Geo. Gordon & Co., Limited

Cache Bay, Ontario

Red and White PINE

Dressing done on short notice. ***Send us your inquiries.***

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the Townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash Table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfe Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

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45,000′ 2″ No. 1 C. & B. Maple
100,000′ 1″ No. 1 C. & B. Birch
30,000′ 1″ & 1½″ Log Run Beech

Above is all dry well manufactured stock.

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1 x 4 & 5 White Pine common and dressing 1913 cut
Dry Hemlock and Spruce all sizes
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10,000 1 x 7 Hemlock Stocks, 1915 cut.
15,000 1 x 8 Hemlock Stocks, 1915 cut.
20,000 2 x 4 — 12 No. 1 Hemlock, 1915 cut.
200,000 2 x 4 — 14 No. 1 Hemlock, 1915 cut.
30,000 2 x 6 — 10 No. 1 Hemlock, 1915 cut.
60,000 2 x 6 — 12 No. 1 Hemlock.
70,000 2 x 6 — 14 No. 1 Hemlock.
30,000 2 x 8 — 14 No. 1 Hemlock.
15,000 2 x 10 — 10 No. 1 Hemlock.
60,000 2 x 10 — 12 No. 1 Hemlock.
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150,000 2 x 10 — 16 No. 1 Hemlock.
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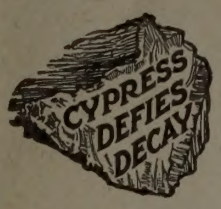

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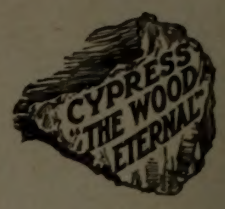

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Some of our stock on hand unsold. December 15, 1915

NORWAY C. & C. F.

	Feet
1 x 4 and up x 10-16	7,224

NORWAY MILL RUN

1 x 4/5 x 10-16	1,503,152
1 x 6 x 10-16	441,853
1 x 7 x 10-16	102,192
1 x 8 x 10-16	43,038
1 x 10 x 10-16	30,000
1¼ x 4 x 10-16	30,292
1¼ x 5 x 10-16	11,798
1¼ x 6 x 10-16	21,375
1¼ x 7 x 10-16	30,521
3 x 4 and up x 10-16	192,049
4 x 5 x 10-16	6,179

NORWAY CULLS

1¼ x 4 and up x 6-16 No. 1	40,392

BIRCH FLOORING

	2-in.	2¼-in.	2½-in. Face
Clear	1 car	¾ car	¾ car
No. 1	1 car	1 car	¾ car
No. 2	5 cars mixed withs.		

WHITE PINE GOOD

1 x 4 and up x 6-16	11,948

WHITE PINE MILL RUN

1 x 5 x 10-16	64,000
1 x 6 x 10-16	118,190
1 x 7 x 10-16	173,085
1 x 8 x 10-16	29,069
1 x 10 x 10-16	2,607
1 x 12 x 10-16	180,192
1 x 13 and up x 10-16	33,176
1¼ x 4 and up x 10-16	117,182
1½ x 4 and up x 10-16	200,000
2 x 4 and up x 10-16	90,211
2 x 6 and up x 10-16	14,290
2 x 8 and up x 10-16	76,913
2 x 12 and up x 10-16	94,831
3 x 4 and up x 10-16	124,340

WHITE PINE COM. & DRESSING

1½ x 6 x 10-16	101,200
1½ x 7 and up x 10-16	89,312
1½ x 12 x 10-16	63,219
2 x 6 x 10-16	87,988
2 x 8 x 10-16	133,918
2 x 10 x 10-16	150,190
2 x 12 x 10-16	183,290

WHITE PINE CULLS

1 x 4 and up x 6-16 No. 2	124,826
3 x 4 and up x 6-16 No. 1	69,397

SPRUCE MILL RUN

5/8 x 4 and up x 8/16	98,000
1 x 4 x 10-16	199,197
1 x 5 x 10-16	354,226
1 x 6 x 10-16	387,930
1 x 7 x 8/16	12,900
2 x 4 x 8/16 Full Thickness	800,000
2 x 5 x 8/16 "	908,900
2 x 6 x 8/16	100,000
2 x 7 x 8/16 "	24,000
2 x 8 x 8/16 "	89,000
2 x 9 x 8/16 "	26,000
2 x 5/10 x 8/16 D1S	81,000
2½ x 9 x 8/16	55,200

SPRUCE CULLS

3 x 4 and up x 6-16	260,000
1 x 4 and up x 6-16	122,000

MILL RUN LATH

1½—32-in. White Pine	187,350
1½—32-in. Norway	645,800
1½— 4 ft. Spruce	1,500,000

CULL LATH

1½ — 4 ft. Spruce	400,000

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Extras	4264M
Clears	3144M
2nd Clears	3955M
Clear White	685M

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All grades and sizes.

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65,000 ft. 1 x 8¼" and up No. 1 and 2 Com. Birch or will ship 9" and up.
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Wide average and well manufactured.

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Little Rock, Arkansas

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"GET A BOARD"

is the Slogan now,
but we say
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and get many boards,
but be sure
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of our 1 x 4" to 9" Common,

which has about 15% 4", 15% 5", 35% 6", 8% 7", 25% 8", 2% 9 and 11".

Have this milled to suit your trade and we will give you satisfaction.

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We specialize in cutting to order all sizes of

Dimension Timber

Also in Dresing in car or mixed lots 1", 2" and 3" to customers' specifications.

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"An army moves on its stomach," said Napoleon, when emphasizing the necessity of food. Lumbering is impossible without hot food—And impossible, too, if you have constantly to be "tinkering with" your stove.

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Send for catalog and prices.

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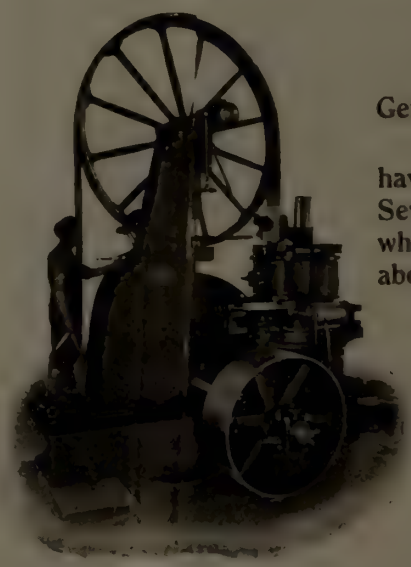

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Memphis, Tenn.,
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Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa,
December 20th, 1912.

Deputy Minister.

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MONTREAL TORONTO WINNIPEG

Canada Lumberman & Wood Worker

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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster General for Canada, for transmission as second class matter.

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Portable Houses — Prompt Action Necessary

The meeting of the Canadian Timber Products Association which was held at Ottawa on December 14th showed that the members of the Association have been studying very closely the possibility of getting orders for portable houses in France and Belgium and that they have to a great extent already got into touch with the situation as it exists today. The results of the meeting, so far as resolutions were concerned, were a decision to send a representative to France to be followed possibly by a second representative a little later on; and a decision to donate the necessary work for producing two portable houses per member or 50 houses in all, providing the lumbermen in Ontario will give the necessary lumber and the other trades will give the balance of the material required, such as beaver board, roofing, etc. The idea of the meeting was that these houses should be produced without delay and sent over to France, and that a representative of the Association should also go to France at an early date to secure as large a share as possible of the portable house trade and of such other trade as the members of the Association can handle.

These results are encouraging. They show that the members are keenly alive to the importance of the situation and that they may be counted upon to make a strong effort to get a large share of this very important business. It is impossible to overestimate the importance of the portable house business. From the reports which have already come out we believe that almost any day now there will be enormous orders given for temporary houses for use in France. There is a great extent of country which at one time was in the hands of the Germans and is now being taken up again by the French families who formerly inhabited it. There is a strong movement on foot in France to assist these people in settling again on the land they once occupied and there is already a great demand for temporary houses. In fact, we believe that some of these houses have already been ordered, and regret to have heard of orders having been placed with firms in the United States. If the Canadians do not act immediately, it will be another case of "too late" and we will have scarcely a look in in one of the greatest sources of business arising out of the war.

Under these conditions not a single moment should be lost by Canadians. We fear, however, that valuable time is already being allowed to slip by. Since the meeting was held in Ottawa, extremely important developments have taken place which we are not at liberty to discuss just at present, but which may change the whole course of events so far as the making of a donation of portable houses is concerned; and we fear this change may involve a costly delay in the other feature of the matter, namely the sending of a representative to France. From a business point of view the donation of portable houses will be an important matter. We believe however, that the charitable and the business features of the situation should not be mingled in any way. What the Canadian Timber Products Association was formed for was to secure orders for portable houses in France, and there is only one way of doing this; that is to have a capable representative in France and to have him there at once. However important the new plan regarding the donation of portable houses may be and however great its bearing upon the business end of the Canadian Timber Products Association, delay in working out and completing the gift should have no effect whatever upon the sending of a man to France. We would like to see such a man sent forward immediately. We have no doubt that his presence in France would be the key to success in this matter and that the details of a gift of portable houses can be worked out in due time, without involving delay in the sending of a representative.

There will be many sources of business for the Association in France. Portable houses will be one of the largest of these, but others will be turning up all the time and unless the Association sends a man over at once we firmly believe that it will be missing great opportunities for securing the business for which it was organized.

Forest Fire Loss for 1915 — Ten Million Dollars

The Dominion of Canada suffered a loss of fully $10,000,000 through forest fires during 1915. It is obvious that destruction of such dimension cannot continue indefinitely. New growth does not equal more than a minor portion of the amount abandoned to smoke nor do the iniquitous effects of the 1915 fires end with an estimate of ten millions of cash. The burned areas of this year too often mean a second fire in a few months or years with the ultimate vicious consequences to the productivity of the soil and the ruin of young growth and seed trees. It is fair to say, therefore, that the estimated ten million dollars loss set down for 1915 is only the beginning of the bill chalked against the country.

That ten thousand forest fires occur every year in Canada, or over 1,400 a month between snow and snow, is an estimate based upon actual figures for the various provinces. Some of these fires are small and do little harm. Others denude large areas of magnificent growth.

Statistics regarding forest fire losses in Canada are complete only in relation to localities. So long as some of the provinces compile no estimate of their forest destruction annually, the total for the country may only be approximated. It is an unfortunate habit of some of those responsible for forest guarding to make their announcements in pleasant generalities, giving the public the idea that forest protection is amply looked after by perfected fire ranging systems, and requires no further public agitation and no radical housecleaning of official attitudes.

The plain fact is that a ten-million dollar annual loss in standing timber and young growth makes an excellent testimony to the half-

thoroughness of forest protection organizations in any and every part of Canada. No one will dispute that Quebec and British Columbia have made remarkable progress in building up forest-guarding systems, appointing conscientious overseers, and striking at the evil from every angle within their reach, but the fresh strength required for further rapid progress must to a large extent come from an awakened public. No minister, however determined, can plan and spend very far ahead of Public Opinion. And one must admit, in considering the forest legislation and administration of Ontario, Quebec and British Columbia, etc., that the departments dealing with forest matters in those provinces have proceeded probably faster than public sentiment urged.

A telegraphic despatch, dated Quebec, and appearing in many newspapers, makes the following statement:

"Throughout the Dominion last summer forest fires caused losses valued at no less than $9,536,867. The loss by forest fires is considerably lower this year than it was previously. Quebec province during the eight first months of 1915 lost through forest fires $2,254,-115, which is a good deal lower than the losses in Ontario, where, although the forest areas are considerably smaller than Quebec's, the losses by fire reach the figure of $3,694,823. British Columbia, with its vast forests, only lost $913,125, due largely to its forest fire-fighting organization. The small loss by forest fires in Quebec province is attributed to the protective measures employed by the government to prevent, fight and control fires."

In Ontario, Quebec and New Brunswick and British Columbia 85 per cent. of the losses were due to settlers' fires. Quebec and British Columbia have secured splendid results from their "permit" laws, by which all settlers are obliged to obtain the supervision of a forest ranger before setting out their clearing fires.

Ontario has no such law, and has suffered serious consequences, but the Minister of Lands, Forests and Mines has the problem under consideration, and may evolve an adequate remedy in the near future. New Brunswick has already made a good start in the regulation of settlers' fires, and will presumably spread the plan across the entire province.

Perhaps, the outstanding fact of the season's forest destruction is the absence of any serious loss along the lines of railway governed by the Dominion Board of Railway Commissioners and their forest protection regulations. Before the imposition of these laws, the Canadian railways were pointed out as the chief offenders in burning of forests. Now, however, the non-government lines under the Board's control are annually presenting a record of fire immunity which places them permanently among the minor causes of damage to the country's timber. As a matter of fact, only two or three fires of over ten acres in extent were attributed this year to those lines where the system of the Railway Commission has been put completely into effect. On two railways, of relatively small mileage, to which the board's regulations do not apply, no less than 200 fires were reported. Many of them were serious in extent, and at least 600,000 acres were burned over by fires due either to locomotives or men travelling along the right of way of these two roads and failing to take necessary precautions against fire.

Manitoba lost more than $1,000,000 in damage to mature timber and young growth in 1915. The total area burned over was 800,000 acres, according to official reports thus far received. Final reports will probably show an increased loss.

The fires in Manitoba took place mainly in the latter part of May and the early part of June, and were particularly destructive in the vicinity of the Hudson Bay Railway.

In the Province of Saskatchewan the most destructive fires took place during the same period as in Manitoba, but the fires were confined more to the areas under effective patrol, and the total distruction is not so great. The present figures indicate a total burned area of about 160,000 acres, and a total damage of $170,000.

In the southern portion of Alberta there has been an exceptional amount of rain throughout the season, so that the fires reported from the region south of the Peace river country and Athabasca Landing are comparatively small in number, and covered only about 25,000 acres, on which the damage is estimated to be about $1.00 per acre.

In the valleys of the Peace river, the Lower Athabasca river and the Mackenzie river conditions have, on the other hand, been phenomenally dry, resulting in fires that have been more destructive than in many years previous. Probably not less than half a million acres were burned over. As a good deal of the country burned over is probably incapable of producing merchantable timber, the loss would not be over $200,000.

In British Columbia, the area patrolled by the Dominion rangers is confined to the railway belt. In the eastern portion of the belt rains occurred at fairly regular intervals, and while there was at several times considerable danger from fire, the ranger staff was able to cope with the situation effectively, with the exception of the month of August in the Lower Fraser valley, where several fires got beyond control. While 10,000 acres of logged-over land were burned, the fires were kept out of the merchantable timber, only 36 acres of which were burned.

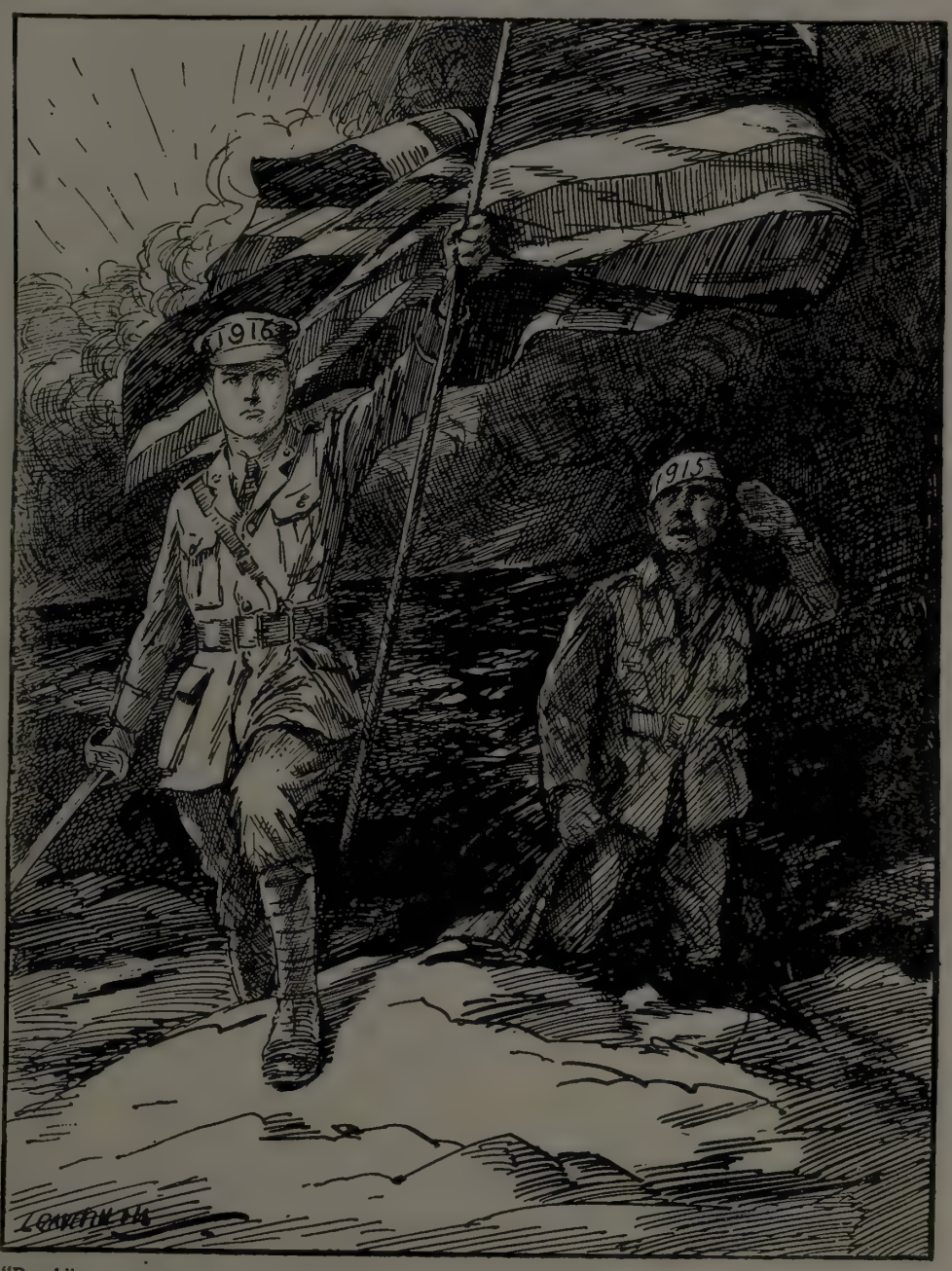
Canada's War Financing Programme

The address delivered by Hon. W. T. White, Minister of Finance, before the Toronto Board of Trade on December 16th, was like his previous address before the same body, one of exceptional importance. Mr. White dwelt particularly upon the methods of financing war purchases in Canada. The most significant fact which he brought out was that the war has greatly enlarged our conception of what is possible to us, as Canadians, in the way of financing our war expenditures and facilitating the financing of the war expenditures of Great Britain in Canada. Eighteen months ago, he said, any one who had stated that Canada could raise 250,000 men for overseas service and could float a war loan of 100 million dollars, would have been received with amused incredulity. The fact remained, however, that Canada had been discovering herself since the outbreak of the war. He then discussed in considerable detail the financing of Great Britain's purchases in Canada of shells, munitions and supplies, as well as similar purchases by the Allies. From enquiries, he had learned that the Shell Committee, or rather the Imperial Munitions Board needed, for the single month of December, 25 million dollars to pay for its purchases during that month. This was at the rate of about 300 million dollars per annum, and when Mr. Thomas, representative of the Imperial Government left Canada he mentioned the figure of 500 million dollars. Canada's 1915 revenue was a little over $150,000,000.

Discussing the means for raising the money for these purchases, Mr. White dwelt upon the course of exchange, which for a time—up to December, 1914—had been in favor of Great Britain, thus enabling her to pay for her purchases by means of exchange. The course of exchange, however, had altered early in 1914 until it reached a discount of from three to five per cent. from the point of view of Great Britain, thus putting an end to the feasibility of paying for purchases by means of sterling exchange. This had led to a consideration of the other methods available for financing the purchases of the Allied Powers in Canada, and in the United States. The two chief methods were by shipments of gold and by borrowings in the countries where the purchases were made. On account of the great demand upon shipping facilities, shipments of gold were also exceedingly costly and the question had resolved itself into one of borrowing in Canada and in the United States. The colossal character of the borrowings of Great Britain, France, Russia and Italy for war purposes were shown by the fact that their total exceeded 750 million dollars. The Anglo-French loan amounted to 500 million dollars. Great Britain and France had borrowed in the United States altogether 625 million dollars, and Russia and Italy 125 million dollars. It had been a condition of all these loans that the money so raised shall be expended in the United States. The importance of this fact was

that the ability to grant credit was the foundation of further credit. Canada also, by raising a loan for Great Britain had directly increased the volume of business that would be placed in Canada.

Canada had great reason to be pleased therefore, with the remarkable change in its financial situation, which enabled it to become a lending nation. It was of great importance to us that we should do all in our power to become a lending instead of a borrowing country. On this subject, Mr. White said:—"I do not know any other way for Canada to become a lending country than to save more money; produce more and save more; I do not know any way whereby an individual can save money and have it for investment, except by the old fashioned mode of living within his income and saving his profits to the extent that he can. I do not believe there is any magic method. If there is one put forward, prima facie I disbelieve in it. The way for Canada to become a lending country is for Canada to produce all she can and to save what she can and by production and saving Canada has been enabled to meet the vicissitudes of the past year as none of us ever expected she would be able to meet them, and by production and saving Canada will in time become a lending nation and be able to find the money for her own works and be able probably to do something more in the way of buying international securities. I pointed out a little while ago that the facility to extend credit obtained business. Not necessarily to extend full credit, but partial credit. Because, other things being equal—I am not speaking now particularly with regard to Great Britain, because Great Britain would desire to place as many orders in Canada as she could, but even from the British standpoint the matter is important—the ability to extend credit and help to finance purchases made on this side of the Atlantic, will secure the orders." Hon. Mr. White then discussed various methods in which Canada could help Great Britain and the Allies in financing their purchases. The chief suggestion he had to make along this line was that the firms and companies in Canada who are engaged in the manufacture of munitions for Great Britain might be willing to accept in payment a certain percentage in British Exchequer Bonds, maturing two, three or more years from now, so as to clear the period of the war. In this way they would, to that extent, be financing Great Britain's purchases in Canada and enabling her to get over the adverse exchange situation. Mr. White made this suggestion quite unofficially, but put it forward as a practical and not unlikely solution of the situation. Such a suggestion was an important evidence of the altered relations between Great Britain and Canada. "There is no doubt," Mr. White said," that the peril to which this war exposes the Empire, and the problems of this war, will lead to a very much closer organization of the whole Empire from a commercial and financial standpoint.



"Punch"

The British Empire, and Canada its most important unit, faces the new year with unimpaired vigor, uncountable resources, unshaken confidence and redoubled determination.

Mr. White's concluding remarks were eloquent and powerful. "I have no doubt," he said, "that when this war is over we will find the financial and the commercial resources of the Empire organized in a fashion that would have taken possibly generations to accomplish had the war not taken place. I said to you before and I say it now that I have an invincible belief in the continued integrity of the British Empire. Not only from the solid consideration of its material strength, which is by far the greatest in the world, but because as I have stated, the British Empire stands for ideals with which this world is not yet ready to part, and I believe, sir, that out of our dire experience in this war and the tragic suffering which every part of the Empire has been and is still undergoing, and is still to undergo, we shall develop an organization financial, commercial and political which will be adequate to cope with whatever responsibilities, whatever duties and whatever dangers the Empire may be called upon in the future to face."

Douglas Fir a Splendid Railroad Sleeper Material

Two Douglas fir and two red cedar railway ties were recently forwarded by the Forest Branch of the Department of Lands of British Columbia to the Great Eastern Railway Company of England, who selected two sleepers from their stock which they obtained from the Baltic, and tested them all under similar conditions. The results of these tests show beyond a doubt the superiority of British Columbia fir for railroad ties.

It was found that under compression Douglas fir will stand 5,695 pounds per square inch as against Baltic timber of 3,950 pounds per square inch; while red cedar made a very creditable showing against the Baltic timber of 3,407 pounds per square inch.

Tests in tension were even more favorable for Douglas fir. This is shown by the fact that it would take 11,450 pounds or over 5½ tons to pull apart a stick of Douglas fir having a cross section of one square inch; whereas just half that weight would suffice to pull apart Baltic timber, and only 3,300 pounds were required to separate cedar.

These tests were carried out by the Great Eastern Railway, and the results which they found will be of immense value to the reputation of Douglas fir as a railway tie material amongst English engineers. The importance of this is increased by the fact that English engineers have the supervision of most of the railway lines in China, India and South Africa, all of which are valuable markets for Douglas fir. The publicity work which is being carried out by the British Columbia Government to promote the use of its native timber products is bringing valuable results every day. It is based upon modern ideas in regard to reaching the consumer. There is great need for similar work by the other timber producing provinces of Canada and by the Dominion Government's Forestry Branch also.

Will Send a Representative to France

Canadian Timber Products Association Going After Portable House and Other Business Direct—Will Co-operate in Gift of Houses

The Canadian Timber Products Association, which has recently been formed with the object of promoting the export trade of Canada in manufactured wood products, and especially the probable trade in portable houses for France and Belgium, held an important meeting at Ottawa on December 14th. Mr. F. E. Parker of W. C. Edwards and Company Ltd., Ottawa, occupied the chair. A great deal of interesting discussion took place regarding the portable house situation, and the chief result of the meeting was the passing of a resolution to send to Paris, France, a representative of the Association, whose duties will be to get into close touch with the market for portable houses and other Canadian wood products and seek to work up trade for the Association. The resolution also contained provisions for sending a second man at a later date, if found advisable, who will be a practical estimator. With these two men on the scene in France, the Association will be in an excellent position for getting in touch with the market and quoting prices upon any orders which develop.

At present, the Association has 26 firms in its membership and 12 other firms are considering the advisability of joining. Of the 26 firms now belonging to the Association 22 have submitted reports of their daily output, the total of which is as follows:—Dressed or finished pine, spruce and hemlock lumber, including mouldings, 1,730,000 feet; hardwood flooring 328,000 feet; doors, 4,175 pieces; frames 3,805; sash, 10,650; columns, 100; blinds, (one firm) 400; portable houses (one firm) 30.

Another important result of the meeting was the passing of a resolution to the effect that each member of the Association would do the milling for one or two portable houses, free of charge, if the lumbermen of Ontario will contribute the lumber, and the other trades will contribute the balance of the material, such as beaver board, roofing, etc. This donation is in accordance with the request recently sent out by Hon. G. Howard Ferguson, Minister of Lands, Forests and Mines for Ontario, upon the suggestion of Sir Geo. Foster, that the lumbermen of Ontario should contribute lumber, the woodworking firms contribute the milling and the government attend to the transportation, so that a donation of portable houses may be sent to France.

According to reports received from lumbermen it is expected that they will readily co-operate by contributing lumber, and that at an early date a substantial donation of this nature will be shipped to France. The expectation is that these houses will be erected at Various points in France and that each of them will bear a small legend indicating that it has been presented by the lumber and woodworking interests of Ontario. The idea is that similar donations will be sent from the other important lumber producing provinces of Canada, and that possibly a hundred or perhaps more houses will thus be sent over free of charge, for the housing of people who have been deprived of their homes in northern France.

Plans of the portable house which the Ontario firms will present are published in this issue. The specifications of the portable house which have been worked out by the firm of Venne and Labelle, achitects, Montreal, P. Q., call for about 3,500 feet of lumber worked to special sizes. The house shown is 15 ft. 10 in. by 19 ft. 11 in. and contains three rooms, one 9 ft. 6 in. by 15 ft. 5 in.; and two 7 ft. 7 in. by 9 ft. 6 in., with a uniform height of storey 8 ft. The roof represents 395 square feet which will require about 450 feet of roofing paper or such other material as may be used. For ceiling and wall lining, whatever material is used the following quantities will be required:—For ceiling 292 square feet; for walls 481 square feet; for inside partitions 155 square feet on each side.

During the afternoon session of the meeting Sir George Foster was present and joined in an informal discussion of the whole situation. He stated that the best time for sending over these houses was the present; it could not be done too soon. A representative should also be sent over to Paris, he thought, at the same time as the houses are sent. The main features of the situation were plain enough. There had been an immense amount of the country devastated, part of which was now outside of the dominions occupied by the Teutons, and was now being filled in by refugees who were ill-cared for and almost unhoused, seeking their old homes or what remained of them. All through these districts in France, building propositions were now coming forward and in these districts temporary habitations would always precede more permanent ones. The temporary habitations would not be of brick, stone or iron. They would be cheap wooden shelter houses. Governments, societies and individuals were all taking a hand in connection with the repatriation of these refugees and the opportunity for business would be a wide one.

Just as soon as Canadian houses could be sent over to France as a practical exemplification of what Canadians can do to meet this demand, one or two of the smartest salesmen ought to be sent over to talk business. United States firms were following this same idea and were doing it more vigorously. This had been exemplified in case after case in the early days of the war. Many Canadians had come to him for assistance in getting contracts, and, while they were doing so, representatives of United States firms were already in Europe getting the business. Other Canadians had gone over to Europe on his recommendation and had come back with large contracts. Others were staying in Canada and not going after the business and few, if any of them, were getting any of it.

So far as credentials, introductions and government influence were concerned, the Dominion Government would do all it could to look after this end of the matter. The Allied powers were all specially sympathetic to Canada and would give preference to Canadian industries in all these matters. He advised the Canadian Timber Products Association to get into direct contact with the French Government, the Belgian Government and the Allies Commission in London.

Sir Geo. Foster mentioned the case of British Columbia as one proving the value of having a man upon the scene in Europe. Mr. H. R. MacMillan who had been sent over by the Dominion Department of Trade and Commerce had spent three or four months in England and France with the result that many cargoes of British Columbia lumber had been ordered for those countries. This had been the direct result of personal representation.

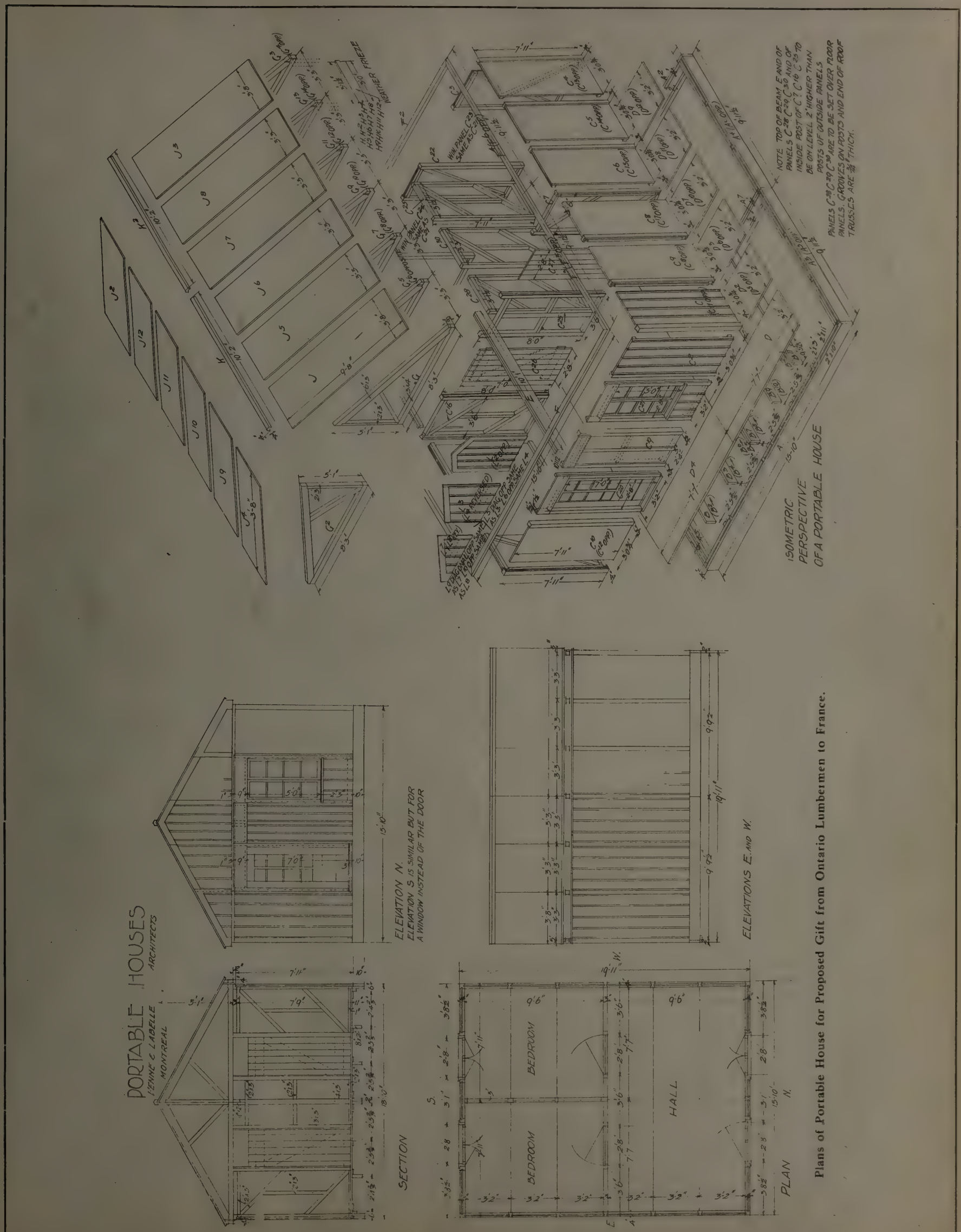
Mr. Frank Hawkins, secretary of the Canadian Lumbermen's Association was also present at the meeting upon a special request from the Association, and stated that while the Association had not yet taken any steps in regard to the question of sending a representative to Europe, this was a matter which he had very definitely in mind to bring up at the annual meeting of the Association on January 19th.

Mr. W. B. Bartram, of Bartram Bros., Ottawa, attended the meetings and in the course of a few remarks stated that he had been in close touch with the French market, having visited France personally since the outbreak of the war. He had found that the French people were ready to buy all the lumber that could be delivered from Canada. Price was not a factor. The demand was in excess of the supply, the only limitation to business in France at the present time being the scarcity of tonnage. He also reported that a portable house movement was under way in France at the present time, and he had just received a cable stating that a representative from France would call upon him in the near future in reference to this matter. Mr. Bartram added that he would immediately turn the French representative over to the Canadian Timber Products Association, when he arrived in Ottawa. He warned the Association, however, against the French middlemen. It would be very necessary to take precautions in regard to this or they would find that their transactions were heavily burdened with commissions.

Mr. A. J. Young of Sudbury, Ont., was selected by a special committee as the best man available to represent the Association in France. Mr. Young has had a wide experience of the planing mill business, is intimately associated with the lumber business and is also conversant with the French language. He is a successful business man with many important business interests. He advised the Association that he would like to accept the appointment, but would ask them to wait a short time until certain pending business affairs were settled. He would then know definitely whether he could represent the Association in France.

In connection with the proposed donation of portable houses to France it is interesting to note that the lumbermen of the province of New Brunswick are also taking steps along similar lines. Lumbermen, mill owners and woodworking factories throughout New Brunswick have received from Premier Clarke, as Minister of Lands and Mines, a circular letter similar to that sent out by Hon. G. Howard Ferguson in Ontario. Mr. Clarke asks that the lumber interests of the province do their share in furnishing a substantial gift of portable houses.

Since the above meeting was held an important development has commenced which may result in a much more comprehensive undertaking than that of presenting 50 portable houses. The new development is still in its early stages and we are not able to publish its details as yet. We hope, however, to be able to report upon it fully in our next issue.


ISOMETRIC
PERSPECTIVE
OF A PORTABLE HOUSE
NOTE TOP OF BEAM E AND OF PANELS C 28 C 29 C 36 AND OF INSIDE POST OF C 7 C 16 C 35 TO BE ON LEVEL 2" HIGHER THAN POSTS OF OUTSIDE PANELS
PANELS C 38 C 39 C 39 ARE TO BE SET OVER FLOOR PANELS. GROOVES ON POSTS AND END OF ROOF TRUSSES ARE ¾" THICK.
PORTABLE HOUSES
LEVINE & LABELLE
ARCHITECTS
MONTREAL
SECTION
ELEVATION N.
ELEVATION S IS SIMILAR BUT FOR A WINDOW INSTEAD OF THE DOOR
ELEVATIONS E. AND W.
PLAN
BEDROOM
BEDROOM
HALL

Plans of Portable House for Proposed Gift from Ontario Lumbermen to France.

Australian Trade Short of Vessels

Commissioner to United States points out a few pertinent facts regarding Pacific Coast exports.

Niel Nielson, Trade Commissioner to the United States for the government of New South Wales, Australia, in an address to The Douglas Fir Club of San Francisco recently gave a keen analysis of the lumber trade situation between the two countries. Much of what Mr. Nielsen said is of importance to lumber exporters in British Columbia, and with the substitution of "British Columbia" for "The United States," in many cases, his remarks can be taken to heart by Canadians.

Mr. Nielsen has been located in San Francisco for the past three years and a goodly portion of the increase in imports from and exports to Australia at this port are directly traceable to his efforts. These for the past four years, in nine-month periods, are as follows:

Imports to San Francisco Port from Australia

January 1st to September 30th

Year 1912	$ 539,603
Year 1913	996,436
Year 1914	2,043,239
Year 1915	6,497,037

Exports from San Francisco Port to Australia

January 1st to September 30th

Year 1912	$2,839,147
Year 1913	3,329,332
Year 1914	5,539,963
Year 1915	7,208,454

Mr. Nielsen said in part: My desire as a buyer is not take your lumber at less than the cost of its manufacture, but I have been forced into that position by the fact that the freight rates have been so excessive and the consumer whom I represent has had to pay not only the cost of the lumber but also these excessive freights, which have brought the C. I. F. price of lumber landed in my country far above the normal price.

Let me give you a word of encouragement. "So long as you produce Douglas fir lumber at what we in Australia consider a fair and reasonable price, so long will we be buyers and ever increasing buyers of your product."

The reason is that in this class of lumber you have a product that has two important qualifications in association, namely, lightness combined with extraordinary strength. We have no lumber in Australia that has this combination of qualifications to the extent that Douglas fir has.

We have stronger timbers and we have lighter timbers, but we have not in any one class of timber these two qualifications in combination to the extent that they are possessed by your Douglas fir.

We in Australia are the principal buyers of West Coast exported lumber. This will continue to a certain point, that point being where the price of your lumber landed in Australia is equal and perhaps a little greater than lumber produced in Australia that can be substituted for your product, and let me tell you, gentlemen, that point is nearly being reached at the present moment owing to the high cost of the carriage from this Coast to our country.

The lumber trade is undoubtedly on a very unstable basis, when the price can not be fixed either by the producer who manufacturers it nor by the consumer who uses it nor by any combined agreement between these two, but the price is arbitrarily fixed by the ship owner, who does nothing towards producing it, who does nothing towards increasing its value by consuming it, but who simply carries it from one side of the Pacific to the other.

Stability of trade is based upon two important factors. The first and most important is a "fair reciprocity of trade" and the second is "the ownership of the means of carrying the manufactured product to where it is to be consumed." A combination of these two factors will make trade absolutely stable and permanent; the absence of one of them may not altogether dislocate the trade, but the absence of them both might at any moment cut off the trade completely.

These factors of stability are altogether absent in the lumber trade between Australia and the West Coast of America, as they also are between this Coast and China.

You may think that your business ability is responsible for the lumber trade to Australia. If you do, do not deceive yourselves any longer.

The lumber trade between this Coast and Australia is largely accidental in its origin and it is based not upon a business foundation, not upon our needs on the one hand and your ability to supply them on the other, but on the ship owner's willingness to carry the commodity from you to us. It has taken the European war to show us this.

While the Pacific was full of lumber carrying boats, no one, neither the manufacturer or the consumer, worried their heads about the carrying portion of the trade; the ships were always there in normal times and we did not bother ourselves as to what flag they had at their mastheads.

But when the war made the carrying of stores and munitions in the Atlantic such a profitable business as it is today, the ships which we had depended upon at once left for those seas where most money was to be made.

As a matter of fact our lumber fleet, as we were pleased to call it, dwindled until it contained only those boats which were held in the Pacific Ocean because they were owned by the people living in the countries surrounding that ocean.

Speaking of the general problem of the Pacific shipping trade, I wish to give you a startling comparison, which accounts for the present alarming state of affairs in the carrying trade of this great ocean.

During the year immediately preceding the outbreak of the war the people of Australia bought from the United States of America a quantity of goods which required 218 ships aggregating 565,960 tons to carry them to our country.

Our trade with Germany required 219 ships, aggregating 743,632 tons to carry it.

Our trade with Japan necessitated the employment of 98 ships.

Now note the difference. Of the 219 boats carrying the German trade to Australia, every one was a German boat. Of the 98 boats carrying the Japanese trade, every one was Japanese. But of the 218 boats which carried the American trade, only 61 carried the American flag at the mizzen.

This explains the present high freights. Practically all the foreign owned boats which assisted you to transfer your commodities across the Pacific have deserted this ocean as soon as it paid them to do so and the only ones you have left in the lumber trade are those owned on this Coast and which have thus a strong reason for staying here.

What is going to happen to these as soon as freight rates return to their normal level? Can they stay under American registry and compete with the foreign-owned boats? I am afraid they can not.

You who know America so well, perhaps have never been in a position to compare the productive possibilities of your own country with that of others. Bring the map of the world into your mind's eye and then tell me where is there another great area of arable land within the temperate zone so well situated as is your great Mississippi basin? You have between the Rockies and the Appalachian Mountains from west to east and between the Great Lakes and the Gulf of Mexico from north to south, the greatest territory on earth of cereal-producing country, with reasonably easy access to the sea.

The only other country which has a greater area than this, of continuous arable land within the temperate zone, is Russia in its Asiatic possession, Siberia, but the greater part of this latter area is thousands of miles from the sea, while all but the far western portion of your great cereal area is within 1,000 miles of water carriage.

Nature has truly done well for the United States and it rests with you to use these opportuinties which are not possessed to as great a degree by any other country on earth to their greatest advantage.

You might say, is Australian trade worth going after when you have such a great home population to consume your products? I do not know what you think on this point, but I would like to tell you that the Australian people are the wealthiest on earth; they are also per capita the greatest buyers of foreign goods on earth. The average wealth of our people per unit is $2,030; our imports run to $86.75 per head of our population, and our exports to $88.25 per head of population, a total value of foreign trade per head of our population of $175.

Let me compare in another way our present value to your country as buyers of your products, which I hope is an indication of our much greater future value.

The United States Treasury Department has furnished me with the following figures, which are those for the year 1914:

Exports From the United States to

1.	United Kingdom	$ 594,271,863
2.	Germany	344,794,276
3.	Canada	344,716,981
4.	France	159,818,924
5.	Netherlands	112,215,673
6.	Italy	74,235,012
7.	Cuba	68,884,428
8.	**Australia**	**54,725,340**
9.	Japan	51,205,520
10.	Argentine	45,179,089
11.	Mexico	38,748,793
12.	Russian Empire	31,303,149
13.	Spain	30,387,569
14.	Brazil	29,963,914
15.	China	24,698,734
16.	Austria-Hungary	22,718,258

It will be seen by these figures that Australian trade is already worth more to the United States than that of any other Pacific coun-

try; that it is greater than that of Japan and very much greater than that of China; that it goes far beyond that of your best customer in South America, Argentina; that it is greater than that of Mexico, Russia, Spain, Brazil or Austria-Hungary, and is only beaten by five of the great European countries and by Canada and Cuba in the Western Hemisphere.

In view of these facts is it not essential that this trade be based upon permanence and stability? How can this be done? Only by making the carrying of your commodities sure in abnormal as well as in normal times. You have found by your recent experiences that the carrying of your commodities is the most important factor in the marketing of them.

All the lumber you can produce for the export trade and all the anxiety of the consumers in Australia and other countries to secure it for their use will not put a dollar in your pockets unless you have the ships to carry your product across the seas.

No country, not even your great Republic, can be wholly self-contained. It fully controls only that portion of its production which its own population requires and uses. As soon as local requirements have been fully met, the rest depends upon international distribution.

No branch of your trade rests more upon such distribution than does your lumber trade.

The foundation of the whole trade is ships and ships that will stay with the trade and not desert it for other waters.

There must be continual inducement for these ships to stay in the trade, such an inducement that even a world's war will not overcome. This can only be brought about by either filling the ships both ways by buying goods in bulk and value approximately equal to what you sell or if this can not be done the ships must be owned and controlled by either one or other of the countries concerned in the continuance and permanence of the trade.

If a proper and adequate reciprocity in trade does not exist or can not be brought about, then the country which holds the trade balance must in its own interest supply the ships.

For the lumber trade between Australia and the West Coast of America, the United States being the country having the trade balance in its favor, must own and control the ships to carry that trade or be always face to face with the prospect of its being cut off at any time or very seriously crippled, as it is at the present moment.

Our people in Australia are principally primary producers and primary producers principally along special lines. Our distance from the markets of the world is so great that we have become specialists even in primary production and we must produce commodities that are very valuable in proportion to their weight.

That is why our principal products are wool, metals, butter, meat, etc., etc., and that is why we will stay in the primary producing stage longer than have other countries which lay nearer to the great centers of the world's civilized populations.

Your manufacturers require our primary products; we require your manufactured products, so there is every element essential for a great and increasing trade between your country and mine. The business is there for you if you go after it. Old avenues of trade have been completely cut off by the war. New ones must be opened up.

You people in America are our kinsmen, drawn from the same stock, speaking the same language, and outside of the United Kingdom, our own mother country; yours is the country that we would sooner trade with than any other on earth.

Market Conditions Reflected in U. S. Forest Service

The annual report of the Forestry Branch of the Department of Agriculture, Washington, D. C., states that there was a drop of 30 per cent. in the demand for national forest stumpage during the fiscal year ending June 30, 1915. This is indicated by the falling off in new sales and is a significant index of the unstable market for lumber and the serious conditions obtaining in the forest-using industries. These conditions which are now the subject of a special study conducted by the Department of Agriculture in co-operation with the Federal Trade Commission and the Bureau of Foreign and Domestic Commerce, "are related primarily to the carrying of enormous quantities of raw material, exploitable only during a long period of time, in private ownership. This load of uncut timber, with its far-reaching financial burdens, hampers or prevents the private operator from adapting his business to the changed conditions of his market and to the competitive factors of more or less recent development. Hence a tendency toward a lumber output governed not by the requirements of the country, but by the financial necessities of the owners of stumpage, with its resultant market demoralization and wasteful use of timber resources. Had the National forests never been created, the conditions of trade depression and wasteful exploitation, detrimental alike to the interests of the lumber industry and the public, would have been markedly accentuated. The value of public ownership of a considerable part of the timber resources of the Nation has never been demonstrated more strikingly than by the results of private ownership now manifest.

Although large commercial sales fell off, due to the depressed condition of the lumber market, the number of sales to settlers, farmers, and small dealers at cost rates nearly doubled in number, while more than 40,000 free timber permits were issued, an increase of 549. The steady increase of this use indicates the importance of the National Forests to the communities in which they lie and the stability of the local demand for their products.

The report discusses in detail the work of the Forest Service during the fiscal year ended June 30 last, showing a general increase in all Forest activities except commercial timber sales. It predicts, however, a larger revenue from all sources for the fiscal year 1916, the general improvement in business conditions throughout the country having been already felt in the National Forests, as shown by an increase during the first three months of about $119,000 over the earnings of the same period last year. During the fiscal year, the total revenues were $2,481,469.35, an increase of $43,759.14 over 1914. Of the $5,662,094.13 provided by the regular appropriation for the Forest Service, $5,281,000 was expended for protection, utilization, and improvements, the cost of protection being increased by an extraordinarily severe fire season which necessitated emergency expenditures that were partly provided for by a deficiency appropriation of $349,243. An additional sum of about $196,000 was spent under the law which permits 10 per cent. of the Forest receipts to be employed in road development for the public benefit.

How the Southern Pine Trade is Booming

The widespread improvement in the lumber trade in the United States which has developed during the past two months is well indicated in a series of reports recently received by a prominent Canadian lumber manufacturing firm. Realizing the beneficial effect in Canada which will certainly follow improvement in United States trade conditions this Canadian manufacturer wrote several American firms and received the following among other telegraphic replies:—

Great Southern Lumber Co., Bogalusa, La:—We find great improvement in the southern pine situation. We have orders on hand for over two thousand cars at good prices. We feel that the turn has come and yellow pine will go to seventeen dollars by March or April and feel that it will be fifteen by January.

Long Bell Lumber Co., St. Louis, Mo:—Our order file is increasing. Shipments are in excess of capacity. Prices are advancing and demand growing stronger. We made two advances last week.

Pickering Lumber Co:—Demand exceeds supply. Prices are advancing rapidly. We advanced prices Saturday fifty cents to one dollar entire list. Again advanced prices yesterday fifty cents to one dollar all items common stock and few items of better grades.

Kaul Lumber Co., Birmingham, Ala:—We find the yellow pine demand very active. The market is strong. Our recent shipments exceed output. Improvement in market during past week is marked and seems fairly uniform over the entire consuming territory. We understand dealers' stocks are low. Mill stocks are broken and becoming depleted.

Central Lumber & Coal Co:—We have advanced our prices twice in one week fifty cents to one fifty last Friday and are advancing again today. Sales made last week by one hundred and fifty two mills were one hundred and thirty-eight per cent. of production. We think stocks will be reduced this month by fifty million feet. Stocks were reduced last month by forty million feet. Orders have increased since July forty-two per cent.

Missouri Lumber & Land Co., Kansas City, Mo:—Our business is above normal. Prices are advancing. We have much more demand than can be supplied by our broken stocks.

Roper, Norfolk:—We have made three advances this month. The demand is principally for lower grades, but orders for upper grades indicate that general yard conditions are improving.

B. C. to Build Lumber Carriers

A despatch from Victoria, B. C., states that a bill will be introduced at the next meeting of the British Columbia Parliament providing for a bond issue by the Provincial Government to be used in building 30 four-mast semi-Deisel auxiliary schooners. These schooners will have approximately 2,235 tons dead-weight capacity, or 1,800 tons gross registry. This is equivalent to about 1,300 tons net registry. Their capacity for carrying lumber will be about 2,000,000 feet each. These schooners are to be turned over to lumber manufacturers of British Columbia, who are to assume the bonds and pay for the schooners as bonds fall due. They are to be operated in the lumber trade of the entire Pacific coast. It is reported that these vessels will take about 200,000,000 feet of lumber annually, whereas the present exportation is only about 60,000,000 feet. Keels of six or eight of these vessels are to be laid in British Columbia by April 1, and the remainder to be built as the demand increases.

In the Public Eye

A budget of comment on men and things of moment presented in the interest of our readers, independent of party politics and with malice toward no one.

Right here at the start let me say that this criticizing of the Government is no pleasant task. I am well aware that the publishers of this paper will get little credit for honesty of purpose. So accustomed is the public to the harpings of the party and corporation press that it has become case-hardened. It has learned to look through the printed articles for the self, party or corporation interest that prompted it. Let it be known then, once for all, that I prefer the Borden administration, with all its sins, to a Government controlled by a party that sought to tie us up to the United States with a reciprocity treaty. But this paper represents a constituency of business men. It realizes that they are tired of seeing politics practised where business methods should be applied. They know that honest criticism is the best medicine for any government—even if you have to hold its nose while you administer the dose. As I have said before, the publishers are not in a position to handle a war contract and do not care to farm one out. I myself have no desire to swagger around in an honorary colonel's uniform. We simply want to show that petty politics are no satisfactory substitute for patriotism and that party machines cannot do the work of factory lathes. And permit me to say further, that we believe that things would have been just as bad and probably much worse if a Liberal government had happened to be in power when the war broke out.

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Despatches from Ottawa indicate that the Government is firmly fixed in its resolution to side-step any and all enquiry into the "educative" work of the late lamented shell committee. It is evidently hoping that its work will be so covered by the improved methods under which the Imperial Munitions Board is working that it will be forgotten. But the charge that the sufferings of heroes have been capitalized and made to yield fortunes is one that refuses to die. The Ottawa Citizen, which was early in action against the "profiteers," returns to the charge with a statement that for machining 4.5 inch shells the Motherland has been forced to pay as high as $6.70 per shell, when the work could be profitably done for $2.25 per shell. It also gives figures to show that profits on other sizes of shells were proportionately large. What the public wants to know is how true these figures are. The public has a right to know, and it is going to keep on asking till it finds out. If it does not find out from this government it will find out from its successor.

* * *

That there are two sides to every story everybody will admit. There is doubtless some truth in Brigadier-General Bertram's story that he effected a saving of $14,000,000. It is also very probable that Mr. Cantley and the Nova Scotia Steel Company were entitled to consideration for the reason that they were the Canadian pioneers in shell making and invested considerable money in experiments before they succeeded in producing shells at a profit. Let those men have the credit that is due them. I would not for one moment rob any committee or any manufacturer of one iota of credit for anything that was done to relieve the Empire's great need for ammunitions. But credit can only be given by letting in light on the entire works of the Shell Committee. So long as that committee lies in an as yet unnamed grave the public will think only the worst of it and the government that was responsible for its existence. The fact that it was buried by the Imperial authorities adds to rather than detracts from the Canadian Government's responsibility.

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The Government has everything to gain and nothing to lose by being open and above-board in this matter. So many stories have been whispered, so many charges have been flung broadcast that to remain silent must simply be taken as an admission of guilt—an admission that the worst has not been told. Never since Confederation have so many stories of trickery, trafficking and grafting been afloat. They come to this office by the score. All cannot be given because all cannot be investigated. It would take a big staff working overtime to get into them all. But they pass from mouth to mouth, growing with each telling. Probably most of them have not yet reached Sir Robert Borden. His "machine men" probably see that such as do reach him are fumigated, sugar-coated and otherwise specially prepared for his consumption. But even his own party organs are hinting that makers of munitions "have striven to get large profits out of their contracts." The Toronto News (Conservative) charges it all to "stock market booming," but closes its article with the rather ominous sentences: "As in previous crazes a reckoning is coming. It may be close at hand and some very prominent men may be involved in the inevitable disclosures."

It is up to Premier Borden to see that the Conservative party and the Dominion Government not only are not involved in, but wrecked by the inevitable disclosures. If he has that ability that was ascribed to him when the intelligent electors put him where he is he will rise above his "machine men" and investigate the deals in shells and shell boxes. He owes it to himself, to the great majority of his Conservative followers, to the country he represents and to the Empire we are fighting for.

* * *

A prominent grain man, in telling why Canada should be prosperous, states that Manitoba, Saskatchewan and Alberta this year produced 700,000,000 bushels of grain, of which 300,000,000 bushels was wheat. He gives $450,000,000 as a conservative estimate of its value. Is it any wonder that the other week Winnipeg had larger bank clearings than Montreal, and that the Prairie City is entering on a new era of prosperity? And with millions of acres of this grain-producing land still waiting for the settler's plow why should Canada worry about the future?

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Why did the Government lease the Transcona car shops to a private company for the manufacture of shells? Well, perhaps you had better ask D. A. Thomas. The Shell Committee was the part of the Dominion Government with which he came in contact. So when the Government proposed to start in to manufacture shells without saying anything about price you can imagine him throwing up his hands and exclaiming "Heaven forbid!" However, what he said to the Government was, "put in a tender." Well, you know that Shell Committee never did care for tenders, anyway. It just shied off and the Government with it.

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The Liberal press is loudly demanding the resignation of J. R. Fallis, M.P.P. for Peel because he is alleged to have made an odd dollar in buying horses for the Government. As usual the astute Opposition organs have allowed the Government to draw a red herring across the trail and are off in full hue and cry on the false scent. And while they are howling their lungs out over a spavined horse or two the Government has had the Shell Committee quietly and respectably buried and is leaving it to Messrs. Hichens and Brand to prove that the good committees do live after them.

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The tributes the English representatives pay to the late lamented are most touching. It "has met with remarkable success in dealing with a difficult task." "The measure of its success can be gauged by the remarkable results achieved." In fact it was such a remarkably able and conscientious organization that one wonders where those distinguished Englishmen ever found the heart to abolish it. But abolish it they did for even if some of its members find place on the Munitions Board the latter is a new and entirely different body. It is responsible to the Imperial authorities whereas the Shell Committee was responsible to the Dominion Government. To put it briefly the Dominion Government has buried its "war baby" and the fervent prayer it murmers over the grave is "May its sins die with it."

* * *

But the sins refuse to die. Manufacturers all over the country, both Conservative and Liberal, demand explanations. They want to know why certain firms could get contracts while others could not even get their names put on the list to be considered. They know that open tenders were not received till after those famous interviews which F. P. Jones so evasively denies. They want to know just what powers influenced that Committee in awarding tenders. They want to know if the Jones interview did not save the British taxpayers $21,000,000, just how much it did save him. In short they want that Shell Committee exhumed till a proper autopsy shows just why it died and like a hero of other wars was buried so darkly at dead of night.

* * *

And the manufacturers are entitled to this explanation. Many of them spent time and money trying to get contracts at a reasonable profit and could not even get consideration of their propositions. One man who had the factory and the men waiting for work went to Ottawa. Failing there he went to New York to see D. A. Thomas. Back from there he again went to Ottawa, hung up his coat and announced that he was going to stay till things happened. Did they happen? Not so that they were noticeable. Summoning all the influence at his command he finally succeeded in getting his name on the list of firms to be considered for contracts. Realizing that he had done his utmost he went home. Shortly afterward he learned that his name had been slipped off the bottom of the list. He had simply wasted his time and money. Is that man entitled to an explanation? He is. And his is not an isolated case.

* * *

The public demand an investigation. They look not to the Conservative political machine but to Sir Robert Borden for that investigation. They feel that the Premier who is a gentleman rather than a politician, has been sinned against. They know that when next Sir Robert Borden visits England he will not want to be pointed out as the sponsor for a Committee that scattered its contracts like so much political graft, while our soldiers cried from the trenches for the munitions they so sorely needed. Sir Robert Borden may be deluded by the men he has trusted but he is not the man likely to stand idly by while the good name of the Dominion is dragged through the dirt and grime of a war scandal. Sir Robert Borden will act. Sir Robert

Borden must act to save the reputation of the country he represents and his own political honor.

* * *

One V. Sly who dealt in war supplies without a license is now serving a four months' sentence in an English prison. Would it be infringing on the rights of the Munition Board to require Canadians who deal in war supplies to be licensed? In other words, shouldn't—well say a publisher require a license to handle a contract for shells?

* * *

The suggestion that Canada should give credit to the Empire comes from the London Times and should receive immediate consideration. The Thunderer calculates that in the present year Canada's exports will exceed imports by two hundred million dollars and points out that this balance will be at her disposal for any credits that may be arranged for supplies to Britain in lieu of cash payments. That the suggestion is timely everyone will admit. Canadians are of one mind in regard to the war. It is not Britain's war or Canada's war but a war that involves the freedom of the world. No sacrifice is too great to secure that freedom without which material prosperity would be merely an aggravation. Canada must do everything in her power to help bring the war to a successful close. Every bushel of grain, every dollar and every man capable of bearing arms must be at the Empire's disposal till freedom is assured, Belgium has been avenged and the German war machine is in the scrap heap. It is Canada's part not only to offer every assistance to the Motherland but to grasp every suggestion as to how that assistance may best be given. Giving Britain a line of credit will provide this young Dominion with a new sensation, or rather two sensations—pride in being classed among the creditor nations and pleasure that she is able to aid the Old Land financially in her hour of need. It is whispered that the Minister of Finance will insist on our banks loosening up.

* * *

With the Shell Committee buried and the Munition Committee responsible to the Imperial authorities the Government appears to have washed its hands of the entire war contract business. But does it owe nothing to the country it represents? There are idle factories in Canada that would be running full time if the Government were alive to its duties and capable of performing them. Take the city of Guelph for an example. It has factory accommodation to keep from 2,000 to 2,500 men working overtime on munitions. But though its manufacturers are alive to their opportunities all the war orders they have been able to land are a couple for shell plugs and one for shell boxes, the total amounting to about $75,000. Would a business Government see a neutral country flooded with war orders without putting forth some effort to secure part of this business for its own idle factories? Does its responsibility to the country cease when it shakes itself free from future charges of profiteering? Do our Cabinet ministers draw their salaries for speeches they make at recruiting meetings?

* * *

The busybodies who make other people's morals their chief concern have been at it again. The soldier who comes out of the trenches drenched and shivering can now get his jorum of rum only three times a week. Formerly he got it every morning. If I had my way every one of these "temperance" people would be sentenced to a month in the trenches—without rum.

* * *

Recruiting has now reached the stage where men must be asked to leave good positions to take their place in the ranks. It is a critical stage. When England reached it she made changes in her rules to make the ranks more attractive. Companies of chums were assured that they would be kept together after enlistment and other promises were given. A Canadian who is enjoying a fair salary hardly feels like taking the plunge until he is assured that he will not be asked to act as batman to some young officer who never earned $10 a week.

* * *

The Financial Post is among those who think explanations re the abolition of the Shell Committee should be forthcoming. It says: "There is evidently something as yet to be explained. One commission succeeds another without the public being given what can be regarded as a satisfactory explanation. Documents such as that issued by Mr. Hichens, the British representative, intended obviously to allay the querulous, excite apprehension. There are, of course, some things that it is not wise to discuss publicly, but as to the supply of munitions, or such as comes within the sphere of the Shell Committee's work, frankness and publicity would appear to be better for the Government as well as for the nation. In the public mind there will undoubtedly remain the question, 'Why are all these changes necessary?' Are our Ministers and their staffs to be permitted to thus lightly hand over their responsibilities to commissions?"

SEARCHLIGHT.

According to a nestimate made by the Canadian Pulp and Paper Association, there are at least 15,000 people directly dependent on the pulp and paper industry in Canada. This means 3,000 to 3,500 families, and about 4,000 to 5,000 individuals actually working. Of the total 15,000, probably 12,000 are east of Fort William. About two-thirds of these are in two large areas, one of which centers about Montreal and the other a little north of the Niagara Peninsula. A hundred miles radius from Hamilton, Ont., and a 125-mile radius from Montreal would therefore include about two-thirds of the paper population of Montreal. Outside of these two areas there are large but more or less isolated plants.

Lumbermen Have Wide Privileges on Rivers

The case of Gilbert vs. J. Austin & Sons which was recently heard by Judge McMillan in the County Court of the County of Victoria, Ont., involved much the same principle as the case of Lowery and Goring vs. Booth, the judgment in which was published in the Canada Lumberman of December 1st. The judgments given by Judge McMillan in the Gilbert vs. Austin case and by Mr. Justice Middleton in the case of Lowery and Goring vs. Booth are similar in principle. The plaintiff, Samuel Gilbert is a farmer in the township of Snowdon and he brought action for damages against J. Austin & Sons of Kinmount for the flooding of his lands. About ten years ago J. Austin & Sons built a dam on the Burnt River below the plaintiff's land, and they admit that they put in stop logs to enable them to float their timber. Judge McMillan based his decision upon the Rivers and Streams Act which, he says, gives a right, during spring, summer and autumn freshets, to flood and transmit timber down all rivers, streams and creeks, and it is provided that, where necessary, dams, aprons, slides, locks, booms or other works may be constructed so long as they do not cause unnecessary damage to the rivers or their banks. Judge McMillan then quoted from Judge Middleton's decision in effect as follows:—The rivers of the province are regarded as great highways for the transmission of timber and the province has seen fit to confer upon those engaged in lumbering extraordinary rights and privileges in connection with these rivers. The timber industry is one of vital importance and apparently as a matter of public policy the paramount right is given to a lumberman to take his timber down the streams so long as he does not do unnecessary damage, which is interpreted as meaning damage that could be avoided by the exercise of reasonable care and caution.

In the present case, Judge McMillan said, all parties agreed that the defendants had used these waters and the dam constructed by them in the same way for years past as in the year 1915. There was no evidence to show that the defendants had been in any way negligent. On the contrary they used the stop logs only when necessary. Having found against the plaintiff as above, Judge McMillan dismissed the action, costs to be paid by the plaintiff.

Sawmill Employee Not a Lumberman

An interesting decision under the Workmen's Compensation Act has been given by the Supreme Court of Nova Scotia in the case of Grant vs. Sutherland. This was a case of injury to a workman employed in a sawmill. Mr. A. J. Campbell, as arbitrator, made an award under the Workmen's Compensation Act holding that Grant was employed in a sawmill and not in lumbering, although the sawmill was used in connection with the production of lumber. Lumber operators appealed the case so as to make a test and settle the point whether a man employed in a sawmill could be considered as engaged in lumbering, and thus not come under the Workmen's Compensation Act. The Supreme Court upheld the decision of Mr. Campbell and Grant therefore receives compensation under the Act.

Judgment Given in Timber Limit Suit

Mr. Justice Morrison has given judgment in the suit of the Alberta Northwest Lumber Company vs. B. A. Lewis, a Seattle timber and real estate broker, directing that he shall return farm property in Alberta and sums of money received as payment on two sales of timber limits on Howe ound. The suit was brought on the ground that Lewis and his associates had misrepresented the quantity and quality of timber on the limits, and their suitability as logging propositions. The two sales are set aside by the judgment and the contracts are rescinded. In one of the cases it was also held in the judgment that Mr. Lewis had sold a limit on which the government had issued other timber licenses.

An auction sale of timber lands was held by the Department of Lands and Forests of Quebec on December 14th. In the lower Ottawa agency the Rawdon and Chertsey townships were sold to M. M. Minard of Rawdon for $305. In the upper Ottawa agency, M. Gervais of Hull bought the Malaric township for $85. He also got Lamothe township at the same figure. In the same agency M. Desrouleaux bought the Desmoiselles township for $55, while Mr. Benard got the Maralic township for $75. Pascalis township, in the upper Ottawa agency, went to Mr. R. Groulx for the sum of $325. In the Lake St. John east agency Bourget township No. 2 was not sold while Ranges 5 and 6 in the township of Kenogami were bought by Messrs. Vailancourt and Perron of Robervale. These timber lots had been advertised for auction sale last spring, but had been withdrawn on account of the bids being too low.

Reduced Output in Eastern Canada

Reports Indicate Probable Decrease in Log Production During Present Winter

Reports received by the Canada Lumberman from 26 important mills in Eastern Canada, including Ontario, Quebec and New Brunswick, indicate a reduced cut of logs in the woods this winter. The reduction appears to apply about equally to each province. The total cut of logs by these mills in the winter of 1914-15 was 362,350,000 feet. During the present winter they will cut a total of 292,050,000 feet of logs. A number of these reports have been published in our last two issues. The others are as follows:—

* * *

Chew Bros., Midland, Ont., report that they expect to take out between 6,000,000 and 7,000,000 feet of logs this winter. Last winter their bush scale was between 4,000,000 and 5,000,000 feet. They report a marked buoyancy in market conditions recently. This year, Chew Bros., were sawing under contract until September 4th, when they started to saw their own logs. They closed their mill for the season on November 18th. Although only a portion of their stock, sawn so late in the season will be in shipping condition before next spring, they have sold their entire cut. They are carrying over a large part of a raft in their mill pond to be ready for spring sawing.

* * *

The New Ontario Colonization Company Ltd., expect to take out a fair stock of logs, mostly spruce, in connection with their operations at Jacksonboro, Ont., this winter. Last winter they took out a comparatively light stock. They report that the outlook for the coming year seems to them to be very favorable. They have on hand a fair stock of seasoned lumber which is moving out satisfactorily at the present time and they expect to have it pretty well shipped out early next summer.

* * *

Smith, Fassett & Company, North Tonawanda, N. Y., report that they are taking out 9,000,000 feet of logs in connection with their Canadian operations this winter. Last winter they took out the same quantity. They find that business is improving and they expect improvement to continue. During 1916 they are looking for good business and better prices both in Canada and the United States. Their opinion is that while the probable output of lumber both in Canada and the United States will not be any larger this year than last year, the demand should be considerably larger.

* * *

Herman Weismiller, Bala, Ont., will take out 1,000,000 feet of logs this winter. Last winter he took out about 200,000 feet. Mr. Weismiller is putting in a spur track from the C. P. R. 730 feet long, to connect with his planing mill. He reports that the lumber trade has brightened recently, and that there is a good demand for any lumber suitable for ammunition boxes. He expects the output of logs this winter to be about equal to that of last winter, and as 1915 stocks are pretty well cleaned out he is looking forward to a steadily improving market.

* * *

The Stone Lumber Company, Ltd., Marksville, Ont., expect to take out 2,500,000 feet of birch and maple logs this winter. Last winter their output was 1,000,000 feet. They report that their stock is sold under contract and that they find the demand improving. They are expecting that prices will advance. In their district logging conditions are good and labor is plentiful.

* * *

Lauder, Spears & Howland, Toronto, report that they will take out of the woods in connection with their northern Ontario operations this winter 7,000,000 feet of pine and 2,000,000 feet of hemlock. Last winter they took out 8,000,000 feet of pine and 500,000 feet of hemlock.

* * *

The Georgian Bay Lumber Co. Ltd., Waubaushene, Ont., expect to take out 10,000,000 feet of logs this winter. Last winter they took out about 12,500,000 feet. They expect that the general cut of logs this winter will be much smaller than for many years past.

* * *

Graves Bigwood & Company, Byng Inlet, Ont., report that they expect to take out of the woods this winter about 25,000,000 feet. Last winter they took out 60,000,000 feet.

* * *

The Lake Rosseau Lumber Company Ltd., Boakeview, Ont., expect to take out of the woods this winter, 2,225,000 feet of mixed timber. Last winter they took out 2,000,000 feet.

* * *

The St. Maurice Lumber Company, Three Rivers, P. Q., report that they expect, during the present winter, to take out 24,000,000 feet of logs on the St. Maurice. This will be sawn at Three Rivers, P. Q. They will also take out 10,000,000 feet on the Batiscan River. This will be sawn at Batiscan, P. Q. Last winter they took out the same quantities on these rivers. The company report that the United States market improved during November. They expect a good demand for their next season's cut. Labor for the camps is plentiful and wages are the same as they were last year.

* * *

Gilmour & Hughson, Hull, P. Q., report that they will take out 12 or 13 million feet of logs this winter. Last winter they took out 25,000,000 feet. They report that while trade conditions for some time past were unfavorable, the present outlook is much more hopeful; shipments being made more frequently now than they have been for a long time past.

* * *

Edwards & McLeans, Bonaventure, P. Q., report that they expect to take out 6,500,000 feet of logs this winter. Last winter they took out 8,650,000 feet.

* * *

The Northwest Lumber Company, Edmonton, Alta., will take out 25,000,000 feet of logs this winter, giving employment to over 600 men. Last winter they took out 20,000,000 feet.

Personal News of Interest to Lumbermen

E. W. Backus, president of the Keewatin Lumber Company, and associated with a number of other important manufacturing and industrial concerns, visited Kenora, Ont., recently to look over some of his interests there.

Mr. Hugh A. Rose, eastern representative for the Canadian Western Lumber Company, Fraser Mills, B. C., will leave about January 3rd for British Columbia to consult with the firm. He expects to be away about six weeks.

Mr. J. E. Dougherty, vice president and general manager of the British America Mills & Timber Company Ltd., Vancouver, B. C., in a letter to the Canada Lumberman states that "prices have materially advanced on all grades of lumber and there seems to be more demand now than at any time during the past two years."

Mr. H. G. White, Trade Commissioner for British Columbia recently returned from a trip to South America. He reports a good demand for spruce and Douglas fir and for many other B. C. products. In fact, he states that lack of transportation facilities between B. C. and South America is the only obstacle to prevent B. C. from working up a splendid trade in South America.

Mr. Geo. Bayliss, Binghampton, N. Y., of the Bayliss Pulp and Paper Company, visited Quebec recently. His company is operating the St. Annes' Lumber property. Mr. Bayliss reports that trade has improved greatly. In connection with the St. Annes' property they will take out 30,000 cords this year. He also stated that he intends to operate the sawmills at Valcartier next year.

The Quebec Chronicle says: "Now that Sir William Price has been authorized to begin recruiting for the battalion which he is raising for overseas, we may expect that there will be considerable activity in this military division for the next month or so. Anything to which Sir William puts his hand will be carried out with energy, enthusiasm and efficiency. His past record is a guarantee of that. Consequently we can be confident that there will soon be a new and really representative Quebec regiment in the field to uphold the honor of the Ancient Capital on the fighting line."

Of particular interest to buyers of Arkansas Soft Pine is the recent appointment of J. J. Dilling as Sales Manager for the Stout and Cotton Belt Lumber Companies of Thornton and Bearden, Ark., respectively. Mr. Dilling assumed his new duties December 15th, succeeding Chas. G. Atkinson, resigned. The sales of the two companies, which are allied enterprises, are conducted through the main office at Thornton and involve the disposal of approximately eighty million feet annually. Mr. Dilling's succession is a logical one, he having served for several years past in the capacity of Assistant Sales Manager at Thornton, during which time he has developed a wide acquaintance among lumber buyers. Mr. Dilling has been connected with the Stout interests in various departments over a period of twelve successive years. He is, therefore, a thoroughly experienced lumberman and well qualified to undertake his new duties.

Fred Wood & Sons, Saw Manufacturers

The firm of Fred Wood & Son, manufacturers and dealers in circular saws, Toronto, whose advertisement appears in another section of this issue, are well known to the readers of the Canada Lumberman. Mr. Fred Wood, the head of the firm, has been manufacturing saws in Toronto for thirty-five years, and has a thorough practical knowledge of the saw manufacturing business in all its branches. The firm manufacture circular cross cuts, trimmers, edgers, bolters, concaves, etc., and make a specialty of repair work on the shortest notice, for which their plant is especially equipped.

Death of Abraham Knechtel

Abraham Knechtel, Dominion Inspector of forest reserves, died at Ottawa recently after a short illness. The late Mr. Knechtel was born in 1859 and was a native of Brussels, Ont. He was one of the pioneers in scientific forestry on this continent. He graduated in 1900 from Michigan Agricultural College, receiving the degree of Bachelor of Science. He then took a special forestry course at Cornell University, receiving the degree of forest engineer. For several years prior to going to Ottawa to take up work in the forestry branch of the Dominion government he was attached to the forest, fish and game commission of the state of New York and in that connection laid out the first forest plantation established by the state. In 1904 he was sent to the St. Louis Exposition to lay out a forest nursery there for the commission. In recognition of his services there, he received a special medal. In the same year, he was sent by the New York commission to Europe to study forest conditions and practice there. For several years Mr. Knechtel also delivered lectures in New York under the auspices of the New York state school board.

Charles Hadley of Chatham, Ont., Dead

Mr. Chas. Hadley, Chatham, Ont., of the firm of C. & J. Hadley, died suddenly at his home recently. Mr. Hadley had not been in good health for some time. About eight months ago he suffered a slight stroke which left him with a weak heart. Mr. Hadley was the eldest son of the late Sylvester Hadley a prominent lumber dealer of Chatham. As a young man he became associated with his father's business and continued at it for 25 years. A few years ago he severed his connection with the S. Hadley Lumber Company and became senior member of the firm of C. & J. Hadley, dealers in lumber, sand and gravel. Under his direction the business was very successful. The late Mr. Hadley is survived by his wife and one son, Sylvester, also by three brothers and five sisters.

Stone Lumber Company Loses Foreman

Edward King, foreman for the Stone Lumber Company Ltd., Marksville, Ont., died suddenly of heart failure on December 11th, while in the woods with his men. The late Mr. King was born near St. John, N. B., fifty years ago. As a young man he moved to Bobcaygeon and subsequently to Kinmount, Ont. He was in the employ of Craig and Austin for fifteen years. Five years ago he took charge of the mill of the Stone Lumber Company, Ltd., at Marksville, Ont. Mr. King was an expert with circular saws and a first class millwright. He was of a very likeable disposition and had a wide circle of intimate friends. At his funeral the pallbearers were six men who had worked for him since he went to Marksville, and everyone of the employees of the company attended the funeral. The obsequies were in charge of the Masonic Order, of which Mr. King was a member. Mr. King is survived by his wife and two sons.

The Late James Mapes Dodge

Mr. James Mapes Dodge, chairman of the Board of the Link-Belt Company, died at his home in Philadelphia on December 4th. The late Mr. Dodge was born on June 30th, 1852, at Waverly, N. J., and had a remarkably successful career, both as an inventor and a business man. His inventions were responsible for great improvements in the methods used for elevating and conveying many kinds of manufactured products. Probably his most successful invention was one which reduced the cost of handling coal in and out of storage from 30c and 40c per ton per round trip to less than 5c.

Gatineau Lumberman Passes Away

Mr. W. J. Conroy, Aylmer, P. Q., died recently after an illness of one month. Mr. Conroy was a son of the late Robert Conroy, one of the leading lumber merchants of the Gatineau district. He was in his 66th year, and was born in Aylmer and lived there all his life. Formerly he was a member of the firm of R. and W. Conroy, lumber merchants, who also owned and controlled the Aylmer Water Power for a number of years. Mr. Conroy was mayor of Aylmer for one year and councillor for several pears. He is survived by his widow, two married daughters and two sons.

Ottawa Pioneer Called by Death

Nicholas Link, a pioneer of the lumber industry in the Ottawa Valley, and a resident of Ottawa for over sixty years, died recently at the advanced age of 80 years after an illness of about two months. The late Mr. Link was born at Chelsea, P. Q. Early in life he secured a position with Hamilton Bros., lumber merchants, as a clerk and continued with the same firm, the name of which was subsequently changed to the Hawkesbury Lumber Company. Mr. Link was actively engaged at his business duties until last summer.

Mr. J. D. Burdes, manager of the Shawnigan Lake Lumber Company, Victoria, B. C., one of the best known logging men in the province died recently as a result of injuries sustained when a log rolled over him in a logging camp near Victoria. Mr. Burdes was 47 years old and was the inventor of a switchback railway which was found to be very effective in handling timber in the hills of British Columbia.

Mr. Leander Lingley, a life long resident of Lingley, N. B., died recently at the age of 74. For many years he was engaged in the lumbering business, but retired about five years ago, and accepted the position of postmaster at Westfield, N. B.

Thos. Golds, for many years foreman of Robert Stewart Ltd., Guelph, Ont., died recently at the age of 82 years. The late Mr. Golds was widely known in Guelph and highly respected.

Timber Conditions in Smoky River Valley

A report upon timber conditions in the Smoky River Valley and Grande-Prairie Country has been issued as a bulletin by the Forestry Branch of the Department of the Interior. The report gives the results of a survey of the country which lies between range 23, west of the 5th meridian, and the Alberta-British Columbia boundary, and extending from the 15th base line on the south to the Peace River Block and Pouce Coupe and Burnt Rivers plateau on the north. The survey covered an area of 9,500 square miles. The region belongs mainly to the eastern slope of the Rocky Mountains and to the foothills. Of the area examined about 8,000 square miles is forest land and 1,500 square miles prairie land. Fires have done great damage to the forests, but it is estimated that the total of saw-timber on the area would be 3,727,080,000 feet B. M., and of cordwood 10,654,400 cords.

The valley of the Smoky River was once very rich in saw-timber, but fires have destroyed the best of it. The rather small quantity still existing is found scattered in small patches along the river bottoms or in isolated groups on the slopes.

The Smoky-Simonette timber was the main stand found, and it is considered of real importance.

The permanent forest can be classified into six different types which are generally determined by the quality of the soil, the condition of drainage and the altitude. They are (1) river-bottom type, and (2) lower-slope type, which are much alike, (3) high-slope or height-of-land type, (4) summit-plateau type, (5) muskeg type, and (6) high-mountain-slope type. The species of trees forming these different types are the following:—Lodgepole pine, white spruce, aspen poplar, balsam poplar, black spruce, tamarack, Englemann spruce, alpine fir, northern canoe birch. In permanent forest white spruce is the predominant species in river-bottom and lower-slope types; poplar is often found in admixture. Lodgepole pine occupies the first rank in the height-of-land type, high-slope type and summit-plateau type, with a variable quantity of white spruce and poplar in the two first types, and in the other black spruce and alpine fir. The muskeg type is composed mostly of black spruce and tamarack, while Englemann spruce, pine and alpine fir form together the high-mountain-slope type.

The bulletin concludes with detailed recommendations regarding proposed additions to forest reserves and the organization of a good system of fire protection.

A Plan to Provide Vessels for British Columbia

J. H. Moore, vice president of the Canadian Puget Sound Lumber Company, recently visited a number of the principal United States cities on business. Upon his return he stated that the demand for lumber was improving, not only for export to Europe, but for domestic consumption in the United States. He expressed strong opinions regarding the importance of securing sufficient tonnage for handling British Columbia's export trade. The Government of the province had guaranteed railway bonds to an enormous extent and he believed that it was equally important for the Government to assist in the marketing of lumber by export by guaranteeing bonds for the development of a shipping company. Mr. Moore had in mind vessels of the schooner type capable of carrying about 1,000,000 feet. He suggested the formation of a company with about $3,000,000 capital into which the lumbermen would put some $300,000, the balance being raised by bonds guaranteed by the provincial government.

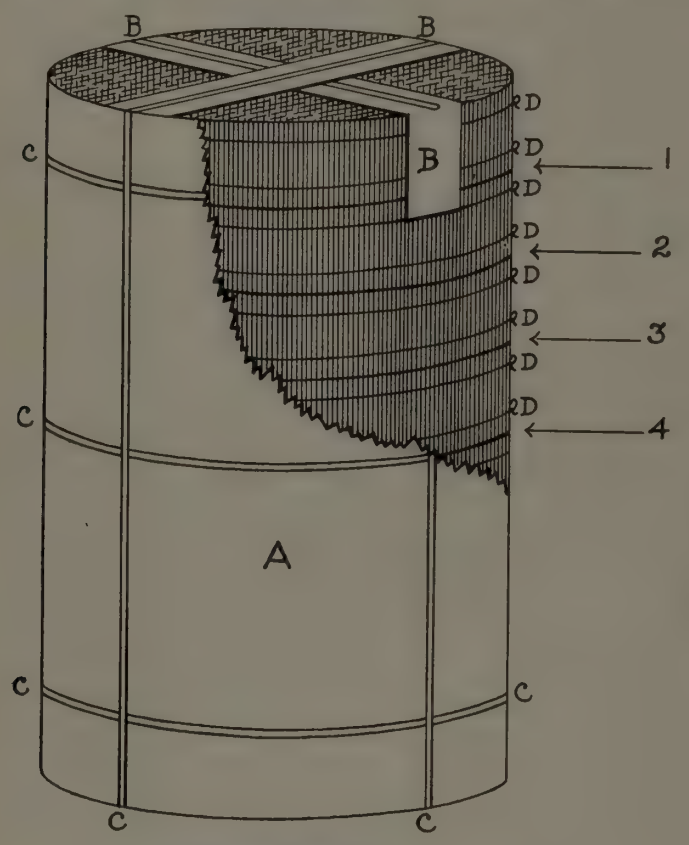
First of the 1916 Calendars

The first of the New Year's calendars to reach us is a splendid large one sent by the River Quelle Pulp and Lumber Company, St. Pacome, P. Q. In addition to a large date pad the calendar is decorated with a copy of a splendid painting by Philip R. Goodwin, entitled "Hitting the Trail." This is a very fine colored picture of a pack train of horses about to ford a river in the course of their journey. The picture is one of the best, from an artistic point of view, that we have ever seen upon a calendar.

Match Splints Required in Australia

There is a considerable quantity of match splints being imported, chiefly from Japan, by the Australian manufacturers of matches whose factories are in Melbourne. Generally, the splints are dipped in a solution of phosphate of ammonia (to prevent the heads glowing) before shipment is made. This trade may be of interest to Canadian manufacturers, particularly those near the seaboard, as inland freight adds considerably to the f. o. b. steamer cost. Quotations on the basis indicated, or preferably c. i. f. Melbourne, if forwarded will be submitted to Australian match-makers. This line is duty free to the United Kingdom (from which no supplies are being shipped), and 5 per cent. to all other countries. The boxes in which safety matches are packed are principally made from skillets—from Queensland green pine—which enables the wood to be bent without breaking, and it is doubtful if dry imported pine would be suitable for that purpose. Any data, however, furnished in respect to skillets will be brought under the notice of match manufacturers. Owing to the high freights and to the difficulties in obtaining supplies of suitable lumber for the required purpose, there now exists a much stronger demand than usual for match splints.

The splints used are of one size only, viz., 50m. long x 2.2m.



Drawing of Barrel of Matched Splints.
A.—Outer covering showing layers of splints 1, 2, 3, 4.
B.—Battens (about 3 in. wide) turned down inside outer covering. (2 each end).
C.—Wire binding (passing over battens on ends).
D.—String holding splints together.

square. The wood must be of the best quality and as light in color as possible. Manufacturers will not accept splints made from dark colored wood. The color should approximate as closely as possible Russian "Aspen." The splints must also be impregnated by dipping in a solution of phosphate of ammonia.

The packing for export is a most important feature, as the splints must be arranged in such form as to be easily fed into the machines. Australian match manufacturers only purchase splints put up in the form of small barrels, one of which is illustrated herewith. These barrels consist of about 8 layers of splints, each layer being bound round with two light but strong pieces of string.

The layers, in which the splints stand upright, are about 12 to 14 inches in diameter, but a slight variation in this measurement would make little difference. In order to keep the eight layers in the form of a barrel, thin sheets of veneer or other suitable material are placed right round them, secured by three or more wires,

Across the top and bottom of the barrel thin sheets of veneer are also placed, these sheets being held in place by two or more wires placed lengthwise right round the barrels.

The advantage of having the splints packed in the manner described is that each layer can be placed direct into the machines without any intermediate handling, thus saving considerable expense incurred over those packed in an ordinary case. The form of the package illustrated is, if anything, on the frail side, and it is possible for Canadian manufacturers to devise a further covering of some cheap paper or other material which would prevent any waste or loss in the event of the barrels receiving severe handling in transit.

By expert opinion, based on the present output, it is estimated that the annual requirements of Australian match manufacturers are from 6,000 to 8,000 million splints. In the packing outlined above eight barrels contain one million splints.

Particulars relative to the present prices paid by Australian manufacturers are available to Canadian suppliers upon application to the Department of Trade and Commerce, Ottawa. (Refer File No. A 1376.)—The Weeky Bulletin.

Bathurst Lumber Company Issuing $1,000,000 in Bonds

The Bathurst Lumber Company, Ltd., of Bathurst, N. B., is issuing in New York $1,000,000 first mortgage five-year 6 per cent. convertible gold bonds. This makes a total capitalization of the company at the present time of $6,000,000. The other $5,000,000 are represented by an authorized common stock to that amount, of which $3,036,150 has been issued. The company's timber rights in New Brunswick and Quebec cover 1,000,000 acres, on which it is estimated there are 1,884,000,000 feet of saw timber and 11,136,000 cords of pulpwood. This timber has an estimated standing value of over $5,000,000. The company also owns the water rights at Grand Falls, on the Nepisiguit river, the second largest in the province of New Brunswick, affording a development of 10,000 horse power. It has 10,000 additional acres of land in fee, and owns and operates three saw mills, with a total annual capacity of 60,000,000 feet; an electrically-driven planing mill with an annual capacity of 25,000,000 feet; and a pulp and container board mill with an annual capacity of 30,000 tons. The total value of the property, exclusive of lumber is in excess of $2,000,000. The net earnings of the company last year were $157,098 from the mill cut. The pulp mill, which has only been completed during the past two months, is operating satisfactorily, and is officially stated to be developing a production which exceeds the estimated output of the engineers. The container board mill is nearing completion, and will be in operation from the first of the year. The president of the company is Senator Edwards, of Ottawa, and a number of Americans are on the directorate, namely: F. M. Kirby, Wilkes-Barre, Pa.; H. Crosby, Buffalo; F. L. Peck, Scranton; C. M. Carrier, Punta Gorda, Fla.; Cyrus D. Jones, Scranton; Hugh McLean, Buffalo; E. S. Peck, Scranton, and M. E. Priesch, North Tonawanda.

Detroit's Lumber Board of Trade

The Detroit Lumber Board of Trade, recently organized, have elected the following officers:—president, Wm. E. Brownlee; vice-president, John C. Lodge; treasurer, C. H. Hecker. The directors are:—W. A. C. Miller, Jeff B. Webb, Louis Schmeid, E. E. Hartwick, Geo. I. McClure and Arthur F. Hoyt. There are 115 charter members to the new board. Mr. Brownlee, the president is head of the Brownlee Lumber Company, one of the largest of Detroit's hardwood firms. Vice President Lodge is secretary of the Dwight Lumber Company, a prominent figure in the retail trade, and is also a member of the Detroit common council. C. H. Hecker is an official of the Detroit Lumber Company, whose main yards and branches constitute one of the largest retail lumber systems in the middle west. The idea of the organization, so far as membership is concerned, is to include all who are engaged in the lumber business, either as producers or sellers. The membership is divided into three classes:—Class A—retailers and wholesalers operating yards in Wayne County (the county in which Detroit is located); class B—wholesalers and manufacturers operating sales offices only in Wayne County and woodworking manufacturers; class C—lumber and sash and door salesmen not maintaining offices in Wayne County.

Much of the business of the board will be to co-operate in the national movement for increasing the consumption of lumber products. The annual fees are graded according to yearly sales of members, the minimum being $25 and the maximum $200.

Committees have been appointed upon organization, membership and finance; newspaper publicity, direct advertising, permanent exhibit and public speakers; and commercial legislation. During the first week in January a dinner will be held at which architects, builders and others interested in construction will be invited to be present.

Australia's Imports Show Decrease

A Drop of Nearly 75,000,000 feet in Receipts of State of Victoria—Consumption and Stocks also Decline

Victoria is the only Australian state in which (for a long period) a detailed compilation has been made of the imports, local consumption and stocks of oversea timber held to June 30, in each year. Practically all the timber was discharged at Melbourne. While New South Wales is the largest timber importing state, the comparative statistical data appended, for the last two years, can be accepted as an illustration of the reduction in importations and the decrease in both consumption and stocks of timber held throughout the Commonwealth. As compared with the previous year, the importations declined by 74,439,000 super. feet, the consumption by 49,280,000 super. feet and the stocks held on June 30, 1915, show a contraction of 16,401,000 super. feet. The war, the recent drought (with a consequent decline in building), and the lack of freight facilities have as in other lines of imports, formed a combination of adverse circumstances which is forcibly reflected in the several accompanying schedules.

Particulars of imports and consumption for the twelve months ended on June 30, 1915, together with the stocks held on that date in the State of Victoria—in comparison with the previous year—are as follows:—

Imports Into Victoria

	1913-14 Sup feet.	1914-15 Sup. feet.	+Increase —Decrease
Red deals	4,778,000	909,000	— 3,869,000
Dressed flooring, lining and weatherboards	51,453,000	35,743,000	—15,710,000
Spruce and hemlock	5,235,000	3,272,000	— 1,963,000
Oregon (Douglas fir)	50,406,000	17,973,000	—32,433,000
Sugar, yellow pine and door stock	3,669,000	1,433,000	— 2,236,000
Redwood	13,727,000	10,478,000	— 3,249,000
American shelving	25,000	74,000	+ 49,000
Ned Zealand kauri	4,096,000	3,275,000	— 821,000
New Zealand pine and rimu	13,947,000	12,400,000	— 1,547,000
Clear pine	73,000	23,000	— 50,000
Pacific pine	13,200,000	590,000	—12,610,000
	160,609,000	86,170,000	—74,439,000

Consumption in Victoria

	1913-14 Sup feet.	1914-15 Sup. feet.	+Increase —Decrease
Red deals	3,991,000	2,629,000	— 1,362,000
Dressed flooring, lining and weatherboards	47,979,000	30,622,000	—17,357,000
Spruce and hemlock	4,817,000	4,967,000	+ 150,000
Oregon (Douglas fir)	40,314,000	29,749,000	—10,565,000
Sugar and yellow pine and door stock	3,202,000	2,980,000	— 222,000
Redwood	14,572,000	12,227,000	— 2,345,000
American shelving	198,000	108,000	— 90,000
New Zealand kauri	4,062,000	3,035,000	— 1,027,000
New Zealand pine and rimu	13,212,000	13,107,000	— 105,000
Clear pine	105,000	72,000	— 33,000
Pacific pine	19,402,000	3,075,000	—16,327,000
	151,854,000	102,571,000	—49,283,000

Stocks in Victoria

	1913-14 Sup feet.	1914-15 Sup. feet.	+Increase —Decrease
Red deals	3,583,000	1,863,000	— 1,720,000
Dressed flooring, lining and weatherboards	18,454,000	23,575,000	+ 5,121,000
Spruce and hemlock	4,691,000	2,996,000	— 1,695,000
Oregon (Douglas fir)	21,464,000	9,688,000	—11,776,000
Sugar and yellow pine and door stock	4,362,000	2,815,000	— 1,547,000
Redwood	6,169,000	4,420,000	— 1,749,000
American shelving	96,000	62,000	— 34,000
New Zealand kauri	5,009,000	5,249,000	+ 240,000
New Zealand pine and rimu	10,210,000	9,503,000	— 707,000
Clear pine	95,000	46,000	— 49,000
Pacific pine	2,780,000	295,000	— 2,485,000
	76,913,000	60,512,000	—16,401,000

Laths and Pickets

Importations of American laths and pickets were 10,630,000 pieces and 658,000 pieces respectively for 1914-1915. The percentage decrease in imports for the year ended June 30, 1915, compared with 1913-1914, is 53.65 per cent., whilst consumption for the same period is 32.46 per cent less. The quantities received since June 30 and coming forward indicate no dearth of supplies on the present basis of consumption.

Safety Matches in Australia

Inquiries having been received from Canada relative to marketing matches in Australia, the particulars embodied under this heading are submitted for the information of Canadian manufacturers.

It shoud be particularly noted that phosphorous matches are prohibited from importation into the Commonwealth.

The wood matches usually imported into Australia are the impregnated safety matches—to strike on the box—being of white timber with brown heads, packed in boxes each containing 60 sticks; a dozen of these boxes are wrapped in paper packets and 600 packets (50 gross) are packed in a case—the case being zinc lined. Generally, the shipping companies will not accept such cargo unless the zinc lining is provided, and buyers usually stipulate for lining in this way. Quotations have been occasionally made for strong kraft paper lining, but this is not generally acceptable to importers.

To comply with the Commerce Act, each box of matches has to be stamped with the country of origin and the average number of sticks per box, for example "Average contents 60 matches. Made in Canada."

According to the old customs tariff, each brand of the matches had to be registered in Australia, otherwise an extra duty of 7d. (14 cents) per gross of boxes had to be paid. Under the new tariff this provision is omitted but until the tariff is passed by Parliament the Customs demand this extra duty being paid as a deposit. The customs duty is now 8d. (16 cents) if made in the United Kingdom only and 1s. 2d. (28 cents) if made in other countries—including Canada—per gross of boxes, each box not to contain more than 100 matches. If 100 matches per box is exceeded extra duty at full rates has to be paid.

Countries of Origin

Prior to the war, the imported safety matches were chiefly Swedish and English, to a small extent Norwegian, Dutch, Austrian and Belgian, but none of the latter were popular on account of the qualities offered.

Since the outbreak of the war, practically the only matches obtainable under fresh contracts have been Japanese, while limited supplies of Swedish, English and local makes have been provided under old contracts. A few Swedish have been quoted at 3s. 6d. (85 cents) per gross c.i.f. & e. Melbourne and Sydney, equal to about 4s. 10d. (1.18) delivered into warehouse, duty paid and less 2½ per cent. discount. Local matches have been supplied at 2s. 9d. (67 cents) per gross, less 2½ per cent., delivered. The local matches are packed in paper lined cases and in a number of instances only contain 40 to 50 matches per box.

Japanese safety matches are now quoted at 1s. 6½d. (37 cents) per gross, c.i.f. & e. Melbourne and Sydney, equivalent to about 2s. 10½d. (70 cents) per gross, less 2½ per cent. discount, delivered into store.

Prior to the war, based on the old rate of duty 6d. (12 cents) to the United Kingdom and 1s. (24 cents) to all other countries, English and Swedish matches were sold at about 2s. 1½d. (51 cents) per gross, less 2½ per cent., delivered but with the extra duty and much increased freights—together with the advance of raw materials—these prices are no longer possible.

The quotations given herein are for what is known to the trade as "full sized matches" averaging 60 sticks to the box, which is the box looked for by retail buyers.

A few standard sample boxes of the safety matches used in Australia can be seen at the Department of Trade and Commerce, Ottawa.—Weekly Bulletin.

Canada's United Kingdom Exports Growing

In the November 20th issue of the Timber Trades Journal, of London, England, we are pleased to note an interesting reference to the Special Issue of the Canada Lumberman which was published on November 1st. "The promotion of export trade," says our contemporary, "is a predominant feature of the issue of the Canada Lumberman dated November 1st. Nicely printed, as usual, on good paper, our influential contemporary contains many illustrations and descriptive articles, the sole object of which is to bring to the mind of the reader the fact that Canada has an enormous capacity for the production of those products of wood that will be required in the rebuilding of the war-devastated areas of Europe." The Timber Trades Journal then quotes briefly from our Special Issue and concludes as follows:—"We can assure the Canada Lumberman, its readers, and our own subscribers in the Dominion that we will do our best in assisting the further use of Canadian woods on the Continent of Europe. But Canada need not wait until the war is over for an increasing market on this side; in truth she is not waiting, for her exports of sawn wood to the United Kingdom during the past ten months were 936,776 loads, valued at £4,222,000, against 674,191 loads, valued at £2,197,000, for the corresponding period of last year. We hope that these exports will continue to grow year by year."

B. C. Log Production During November

The B. C. forestry department has issued the monthly statement of the cut in the province, giving the figures for November. There were cut in the province 47,436,313 feet, board measure, of saw-logs, 291,577 lineal feet of piles and poles and 9,386 cords of ties, shingle bolts and posts. By districts the cut of sawlogs scaled was: Vancouver, 31,319,771 feet; Cranbrook, 6,953,170 feet; Nelson, 3,572,906 feet; Island, 3,201,743 feet; Vernon, 1,037,901 feet; Kamloops, 790,541 feet; Prince Rupert, 482,769 feet. In the Nelson district 203,992 lineal feet, and in Cranbrook division, 85,370 feet of piles and poles were cut.

Breakage and Bonus in Logging Operations

The subject that has been allotted to me is "The Breakage of Timber"—the old, old subject that originated with the felling of the first tree in history, and has continued to haunt all loggers and timber owners, not as the proverbial skeleton in the cupboard, but as the living terrible fact in plain view at all times.

There are two great destroyers of timber: (1) Destruction by fire; and, (2) Destruction by breakage.

Destruction by breakage must be divided into two classes, namely: (a) That breakage which cannot be helped, and which is sometimes necessary for the saving of more valuable timber; and, (b) that which is caused by carelessness; inexperience; improper management; incompetent judgment; excessive speed on the part of timber fellers in their attempt to fell a large scale in a given period of time to secure additional pay or bonus money; and failure to have all windfalls bucked ahead.

Heavy Percentage of Breakage

Before going any further let us go into the matter of the percentage of breakage. One authority, discussing this problem, insists that one-third of all the timber—taking it straight through—that is felled, on good and bad ground, is destroyed by breakage, and adds that two-thirds of this enormous waste is due to carelessness. Other authorities are less severe in their assertions and place the average breakage of all operations at between five and fifteen per cent. As a matter of fact, can anyone definitely state that he has the actual figures that will show the real percentage of the original stand of timber that has been left on the ground, after all merchantable logs have been removed? Is it not a fact that most of the percentages of breakage that we hear about are for the larger part figures of estimation or guess work? A well known gentleman informed me a few weeks ago that in one operation the breakage amounted to 37 per cent—yes, and he made that assertion with a smile on his lips. Just think of it—37 per cent. of a beautiful stand of this "God-given—man destroyed" resource lost forever to the uses of mankind. Further on in his conversation this gentleman added: "Our labor cost of felling has been reduced considerably this year." But at what a cost. How trifling must be the saving of a few cents per thousand feet in this one phase of felling when compared to the man who owned the timber and who had paid the taxes.

Results Actual Scale Record

I present for your interest some information taken from actual scale records. It must be stated that the timber under consideration was an old growth of yellow (Douglas) fir, western hemlock, cedar and spruce, the stand being, I should imagine, between 80 and 100 M to the acre. The ground was rough. The fellers were operating under a bonus system, and a wood's scaler was employed to scale after them. I am not going into the details of the bonus system. My particular interest being the breakage, it gives me pleasure to cite a passage from my files.

For one week, in which five sets of fellers were working, the number of set-days was 27; the total number of trees felled numbered 311, containing in all 1,082,565 feet B. M. (Spaulding scale rule) in merchantable logs. The average scale per set-day amounted to 40,095 feet B. M. The actual breakage of timber amounted to an an average of 3,988 feet M. M. per set-day; or, approximately 9 per cent. of the stand of timber felled during this week was broken up or left on the ground. So, during this week five sets of fellers were accountable for 107,676 feet of broken, valueless timber. Supposing the stumpage to be worth $3.00 per M, then these five sets of fellers smashed $323.03 worth of timber. The labor cost (not including the overhead charges against them for the period) amounted to $184.85, plus several dollars bonus money distributed among the scale efficient sets.

Here then is the climax. There was a waste in value amounting to 57 per cent. more in broken timber than the value of the wages paid the men for the work. Or, to satisfy myself that the meaning of these figures will be clear to you, it can be stated that each set received $6.85 per day—and smashed $12.00 worth of timber, each and every day during the week. That is of course basing the stumpage at $3.00 per M.

As I have heretofore stated, these men were working under a bonus system and, from what I understand, the management is satisfied with the working of it. The principles for which the system stands are working out. As with other "Output Bonus Systems" the main idea is to reduce the cost of felling by increasing the output, paying the men for additional labor. The system is clever so far as it goes.

Some Bonus Systems Increase Breakage

I am not attacking any particular felling bonus system, but I will rigorously attack any and all methods that will have the least tendency to increase breakage. The felling of each tree is a problem of its own and requires an amount of study, thought and keen judgment borne of experience. I am suggesting that any system that will offer remunerative incentive for faster work and bigger output will tend to cause less care on the part of the fellers in their natural rush and endeavor to secure the additional bonus money offered.

By the increased pace of the men and the bonus money paid for faster work, are the men who own the stumpage, logging plants, machinery, etc., getting all the timber they should get?

Will the decreased cost of felling due to these bonus systems overcome the value of waste broken timber?

Is bonus going to increase breakage?

These are vital questions to any timber owners, capitalists, bond holders of timber lands, timber factors and cruisers, as well as logging operators. They are particularly vital to men who are contemplating the engineering of bonus systems for their own fellers in their own operations, operating upon their own holdings, and still more vital to timber owners who contract the logging of their timber to contracting logging companies.

Fire Loss Diminished

Fire takes place occasionally, but breakage takes place every day, rain or sunshine, that your timber fellers hew and saw. To safeguard the valuable forests against the old enemy Fire, numerous laws have been enacted, Fire Protective Associations have been formed, and the fire hazard has been reduced magnificently. E. T. Allen, at the Congress at Bellingham last year, delivered a report on the progress of co-operative fire prevention and stated that the actual loss by fire was a thousandth of one per cent. of the timber protected.

I look forward to the time when some able gentleman will deliver a report on the progress of co-operative breakage prevention.

Breakage is Largely Preventable

Breakage, two-thirds of it at least, is caused by the overt acts of man. Thousands and thousands—yes, millions of feet of sound timber that should have been converted into merchantable logs have been thus wasted, are being wasted to-day and will continue to be wasted unless you gentlemen combine to check the further ravages of this too slightly studied waste, using the same co-operative spirit that you use against the fire menace. My advice to you is this: Don't be satisfied with an estimate given to you by one of your executive employees of the breakage on your own operations; have it scaled by a competent scaler and then yoyu will have the real figures. Be sure that you know what your percentage of breakage is before you engineer your bonus system for your fellers. Otherwise, you will not be certain whether your breakage is decreasing or increasing.

Don't lose sight of the fact that increase of waste of merchantable timber that will remain on your cut-over lands, after the logger has removed his machinery, will increase the cost of clearing the land when the time comes along when you will want the plough to work and not the axe or donkey engine. Breakage undoubtedly to a great extent materially affects the value of your cut-over lands for this reason—the greater amount of rubbish left on your hands, the greater the cost of clearing and naturally, the reduction in value per acre.

What has been the greatest argument against contracting felling in logging operations. The answer I think you will agree is breakage. In the natural attempt of the contractor to make money, maximum output by speed and not "Safety first" has been his axiom, with the result that excessive breakage has been the report of your own examiners after the work of the contract has been completed.

Bonus System Based on Reduced Breakage

I suggest that the "greater the output, the greater the pay" bonus system is a first cousin to the felling contract that most of you with sound reasoning object to, and this type of a bonus system contains many of the dangers of the contract. Of course where you are operating the afore-described system you control your own fellers, but your bonus system is to a certain extent a conglomerate of small contracts, one for each set of fellers.

Because you have submitted to breakage in the past does not definitely allow of there being no remedy. Scientists of many ideals are striving to safeguard these forests for you; tree pathologists are making studies of tree diseases and are searching for a preventative against conk, punk rot, and fungi of every known description; entomologists are making studies of damage by insects and are daily in their laboratories making every effort to cope with the trouble for your timbermen; tree surgery has arrived in this country to stay, and has been practiced by the French Government for years, and all of this to save timber and you calmly allow 10 per cent. of your own to be destroyed.

There is a remedy for everything, so we are told, and if so, a remedy will surely be found if scientific loggers collectively search for it. Perhaps a suggestion may possibly help you. It has been definitely proved that bonus systems will get for you the desired

*An address by Neol Aylmer Dew, before the recent Pacific Logging Congress.

results, because of the monetary incentive offered to employees. Money talks. Why not offer remunerative incentive for reduction of breakage? Why not appeal to the brains of your fellers and offer them greater remunerative incentive than the present bonus system offers to brawn?

First of all make a breakage study—get the exact percentage and not guess work percentage. With this formidable data in hand of what you have already lost to guide you, you can work out a bonus system for your fellers that shall embrace a standard of breakage. I suggest that the standard shall be the exact percentage ascertained by your scaler. Let bonus then be pair at a ratio determined by the value of the stumpage, at a bonus rate for each 1 per cent. of the saving under the standard. To illustrate: Let us suppose that you have found that your breakage has amounted to 10 per cent., that your stumpage is worth to you to-day $3.00 per M, and that your fellers are averaging 30 M feet per set-day (in some camps felling sets average over 40 M and sometimes as high as 50 M) and that each 30 M is manufactured into merchantable logs. Approximately then standing trees containing 33,000 feet produce 30 M feet of merchantable logs and 3,000 feet is broken up and left on the ground by each set each day. In relative values each set is felling $99 worth of timber on a daily average; you are receiving $90 worth of logs and rubbish to the value of $9 is left on the ground.

Suppose that you offer to pay your fellers 10 per cent. of the value of the stumpage saved, or in this suggestive case 9 cents bonus for every 1 per cent. under the standard. A table of this sort would result.

Suggestive Table

Output per Set—Day of 10 hours 33,000 ft. B. M. Total 30,000 ft. Productive	Breakage Per Cent—Feet	Value of Stumpage Broken (at $3 M)	Cash Bonus
	10%—3,000 B. M.	$9.00	
	9%—2,700 B. M.	8.10	$0.09
	8%—2,400 B. M.	7.20	.18
	7%—2,100 B. M.	6.30	.27
	6%—1,800 B. M.	5.40	.36
	5%—1,500 B. M.	4.50	.45
	4%—1,200 B. M.	3.60	.54
	3%— 900 B. M.	2.70	.63
	2%— 600 B. M.	1.80	.72
	1%— 300 B. M.	.90	.81
	—%— ... B. M.	.00	.90

This of course is purely a suggestive table, and alterations should of course be made to suit any requirements and to comply with every and any stumpage value. You would also have to figure the proportional bonus that in your mind you believe would be paid to the head and second fellers. It is quite possible that many of you will consider that the monetary incentive is not great enough and it will be a question of how much you feel that you will be able to pay for the saving.

You must take into consideration that you will have to engage the services of a compettnt scaler who will be able to distinguish readily what should have been merchantable timber and what would have constituted valueless timber, if unbroken. It must be borne in mind that in speaking of breakage I am referring to sound timber that was in the standing tree, and which if unbroken, would have been converted into merchantable logs. Rough knotty tree tops, valueness cull timber and small limbs are of no known value, and whether broken or not, must not be considered "breakage." It wouldn't be fair to charge up against a set of fellers that portion of a tree that was rotten half way up and happened to break in the rotten spot, and which your head bucker has marked to be bucked out.

Give Fellers a Square Deal

Give your fellers a square deal. See that all the windfalls are bucked ahead of the fellers. This should be rigorously enforced by the management. I have the data of one operation where the superintendent dispensed for a considerable period of time with the windfall buckers. The buckers of the green timber had to buck these windfalls after the trees had been felled over them. I have no data as to the excessive breakage due to this method of procedure, but you will not be surprised to learn that as soon as windfall buckers were reinstated by the management the felling output average per set-day immediately increased and the records of the buckers showed vast improvement.

In the matter of costs, felling and bucking are in many cases bracketted together. The costs, however, should be treated singly. The cost of bucking will be materially affected by better felling and less breakage. There will be fewer cuts to make, because there will be fewer breaks to cut out.

Better scientific felling will ensure better bucking shows, and there will not be so much rubbish for the yarding crews to fight. Buckers working under "Greater Output" bonus systems, at least those that are wise, will always try to get placed behind the fellers that save their timber best because it means a better chance for them to make bonus. Timber examiners, or head buckers as we term them, are not quite the same type of men as the bull buckers of years ago. The old bull bucker made the difficult cuts besides superintending the work of the buckers and had no control of the fellers. To-day, however, the head bucker is generally a master timber feller, and the fellers in his charge know that he is.

When engaging the services of a man for this position be sure that he has had many years of experience along this line of work. Your fellers will surely put it over the inexperienced man who is not competent to cope with a felling problem that one of his head fellers asks his advice about. Your head bucker is a very important man to you. Look up his records very carefully before you hire him. A good man is worth considerably more to you than you are in the habit of paying for this position.

Combination Felling and Saving System

Felling output bonus systems have been installed to reduce the costs of felling and it would be quite possible to install a saving bonus system in the same operation; an amalgamation of the two could be arranged. I would suggest, however, that in the event of this being accomplished, greater monetary incentive be offered for saving than for output. With the two schemes, felling costs and breakage could be reduced at one and the same time.

"Care must of course be exercised that the gain through reduced breakage will be more than offset by the cost of the care exercised," says one authority. "Generally speaking there is a relation between the loss through breakage and the value of the stumpage increases in value. This suggests that the method used must be considered in connection with cost and return."

My fervent desire is to learn that some progressive gentlemen are going to make up their minds to go into this question and that we shall soon hear of energetic steps being taken to reduce want on breakage of timber in our woods operations.

Heavy Losses from Breakage

As soon as those gentlemen who own timber get together and insist that their superintendents and foremen shall see that only a percentage of waste shall remain on their holdings, they will not only be putting money into their own pockets, but they will be protecting in no slight measure the future of the industry, and the general interest of the public. If you estimate the amount of timber that has been removed from the forests of Oregon, Washington, California, Idaho, Montana and British Columbia during the past twenty years and tell yourselves that 10 per cent. of the original stands were broken up and left on the ground, the figures and values will strike home the urgent necessity for some means that will eliminate the disaster that has continued its ravages ever since the hand of man felled the first tree, the disaster of yesterday and to-day.

Your timber lands are not only money to you, but money to the masses. You are even planting forests for the use of future generations. Don't you think it would be more economical to make use of all the timber that you own than to slaughter it when logging and at the same time sow seeds for new forests to cover up your faults?

Many centuries ago there lived a philosopher, one Marcus Aurelius Antonius. I will terminate this address by quoting from his wonderful writings: "If any man is able to convince me and show me that I do not think or act right, I will gladly change; for I seek the truth by which no man was ever injured. But he is injured who abides in his error and ignorance."

B. C. Mining Activity Helping Lumber Trade

Mr. A. B. Buckworth, formerly of Ymir, B. C., whose headquarters are now in Vancouver, recently made a tour of inspection of his timber holdings in the interior of British Columbia. In an interview upon his return he expressed much satisfaction with the outlook for the lumbering industry. Mining has received a new impetus during the past six months and is having a good effect upon the lumbering industry in the interior. Much of the difficulty experienced by interior lumbermen in marketing their lumber of late has been caused by the inability of the coast mills to secure transportation for export, resulting in their stocks being placed upon the prairie markets in competition with the interior product. The present situation, he said, was a difficult one, but both he and those whom he represented had full confidence in the outcome of conditions in the lumber business of the interior and were content to let their timber stand and grow, in the anticipation of a good market in the not very distant future.

The annual meeting of the National Wholesale Lumber Dealers Association will be held in Philadelphia, Pa., in March, 1916. The exact date has not yet been announced.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Wanted to Buy

1-15 million feet White Pine, Red Pine, Spruce, and Hemlock. Also Lath. Box 259, Canada Lumberman, Toronto. 22-1

Wanter to buy Cedar Ties. Apply Box 269, Canada Lumberman, Toronto. 23-1-2

Wanted to buy 1-in. cull Basswood and 1½-in. good Basswood. Apply Box 270, Canada Lumberman, Toronto. 23-1-2

Wanted for shipment whenever in shipping condition:
2,000,000 ft. 3 in. No. 1 Com. & Bet. Soft Elm
1,000,000 ft. 2½ in. No. 1 Com. & Bet. Soft Elm
1,000,000 ft. 2 in. No. 1 Com. & Bet. Hard Maple
500,000 ft. 2½ in. No. 1 Com. & Bet. Hard Maple
Box 274, Canada Lumberman, Toronto, Ont. 24-3

Wanted

10 cars 2-in. Hard Maple or Birch Common and Better. Apply Box 258, Canada Lumberman, Toronto. 22-1

Wanted

Birch and Soft Elm 1 in. to 4 in. dry or new cut. State quantity and full particulars. The London Lumber Co. Ltd., London, Ont. 22-1

Hemlock Wanted

Want block about 500,000 feet 1 in. and 2 in. Hemlock. Write the Elgie & Jarvis Lumber Company, Limited, 18 Toronto St., Toronto. 1-1

Wanted

500,000 ft. or any portion 4/4 dry White Pine, Box grade, for immediate shipment to Boston, Mass. Widths to run 5 inches up, and lengths, 8 to 16 ft. Box 268, Canada Lumberman, Toronto. 23-2

For Sale–Lumber

For Sale

White Pine and Hardwood, estimated 300,000 feet, will cut to order. G. A. Patrick & Son, Delaware Saw Mills R. R. 2, Lambeth, Ont. 1-6

FOR SALE—Considerable quantity of hemlock ties suitable for Electric Railways, Sidings, etc., ready for immediate shipment. Monteith Bros., Rosseau, Ont. 24-3

We Have a Full Stock

of Hardwood, Hemlock and White and Norway Pine Lumber, Norway and White Pine Piling, up to 60 ft. Keenan Bros., Limited, Owen Sound, Ont. 3t.f.

Lumber For Sale

Purchasers of White Pine would save money in buying now from our three million feet, 1916 cut, because we require financial assistance. Sawing to begin early. Apply Box T., Sturgeon Falls, Ontario. 1-2

Lumber for Sale

100,000 ft. Spruce 5th quality and better, 3 x 3 8/14 ft. $15 per M. ft. 50,000 ft. Spruce and Hemlock Culls, 1 & 2 3 x 3 at $12.50.

One Million No. 1 & 2 1¼ in. cull Lath at $1.50 on cars Manseau Savoie & Co., Manseau, Que., on I. C. R. 22 1

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
c Montreal, Que.

White Oak For Sale

Thirty thousand feet White Oak, cut, 1, 2, 3, 4 inches thickness, various lengths from 12 to 32 feet. Also odd sizes, including squares 4, 6, and 8 inch. A snap for quick sale.

CAMERON & CAMERON,
24-3 Beaverton, Ont.

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

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Book-keeper of high caliber, several years' practical experience in Wholesale Lumber business, desires position; experienced cashier and well acquainted with office management and detail. Box 278, Canada Lumberman, Toronto, Ont. 1-1

Wanted

Position as Lumber Inspector or Salesman. Fifteen years' experience in lumber yards, mills and office; thorough knowledge of White Pine Grades or British Columbia grading; also a general knowledge of export grades for United Kingdom. First class references given. Apply Box 273, Canada Lumberman, Toronto, Ont. 24-2

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

Machinist wanted. First Class. Experienced in up-to-date saw mill practice. John B. Smith & Sons, Toronto. 24-24

For Sale–Machinery

FOR SALE—Second hand Bull Lathe, 60-in. swing, 84-in. bed. $150.00 cash; also a lot of Rubber Belting, 6 in. to 16 in., at Low Prices.

MOORINGS MACHINE SHOP,
1-1 40 Pearl Street, Toronto.

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

Machinery For Sale

One 150 h.p. Stationary Engine; two 75 h.p. Tubular Boilers; two Resawing Machines (with Circular Saws). Savoie & Co., Manseau, Que. 22-1

Engine For Sale

Corliss Engine, 150 h.p., 18 cylinder, 24-inch leather belt, heater and pump, first-class condition, no fault, changing plant to electric. Inspect at Guelph Lumber Co., Guelph, Ont. 24-3

Machinery For Sale

One McGregor Gourlay second hand Resaw, 54-in. wheels, carries 5-in. saws, machine in first-class condition, only used on light work. Located in Central British Columbia.

Two second hand McGregor Gourlay Q. Y. Planers and Matchers, one 9-in., one 15-in. wide, in good condition, ran every day till October, when fast feed Matcher was installed. Located in Saskatchewan. Box 275, Canada Lumberman, Toronto, Ont. 1-4

WOODWORKING MACHINERY FOR SALE:—1 10-in. Berlin four side Moulder; 1 New Britain chain mortiser; 1 Defiance rounder, borer and jointer; 3 pole rounders; 2 automatic knife grinders; 1 26-in. Whitney smoothing planer; 2 26-in. revolving bed double surface planers; 6 30-in. Ideal pedestal bandsaws; 1 20-in. American wood scraper; 2 two-spindle wood shapers; 2 power feed rip saw tables. H. W. Petrie Limited, Toronto. c

Saw Mill Machinery For Sale

Second-hand Machinery for Complete Saw Mill, all practically new, in excellent condition, including Bullwheel, Steam Kicker, Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8-ft. Waterous Bandmill, 5-saw Slab Slasher, 48-in. Edger, Trimmer, also Independent Lath-mill, and Filing Room outfit. Power Plant complete. Offers accepted for all or any part. On view at the Waterous Engine Works Company, Brantford, Ont. t.f.

Business Chances

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

Miscellaneous

Timber Limit For Sale

Newfoundland timber limit, 112 square miles, well situated right on railway and within several miles of ocean shipping port; will average nine cords pulp wood and two thousand saw logs per acre, spruce and pine. Present demand for pulp wood and with duty removed by Newfoundland Government, makes this an exceptional opportunity for investment at a minimum of outlay. Particulars from Box 277, Canada Lumberman, Toronto, Ont. 1-4

Automobile for Exchange

We have a "Light Six" Chandler, 1915 model, electric light, self starter, and all up-to-date equipment, in good condition. Cost new $2,350. Will sell in exchange for lumber, any kind of lumber, dead cull and better, and will make a big cut in the price of the car. J. & W. Duncan, Limited, 1801 Ontario East, Montreal. 24-3

30 Replies

are often received to "Wanted" and "For Sale" ads. on this page. Even 50 replies are not an uncommon return from the investment of the small amount a condensed ad. costs. And isn't that good business—to get right into close touch with so many people interested in what you have to buy or sell? For you can be sure their transactions with you will not end when they have closed the business your single ad. announced.

Blister Rust Spreading

The alarming character of the white pine blister rust and the economic loss which it threatens to the Northeastern and Western United States are sharply emphasized by four recent serious outbreaks on pine trees and currant bushes in Massachusetts and New York, says the United States Department of Agriculture. This disease was introduced on imported white pine.

In 1909 extensive importations of diseased white pine nursery stock were located and destroyed in New York and other Eastern states, and warnings were issued broadcast against further importation of white pine from Europe. In spite of these warnings importation continued even from the particular nursery in Germany which was definitely known to be the main source of disease, until finally in 1912 all such importation was stopped.

The white pine blister rust affects the Eastern white pine, the Western white pine, the sugar pine and, indeed, all of the so-called five-leaf pines, producing cankers on the stems and branches, killing young trees and maiming and disfiguring old ones. It also produces a leaf disease of currant gooseberry bushes. The fungus causing the disease must live for a part of its life on pine trees and part of its life on currants and gooseberries. The disease cannot spread from one pine tree to another, but must pass first to current bushes and then back to pine.

In Europe the disease has made the culture of American white pine impracticable in England, Denmark and Holland, and has seriously handicapped its cultivation in Germany. Since the trees which it attacks include three of the most important timber trees of the United States, the loss which this disease will produce if unchecked is very great. Fortunately, the disease is not now known to be present west of Buffalo, New York, but if it is not checked in the Eastern states its ultimate spread to the vast forests of the Rocky Mountains and the Pacific Coast is certain. The disease now occurs in three localities in New Hampshire, two in Vermont, ten in Massachusetts, two in Connecticut, five in New York, one in Pennsylvania and three in Ontario, Canada.

The disease could be controlled by the destruction of the diseased white pines or the complete destruction of all current and gooseberry bushes in the vicinity of infected pine trees.

Wood Ware Openings in England

Good Opportunities for Developing Export Business from Canada—Details of the Trade

A report upon the market in Great Britain for manufacturers of wood, sent by Mr. H. R. MacMillan, Special Trade Commissioner, is published in the Weekly Bulletin of the Department of Trade and Commerce of December 6th. Mr. MacMillan points out that Great Britain imports annually a considerable quantity of woodware and wood turnery. In 1913 the value of these imports was $44,098,426 and in 1914, $8,861,400. Almost one half of these came from the United States and the imports from Canada were the smallest from any country from which these goods were received. From 1910 to 1913, while the imports from the United States increased from $3,379,-958 to $6,684,326, the imports from Canada dropped from $538.829 to $252,739. Roughly, one-third of these goods are re-exported to British India, Nigeria, Australia, Argentina, and Ceylon, indicating the possibility of building up direct exportations to the latter countries from Canada. Shipments to Australia include skewers, dowels, clothes pegs and broom handles. The birch, beech and maple of eastern Canada and the alder of western Canada are suitable woods for these articles.

The most important imports into Great Britain under the head of manufactured wooden articles, etc., are kitchen and house utensils, toys, dowels, skewers, chair parts, broom handles, clothes pegs, brush-backs, birch squares for spools, handles and turned wooden boxes. These articles, with the exception of tool and implement handles are made almost exclusively from birch, poplar, beech, maple, basswood or spruce. The handles are made chiefly from hickory and ash. Maple handles, however, are exported to Great Britain from the United States. There should be many firms in eastern Canada favorably located to compete for this trade. Canadians could not compete in the trade for certain smaller wooden articles such as toys, turned wooden boxes and kitchen ware which are made in Europe of inferior birch and poplar in large factories with excellent machinery operated by women who get 40c a day or men who get 75s a day. The larger articles which require wood over 2 in. in diameter, or wood fairly free from knots, command higher prices and afford opportunities for the Canadian manufacturer. The following articles are imported in large quantities from the United States, and to a small extent from Canada:—Birch squares, 1¼ in., 1½ in., 1⅞ in., 2 in. square and 2½ feet, 3 feet, 3½ feet and 4 feet long. These are used for manufacturing spools and bobbins and for chair legs and the cabinet trade. Pin knots are admissable but no large knots. Quebec birch is preferred because it is clean and hard. Scandinavian squares in normal times sell at £9 per standard and 165 cubic feet, and about £12 may be secured for Quebec birch squares.

Dowels are imported extensively, chiefly from the United States. They are all birch and maple preferably, varying from 3-16 in. to 1 in. in diameter and 12 in. to 108 in. in length. The best selling sizes are ⅜ in. diameter, 36 to 48 in. long, which sell c. i. f. English port for 13s and 18s per thousand respectively. They should be tied in bundles of 200. Since the outbreak of the war the price has risen to 17s 11d for 36 in. and 23s 11d for 48 in.

Broom and mop mandles are imported from Finland, Sweden and the United States, the varieties being spruce, basswood, maple or beech. Spruce and basswood are preferred because of light weight. Sizes and prices per gross c. i. f. are:—

	1	2	3
50 in. by 1 1-8 in.....	14s.	12s. 0d.	10s. 6d.
50 in. by 1 1-16 in.....	13s.	11s. 0d.	9s. 6d.
48 in. by 1 in.	10s.	9s. 3d.	8s. 6d.
48 in. x 15-16 in.....	9s.	8s. 3d.	7s. 6d.

The report also gives details in regard to three-ply boxes in which Great Britain does a large trade with Japan, China, India and Ceylon.

The Commission agents specializing in Great Britain in these goods are very desirous of establishing new sources of supply. The names of the most important of these importers have been forwarded to the Commissioner of Commerce, Ottawa.

The B. C. Department of Lands has decided to appoint a lumber commissioner for Toronto and Eastern Canada. It is expected that the new commissioner will commence his work early in January. Further particulars regarding the office, and work of the new commissioner will be published in our next issue. A commissioner has already been appointed for the prairie provinces in the person of Mr. W. H. Houston, formerly of Nelson, B. C., whose offices are in Regina.

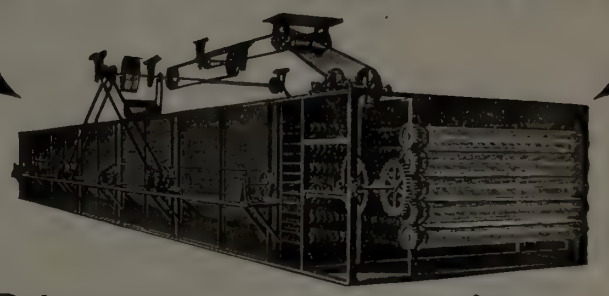
The Eagle Lumber Company, Limited, 97 St. James Street, Montreal, have sent to their friends an attractive calendar for the year 1916. "First Aid to the Injured" is the title of a fine colored picture decorating the calendar, and representing a group of huntsmen in their colored costumes, attending to an injured dog.

Union Lumber Co.
Limited

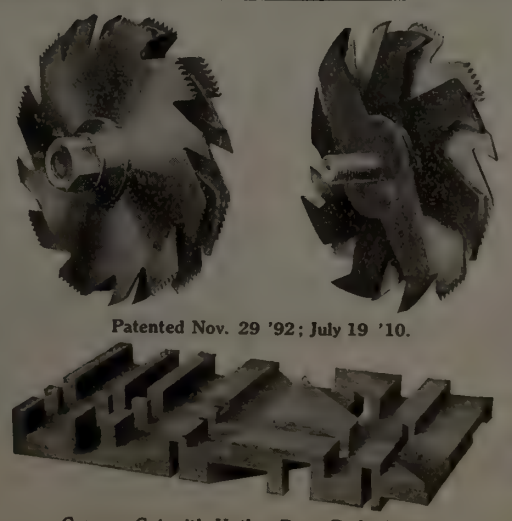
1 x 10/12 No. 1 Mill Culls
1 x 4/up Mill Run Spruce—wide average
4 x 5 Spruce

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

PROCTOR VENEER DRYER



Dries enormous amount of veneer perfectly flat and pliable at minimum cost, without checks or splits
Send for catalog and list of users
The Philadelphia Textile Machinery Co., Philadelphia



Patented Nov. 29 '92; July 19 '10.

Grooves Cut with Huther Bros. Dado Heads

Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

Write for New Illustrated Catalog.

HUTHER BROS. SAW MFG. COMPANY, Inc.
1103 University Ave.
ROCHESTER, N. Y.

Review of Current Trade Conditions

Ontario

Throughout Ontario, at the close of the year, the lumber trade and industry was in a remarkably buoyant condition, caused by increased demand and better prices than those which have prevailed for some months past. The situation is an easy one to understand, but none the less welcome. It is the result of conditions which have been combining during the past several months to create in Canada one of the greatest periods of industrial and commercial activity that she has experienced since the days of the late lamented real estate boom. When the enormous orders for war munitions and supplies required by the Allies commenced to reach Canada, most of us felt that they would mean much improvement in the general trade conditions, but few were sanguine enough to expect a period of activity and prosperity such as has now set in. The conditions which prevail to-day are beyond the dreams of even the most optimistic Canadians of a few months ago; and although they have come about almost over night, they are none the less sound or likely to be lasting.

The war order business has simply started the circulation of money and the rest has been easy. When the war order business comes to an end, Canada will—if all the signs can be relied upon—be in the middle of a period of great and general industrial activity, sufficient in itself to take care of the depression which might otherwise result if the war order business were the mainstay of trade. Our crops have supplemented the war orders and brought great quantities of ready money into the country. Many lines of industry which are new to Canadians are being developed successfully to fill the demand for goods which formerly we had to import. Already there are signs that the building trade will soon be at least normal. If we are not greatly mistaken, next summer will see a greater volume of building operations, not perhaps of a residential nature, but of an industrial nature; that is to say, the erection of plants and warehouses to take care of our rapidly increasing volume of general trade. If this is a correct interpretation of present conditions, the building of residences also will not be long in reaching a more normal stage, although there are, of course, throughout Canada large numbers of unoccupied houses. However, the mainstay of the lumber business, the manufacturers who use lumber as a raw material, the railroads, and the new factory buildings are all promising a prosperous year.

Under all these conditions the opinion is now general that we may look forward to a good season's lumber trade during 1916. Statistics go to show that production will not be excessive this winter, and that stocks in all hands are now reduced to a very healthy minimum, from the point of the man who is in the lumber business; that is to say, stocks are badly broken in retail yards, are not heavy in wholesalers' hands and are well sold out by manufacturers. We can see nothing ahead of the lumbermen in Ontario but a good year, and now that the prices of southern pine has gone sky high, and hemlock is continually growing firmer in the United States we will have much less of our two old bogies to worry about than we have ever had in the past.

Eastern Canada

Lumber trade conditions at Montreal are quiet, as is to be expected at this time of year. There is, however, a much more optimistic feeling among the trade than there was a short time ago. Orders are coming in at a fairly good rate. One important wholesaler states that he is now doing as much business as he was in July. The volume of trade in shell box stock has fallen off to some extent as the Munitions Board has not been taking quick delivery of boxes. Shell box makers do not care to keep boxes in stock in large quantities and production has therefore fallen off. The United States market continues on an active scale. Trade with Great Britain is very quiet, as it is practically impossible to obtain space on vessels leaving ports in the eastern States during February or March.

The demand for western spruce frames at Boston is fair and offerings are light. Quotations are very firm, with the base price at $26. Random continues active. The high cost of southern pine is turning attention to the spruce market. Spruce covering boards, 5 in. and up wide, 8 ft. and up long are bringing $20, and matched boards 10, 12, 14 and 16 ft. are bringing three to four dollars more. Considerable improvement is reported in hemlock at Boston both in the demand and in the prices, as a result of the strength of southern pine. Quotations for hemlock boards have advanced fully $3, from the lowest point last summer, and they continue to grow firmer. Good clipped boards 10, 12, 14 and 16 ft. are bringing $22, and one eastern manufacturer has put his price at $22.50. Shingles at Boston are steady. Good brands of extra white cedars are offering at $3.40 and some fairly good white cedars of the same grade are to be had at $3.30. Clears are quoted at $3 and a few sellers will consider $2.90. Red cedars are offered at $3.45 to $3.55, and are quiet. Lath is moving well for this time of year. For 1⅝ in. the usual quotation is $4.25, but a few manufacturers are asking five to ten cents more. One Canadian manufacturer is quoting $3.75 at Boston on 1½ in. lath, but some offerings are available at twenty to twenty-five cents less.

Prices of spruce dimension at Boston have advanced recently. For 10 in. dimension spruce the price is now $27 to $28; for 12 in. dimension $28 to $29. 8 in. and under is bringing $26, and 10 and 12 in. random lengths, 10 ft. and up, are selling at $25 to $26.

Great Britain

One subject only, is interesting the lumber merchants of Great Britain to-day, namely, the extraordinary prices now being paid and the apparent impossibility of ever reaching a limit. Timber merchants in general are optimistic, and with good cause. Many other lines of industry have profited to a greater extent by the war than the timber trade. The boom in the timber trade, however, although concerned with government and army work at present, is likely to continue for some time when these sources of demand have declined. In fact it is likely to be increased rather than to decrease, and timber merchants are well justified in looking upon the whole situation hopefully. For many years after peace is declared there should be a good market for wood, far exceeding the ordinary supplies.

The situation in connection with Swedish stocks continues very uncertain. Germany still appears to command the Baltic largely, in spite of British submarines, and if the position should be unchanged at next open water, British trade in sawn goods with Sweden will depend upon the maintenance of the present attitude on the part of German authorities.

The spruce market at Liverpool is in a satisfactory condition. Stocks are not heavy and holders are adopting an independent attitude with a view to getting full value for their stocks. The volume of business at Liverpool is good. Recent imports have been only moderate. Further advances in all prices are reported from Manchester and quotations for spruce and floorings have reached extraordinary figures, with a continued upward tendency. Spruce prices were recently quoted at £22 10s for 3 x 11 in.; £19 10s for 3 x 9 in.; £19 10s for 3 x 9 in., £19 for 3 x 7 and 8 in., and £19 10s for floorings, c.i.f. basis. All grades of pine at Manchester have also advanced. 3 x 11 in. thirds were sold recently at £25 15s per standard ex yard. All timber consuming industries are full of work, mostly on rush orders. The outstanding question is the matter of labor, which is becoming critical.

At Glasgow, the bulk of the trade is on government orders. Prices of white deals are advancing all the time, but the demand keeps up. The present freight rate from St. John of 200s per standard makes it necessary to obtain, for example, £23 for 3 x 11 in. ex quay. It would cause no surprise if spruce were to become dearer than pine before long.

United States

The year 1915, which commenced in the United States with industrial depression and widespread pessimism, has gone out amid such industrial and commercial activity as the country has never before known in all its remarkable history. Among those who have cause to rejoice over the wonderful recovery, the lumbermen of the United States are especially favored. They are looking forward to the new year with feelings of confidence such as they have not enjoyed at any time during the seven years immediately preceding. Industrial activity in the United States to-day is at high tension. The country's crops during 1915 have been beyond all the dreams of the optimists. The transportation lines throughout the United States are bearing enormous burdens of freight to all parts of the country. Labor is fully employed and capital is strained in production. Better times have dawned for the poor as well as the rich, and all these blessings, added to the unique blessing of peace, place the people of the United States in the most enviable industrial position of any nation in the world to-day.

The steel industry, which is to a great extent responsible for prosperity in the lumber business, is enjoying unprecedented activity, which, moreover, is not entirely based upon temporary war orders, but largely on demand from the railroads, ship yards and building and structural enterprises. The steel mills are booked to their capacity

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

for many months to come. On the Atlantic coast, leading ship yards have under contract for construction steamships representing an investment of over 75 million dollars. Pacific coast shipyards have closed contracts for ships that will cost more than 12 million dollars. On the Great Lakes the ship-building activity has been renewed. Traffic of every description has commenced to congest the railroads; in fact, every factor of national prosperity is to-day working at high pressure. The lumber industry and trade can, therefore, do nothing but fall in line and enjoy a record period of success.

Details in connection with the various branches of the lumber industry are all similar. The outlook for the fir manufacturers on the north Pacific coast is better than it has been for many long years. Southern Pine Association reports are excellent. Manufacturers have been overwhelmed with the demand and stocks have been wiped out or disturbed so greatly that many orders are being declined. The foreign demand is strong. The railroads are buying freely. Line yards are hurrying to cover their requirements far into the future. Yellow pine mills for the first time in many years find themselves in a position to name the prices for their products. The volume of trade in northern pine continues large at important centres such as Chicago. Wholesalers report an increased request for upper grades. Retailers' stocks are limited. Similar conditions prevail at Minneapolis. At New York, higher prices prevail and the building situation is improving quickly. At North Tonawanda the trade is standing up well for this time of year and shows a big improvement over the corresponding period of last year.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Montreal Trade Continues Brisk

Montreal, December 24th (Special to the Canada Lumberman): At this period of the year one generally expects the lumber trade to be very quiet; the holidays naturally interfere with business, and construction, except for repairs, is almost dead. This year, however, there is a much more optimistic feeling. Wholesalers report that orders have been coming in at a fairly good rate, the manager of one firm stating that they were doing as much as in July. This is, of course, not true of all concerns, but it indicates that substantial business is still being transacted. Orders for box lumber have diminished, owing to the fact that the Shell Committee is not taking quick delivery of boxes, with the result that the goods are being stored. This retards production, as the various makers find it impossible to warehouse the large quantities which would be made at the normal rate of manufacture.

The orders for the United States are still satisfactory, the briskness of general commerce there helping Canadian wholesalers who cater for that market.

The representative of a local firm exporting to the United Kingdom, who has returned from a visit to several New England ports, states that he found it impossible to obtain freight space for shipments to London during February and March, the steamship companies declining even to quote terms. He also states that he cannot obtain room in vessels from St. John, N. B.

The sulphite pulp market is buoyant, owing to shortage of European supplies to the United States and the higher prices obtained in Europe. Quotations in Canada have risen considerably, with the outlook favorable to still further advances. Stocks are being bought up very quickly. A fair amount of pulp has been sent to England, and larger quantities would have been purchased for the same account had not lack of shipping accommodation precluded transportation. Ground wood is quiet.

Lachine Canal Lumber Shipments Doubled

According to the official figures of the traffic passing through the Lachine Canal during the past season, the shipments of lumber from Ottawa points to the United States more than doubled. The total was 19,107,600 feet board measure, an increase of 10,486,800 feet. In addition there were 41 rafts of 5,000 lineal feet each, a total of 205,000 lineal feet, this being a considerable decrease as compared with the previous year. On the whole the pulpwood and pulp traffic was not so large. Pulpwood passing up to Canadian ports totalled 23,759 cords, an increase of 1,019 cords, while to United States ports the total was 114,192 cords, a decrease of 5,459 cords, the aggregate decrease being 4,440 cords. No pulp was carried to United States ports, against 1,600 tons in 1914. 26,137 tons, however, went to United States ports, as compared with 36,012 last year, the total decrease of this traffic being 11,475 tons.

Montreal Exports Show Large Increase

Montreal, December 20th—(Special to The Canadian Lumberman):—With two exceptions, the principal exporters from the port of Montreal increased their shipments to the United Kingdom and European continent during the past season. The figures given below show a total increase of 35,113,623 feet, due to the impetus given to the demand for spruce and birch owing to the war. The Bennett Lumber Company come into the table for the first time. They are a new firm, so far as the Montreal export trade is concerned, and make a good showing. Watson and Todd, Ltd., continue to head the list, the slight decrease in their shipments being due to the smaller call for pine, in which they specialize. Mr. E. M. Nicholson has the largest increase and is now in second place, because of large orders for birch. Considering the poor outlook at the beginning of the season and the difficulties attending high rates and scarcity of space, Montreal firms have done exceptionally well during the past year.

	1915 Ft. B. M.	1914 Ft. B. M.
Watson & Todd, Ltd.	23,445,439	26,165,790
E. M. Nicholson	15,239,280	5,284,731
Bennett Lumber Co.	11,000,000	.....
W. & J. Sharples	9,847,219	6,296,006
R. Cox & Co.	8,852,632	11,336,151
J. Burstall & Co.	7,762,353	6,708,937
E. H. Lemay	7,000,000	3,339,582
Cox Long & Co.	5,130,576	474,818
Dobell, Beckett & Co.	4,446,160	2,677,768
Railway, Steampship Lines and Small Shippers	13,791,365	9,117,618
Total	106,515,024	71,401,401
	71,401,401	
Increase	35,113,623	

Douglas Fir Stands Severe Service Test

Mr. H. R. MacMillan, who holds a special commission under the Department of Trade and Commerce to study the extension of foreign markets for Canadian lumber, has forwarded to Dr. John S. Bates, superintendent of the Forest Products Laboratories of Canada, Montreal, from Johannesburg, South Africa, a small specimen of wood for identification. This was a piece of wood from an ore bin which had seen twenty years hard usage in one of the Johnanesburg mines and is still in an excellent state of preservation. Microscopic examination by the wood technologist of the Forest Products Laboratories showed that the specimen was Douglas fir. In the past, Canadian Douglas fir has suffered a great deal in foreign markets from competition with pitch pine from the southern United States. It is interesting to see that Douglas fir has shown up so well in this particular service test and is another proof of the high quality of our foremost Canadian structural woods. Careful examination of Douglas fir and other Canadian woods used abroad will no doubt do much to remove the prejudice which has existed against them. A more thorough study of methods of handling lumber for shipment abroad, in the way of seasoning, inspecting for dry rot, etc., will ensure that the lumber reaches the consumer in first class condition and thus build up a permanent reputation for our products.

Mr. John Rogers, secretary of the Rogers Lumber Company, Minneapolis, Minn., which operates a number of mills and yards along the international boundary in the United States and in the Prairie provinces, visited Victoria, B.C., recently. He reports that the outlook for the lumber industry is very encouraging for next spring, when he thinks that a higher average price will be established. He estimates the orders placed with American mills by the Allies at about 200,000,000 feet, most of which has been yellow pine from the south. In the past four months, he states, the price of yellow pine has advanced $5 a thousand feet. Mr. Rogers also reports that there has been a very strong demand for spruce for aeroplanes.

J. & D. A. Harquail

Company, Limited

Manufacturers of Lumber

Extensive New Brunswick and Quebec timber limits, abundant with Virgin Spruce, Pine and Hardwoods.

Twenty years' experience in Milling and Manufacturing, together with a practical knowledge of Building and Architecture, is why our Customers tell us that the Dressing, Grading, and Manufacture of our Stock is just a little better than they expected.

Large stocks of 1 in. Spruce Lumber always on hand.

Try a car of our Air-dried Dressed Spruce.

We also make a Specialty of Kiln Dried Stock.

Our personal attention given to every detail.

Write, wire or phone us for quotations.

Established 1894 ***Incorporated 1908***

Campbellton, New Brunswick

New B. C. Shingle Plant with Large Capacity

The Shull Lumber and Shingle Company, Limited

One of the largest and most modern shingle plants on the Pacific Coast was recently completed for the Shull Lumber & Shingle Company, Limited, on the North Arm of the Fraser River at the foot of Boundary Road, the dividing line between the municipalities of South Vancouver and Burnaby, and distant about four and one-half miles south of the city of New Westminster. Construction work on the big plant was started in June, 1914, and continued until September 11th, when operations were discontinued for the winter owing to the unfavorable market outlook. On April 1st of this year work was resumed with all possible vigor, with the result that early in August the machinery was given a try-out preparatory to starting up one side of the double bank of upright shingle machines. The first shipment of three carloads of shingles was made to Montana before the end of the month, since which time all the machines, twenty in number, have been cutting on a 10-hour schedule, the average daily output being about 700,000 shingles. The plant is equipped for twenty-four Sumner uprights, and with that number in operation the twenty-hour capacity of this fine plant may safely be placed at 1,350,000 shingles. Most of this enormous output is being marketed in the United States, where the company has a wide business connection, and with this object in view a sales office is maintained in Seattle, but the Messrs. Shull also look forward to a considerable trade with Ontario and prairie points, which will be handled by Manager H. A. Shull direct from the mill.

Waterfront view of the Shull Lumber & Shingle Co.'s mill on the north arm of the Fraser River, showing double log haul.

Some of the Main Features

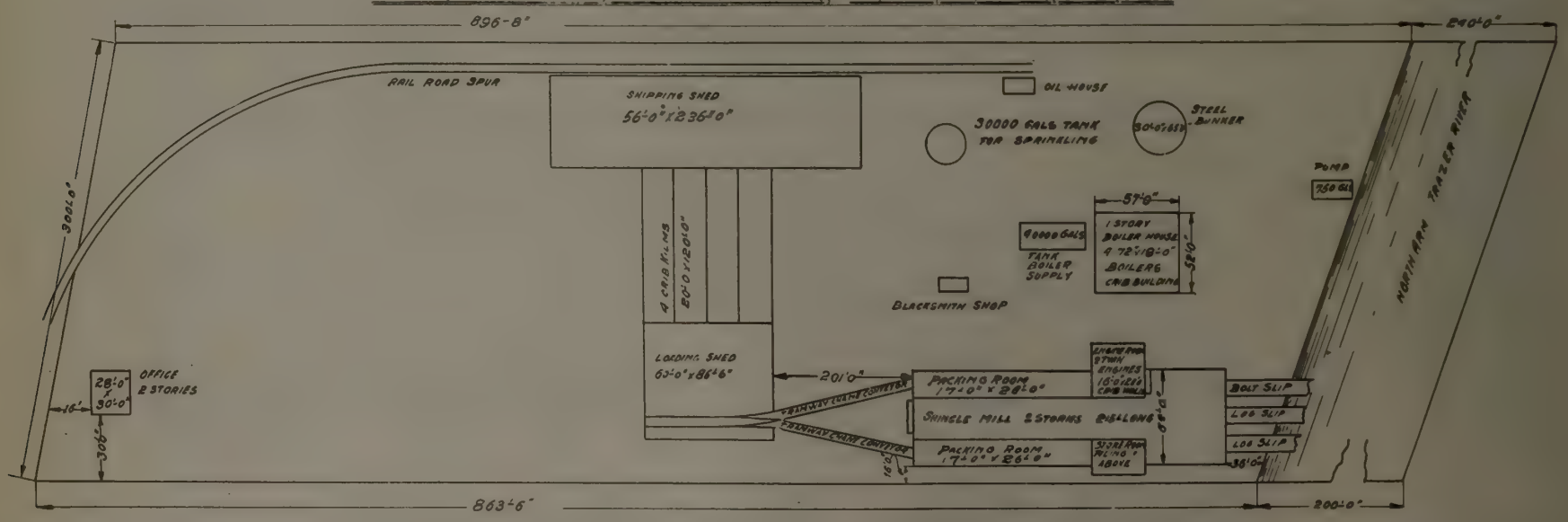
The mill site comprises seven acres, the water frontage being 300 feet. The shingle mill is 74 x 215 ft. in size, there being two 16-ft. storeys and 7-ft. basement. For the foundation 1,015 creosoted fir piles were driven to hard pan—14 feet. The engine room, 32 x 36 ft. in size, is located on the first floor, east side, 50 ft. from front of mill. It contains two 16 x 20 in. twin engines, and one direct-connected generator for lighting purposes. Considerable of the remaining space on this floor is occupied by the sorting bins, shingle packers, and transmission machinery. The bundles are transferred from the packing room to the kilns on elevated transfer chains—a method now in use in a few of the best mills in Washington State. On the sawing floor above the cut-off room, at the south or waterfront end, is 50 x 52 ft. in size. The mill is two-sided, and each side is entirely independent from water to dry-kiln with a view to economy in operation under varying market conditions. Each has its own endless chain log-haul, 86-inch swing cut-off saw, steam splitter, 52-inch knee bolter and grinder for cut-off saw. In addition there is a bolt-haul and bolt cut-off saw, so that bolts may be used to supply a number of machines when the price of that class of timber is attractive. From the cut-off room the blocks pass to a conveyor which runs down the centre of the long machine room, and from this they are transferred by a couple of active employees to the feed tables of the machines lined up on either side. Blocks cut from bolts at the east front of mill are delivered by a dog-chain conveyor to the main conveyor.

The filing room, 32 x 36 ft., adjoins the cut-off room to the west. It has numerous windows which admit a flood of light. The equipment comprises three Covel grinders, one Schaake grinder and one Letson & Burpee grinder. Overhead carriers deliver the saws from the filing room to the machines as required.

The boiler house, which is located 31 feet east of the main building, and in line with the engine room on the first floor, is 52 x 57 ft. in size and 22 ft. in height. Over 350 piles were driven for the foundation, and the concreted floor is 32 inches in thickness. Four Vulcan Iron Works boilers, 72 in. x 18 ft., with Dutch oven equipment, are installed. The stack is 6 ft. in diameter and 100 ft. in height.

A steel refuse burner constructed by the Seattle Boiler Works, Ballard, Wash., is situated 103 feet east of the mill. It has a diameter of 33 feet and is 65 feet in height. The burner is lined with brick, a 16-in. course running 42 feet, the balance being 8 inches, the total quantity of brick required being 135,000. The foundation is made up of 150 piles driven to hardpan, on top of which is concrete to a thickness of 5 feet.

North of the main building, a distance of 102 feet, are four North Coast dry kilns, each 20 x 120 ft. in size, and close by is the storage shed, 56 x 216 ft., served by a spur line from the British Columbia Electric Railway. At the northwest corner of the mill site the company have erected a substantial two-storey office building 28 x 32 ft., sleeping quarters for the staff being provided on the second floor. Across the B. C. E. R. track are a Chinamen's house, 28 x 90 ft., also a large boarding house for the mill crew.



Other Interesting Particulars

The dry kilns, boiler house and engine room are built of 2 x 6 in. cribbing laid flat, which reduces the fire risk to the minimum. An

Shell Box Lumber

DRY BIRCH

WE have in stock approximately three (3) million feet of 4/4-8/4 and 12/4 Birch sawn during seasons of 1913-1914 and 1915. This is particularly suitable for manufacturing or Boxing purposes as it was sawn partially square and partially round or live edged.

We have extensive Kiln Drying, Resawing and Dressing Plants and can work to order.

DRY SPRUCE BOARDS

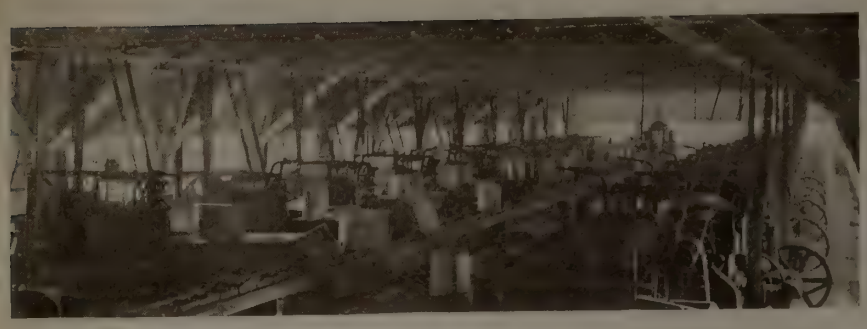
We carry the largest and best assorted stock in Canada.

Send us your inquiries.

John Fenderson & Co., Inc.

Sales Office:
Springfield, Mass.

Saw Mills, Storage Yards and Planing Mills:
SAYABEC, QUEBEC



Shingle manufacturing room, showing installation of 24 machines. Note the feed block conveyor in centre.

automatic sprinkler system protects the interiors of the buildings, the water supply being taken from a 30,000 gallon steel tank on a tower 85 feet in height, and additional security is given by a system of waterworks installed by the company. The size of pipe used is 6 in., and numerous hydrants, with ample hose equipment, are located where deemed necessary. An Underwriters' pump, capacity 750 gals. per minute, feeds both systems.

The Sumner Iron Works, Everett, Wash., installed the shingle machines, engines and transmission machinery; the Taylor Belting Company, Limited, Vancouver, supplied all small sizes of leather belting; and the Western Oil & Supply Company, Limited, Vancouver, furnished the two large engine belts—one 30 in. leather, 59 ft., one 30 in. leather, 111 ft., as well as all Balata belting used on machines and conveyors. The Disston Saw Company secured the contract for cut-off and all shingle saws.

About one million feet of lumber and timbers went into the construction of the various buildings. The order was shared by Brunette Sawmills Company, Limited, and Small & Bucklin Company, Limited, New Westminster, in about equal quantities.

The waterfront area for log storage is 240 x 1,500 ft., and additional space is easily available. The area is divided up into a number of pockets for various grades of logs, nearly 300 piles having to be driven for this purpose. There is 11 feet of water at end of log slips at low tide, and 14 feet at outer boom.

The mill plans were prepared by Mr. Lustig, Sumner Iron Works architect, the superintending millwright being F. W. Talmadge (an old Allis-Chalmers Company man), who built the Seattle Cedar Lumber Company mill at Seattle, which is reputed to have a daily output of one million shingles.

Tom O'Connell, superintendent of the Shull Company plant, hails from Washington, where he acquired a wide experience in the shingle business.

About one hundred men are employed, the majority being white. Most of the latter have their homes in New Westminster, making a trip in and out via the British Columbia Electric Railway.

The name of the B. C. E. R. station is to be changed from Boundary Road to Shull Mills, and an application made to the Post Office Department to have a post office located at that point to serve the large volume of business now originating there has been granted. The address is Shull, B. C.

The plant of the Shull Lumber & Shingle Company, Limited, represents an investment of about $200,000 of American capital. Mr. Harry A. Shull, the chief stockholder and manager of the new plant, is married and resides in Vancouver. He is a young man with a wide experience of the shingle business which had its beginning in Minnesota, his native state. For the past three years Mr. Shull has been operating a large shingle mill in Everett, Wash., which he is now willing to sell or lease in order that he may devote all of his energy to his B. C. plant. His father, Mr. John Shull, was a prominent lumberman in Minnesota years ago, and later was connected with J. W. C. Shull and the Brooks Scanlon Company at Kentwood, La. Mr. Shull retired some years ago and makes his home in Portland, Ore., but since the commencement of work on his son's B. C. plant he has spent much of his time on this side of the line.

Rear view of mill, showing boiler house, burner and conveyor system to dry kiln.

How to Make Retail Stocks Move

By Paul E. Kendall

In view of the many attacks on wood, both past and present, it would be well for the lumberman to study his business, himself and his product in order to find out whether the fault is with himself or with the commodity he sells.

Wood long held an undisputed first place as a building material. It still holds first place in spite of the many attacks upon it by well advertised substitutes. These substitutes have had a rapid growth during the last few years, but their popularity is due not to their value or merit but rather to the fact that their promoters saw the value of two important things that the lumberman has been very slow to adopt—namely, modern advertising and modern merchandising methods.

At first the substitutes of wood offered themselves as substitutes, but when they found that manufacturers and dealers in wood and wood products felt so secure that they neither noticed or answered their attacks on wood, they began to make wild assertions as to their own value. The next step was to educate the public into believing that wood was out of date and not a perfect building material. Large sums of money were spent in national advertising campaigns. Then they discovered two amazing and wonderful things; first, wood burns, and second, wood decays. However, like a great many present day "discoveries" what they found out was not new, but by constantly advertising these facts they succeeded, in a measure, in creating a feeling of doubt in many minds and converts turned from the tried and true original wood to the less worthy but widely advertised substitutes. **No substitute was ever as good as the original and so it is with the substitutes for wood. Why is it then that we find the lumberman trying hard to sell a product that he thought should and would sell itself?**

The answer is simple. The question answers itself. **No product, however good, can sell itself to-day. You must use progressive and aggressive advertising and merchandising methods. Otherwise your goods will stay in your yard or on your shelves. You MUST advertise. Save the advertising bill and lose business or by means of advertising sell more goods; pay your advertising bill, and make a better profit. Write this in your notebook—"In this day it costs more not to advertise than it does to advertise."**

Did you know wood burns? Did you know wood decays? Had you heard that the forest supply is nearly exhausted? Did you know that the present price of lumber is prohibitive? No! Where have you been? On every hand you see this or that substitute for wood telling you such things and many more. You read it in the morning paper, on billboards, on fence rails, in magazines and in show windows. You know wood burns and that some of it will decay if not properly protected from the elements. But you know that the forest supply is ample and that it is a mere joke to say that wood—the best and cheapest building material—is selling at prohibitive prices to-day.

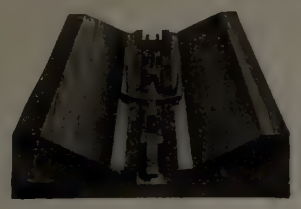
You also know that iron rusts. I quote from a recent advertisement, "Rust—not wear—builds up the Junk Heaps of Canada. Canada's loss through rust is tremendous. On account of using ordinary, fast-rusting sheet metal, Canadians annually lose enough money to build a super-dreadnaught, etc." Then the ad goes on to tell why a certain kind of iron should be used. That is a clever piece of advertising and it tells of an awful loss from rust. National defence is a great public question right now and another super-dreadnaught would come in rather handy. The first part of that advertisement gives a very forceful reason why more wood should be used. You know of many homes and buildings here in Canada built of wood many years ago and they still stand and are in fairly good repair although many of them have been neglected for years.

When bricks are improperly made the wall may soften and wear. How many brick walls do you know of that were used again after they passed through a hot fire?

There are many recent examples that show that concrete is often useless after a hot fire.

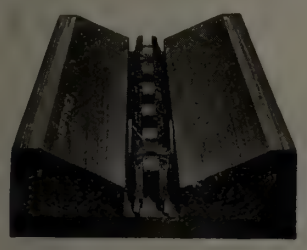
What is the matter with wood then? Nothing! Wood suffers because its manufacturers and dealers lack two things—modern advertising and modern merchandising methods.

Years ago the lumberman waited for business to come to him and it came; for wood was a necessity and substitutes were unknown. **As time went on the substitutes entered the field** in ever increasing numbers and they used modern advertising and modern merchandising methods. **What did the lumberman do? He laughed at the substitutes and waited for business. It began to dwindle and when things had reached a bad state some lumbermen woke up and began to look about to find out why they were losing business to inferior substi-**

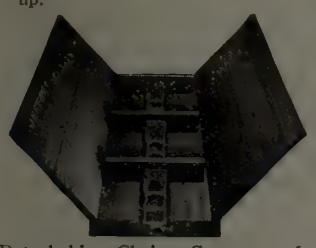


Vulcan Steel Chain with Cast Steel Log Haul-up Spur.

Cast Steel Log Haul-up Spur upon a Long Link Welded Steel Chain.



Malleable Roller Chain Log Haul-up.



Detachable Chain Conveyor for light service.

Simple - Inexpensive - Dependable

Fittingly describes these **JEFFREY CONVEYERS** for handling Logs, Chips, Refuse, Wood Pulp, etc.

Every Jeffrey Chain is proof-tested; rigidly inspected; the best materials and workmanship and the most improved methods go into their making.

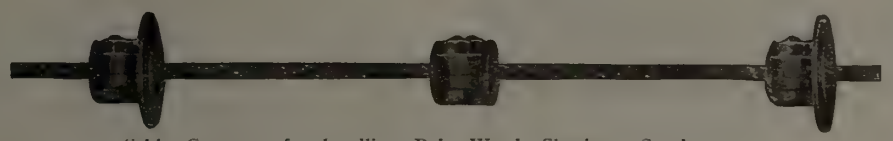
Over 35 years of successful Chain Building Experience puts us in a position to recommend the right type for your elevating, conveying and transmission requirements.

Write for Illustrated Catalog and Price-List No. 160-6, fully describing the Service Application of Jeffrey Chains, and picturing numerous elevating and conveying installations in Saw Mills, Woodworking Industries and Pulp and Paper Mills.

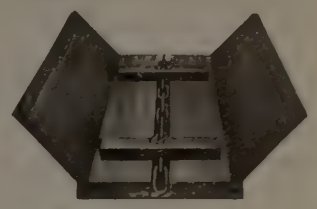
We can make prompt shipment of Standard Chains, Sprockets, Gears, Spiral Conveyor, Elevator Buckets, etc., from our large and complete stock.

Jeffrey Manufacturing Co.

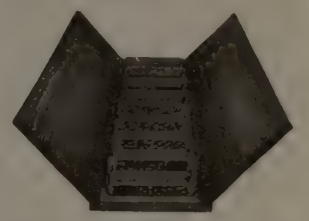
Canadian Branch and Warerooms
MONTREAL



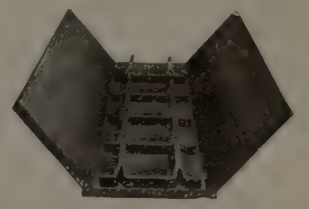
Cable Conveyor for handling Pulp Wood, Shavings, Sawdust, etc. "U" Shaped or "V" Shaped Troughs furnished, as desired.



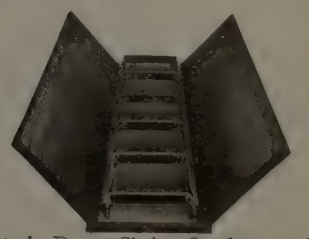
Pulp Wood and Refuse Conveyor made from Long Link Coal Chain with U Bolts and Wood cross-bars at intervals.



Malleable Drag Refuse Chain mounted upon a steel plate.



A durable type of Steel Drag Chain.



Steel Drag Chain Sawdust and Short Refuse Conveyor.

Jenckes Boilers

We make a Specialty of

Horizontal Tubular Boilers

for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

Sherbrooke Montreal Cobalt So. Porcupine St. Catharines Toronto Vancouver Nelson

tutes. At first they blamed anything that looked like it might stand the strain; then they went deeper and some of the wise ones found that the substitutes had some merit plus worlds of expensive advertising and up-to-date business methods. They knew that wood was first when it came to real merit but they also knew that wood lacked advertising but some still won't admit that it has not been properly merchandised for the last few years.

I should like to see your big forests in Canada, in fact, I have often dreamed of a trip in the great Canadian woods. I know I would be pleased and thrilled, if you please, at the sight of the trees just as I was one evening about sunset as we were on our way to see the big trees of California and the sun was just at the head of the valley and—well—I shall never forget it. But I don't thrill any when I see an ordinary pile of lumber and you don't either. Then, please tell me why you expect any customer to even show interest when you show them a pile of lumber and talk about 2 x 4's, 2 x 6's, siding, etc. ad infinitum.

When I buy an automobile I should like to see it before I buy it but in case I cannot then I will get a catalogue—corresponding to your lumber plan book. The first thing of importance will be its general appearance and then comfort and convenience. I am not a mechanic, few car owners are, and many of the fine points (to the salesman) will be lost on me. I don't want a certain kind of steel or bearings but I do want a car. Again here is your answer. **Sell "Homes"—"Barns"—"Sheds"—"Silos"—Have your plan book and be ready to give careful and exact estimates that will hold out.** There was a day in lumber history when a woman would almost have gone into a barber shop before she would have gone into the office of the local lumberman. **To-day the wise lumberman does his best to get the women into his office. He knows that a woman spends a large part of her time in her home;** that she is the one who takes the most interest in its appearance, comforts, and conveniences; in a word, that she has the planning of it. **If you can suggest a time or step saver to that woman you have done more towards making a sale than if you had spent an hour running down your competitor or lecturing on prices and grades.** I am tired of hearing about price per thousand and grades. But I know that I can and did sell "Granaries" and lots of them by advertising, that I was selling complete Granaries; that I furnished a capacity table and all that Mr. Farmer had to do was to find out the size he wanted and, if it was over 1,000 bushels capacity, I would furnish it for so much per bushel capacity. Of course these granaries all followed the same general plan. But this method of selling gave the farmer a starting point—something definite. He knew if he wanted a 10 x 20 granary it would hold so many bushels and by using the price per bushel we furnished him, he could sit at home, figure out the size and price and then talk it over with "mother and the boys."

Don't sell lumber—sell buildings. Sell a home; an ideal and not wood; a material. Help the customer to work out his ideas and don't forget while you are trying to make the sale that your customer is more interested in the completed structure than he is in the materials that enter into its construction.

You must see the customer's viewpoint if you wish to succeed in advertising or selling. You must study the customer's mind and then appeal to him along the lines he would naturally approach, if he were investigating for himself. Tell him what he wants to know before he has to waste a lot of his time and yours too. Use the customer's language; forget 2 x 4's siding, etc.,—it may be Greek to him—but sell comfort and convenience in the form of HOMES; protection and economy in the form of BARNS; and conservation and preservation in the form of SILOS.

After the customer has made up his mind what he wants and he has seen a plan photograph, or has "an idea how it will look," he wants to know how much it will cost. Now the old method is that the customer is told that it will cost so much and maybe it will and maybe it will cost from one-fourth to one-half more. We must adopt the plan of giving guaranteed complete bills of such materials as we are to furnish. You think it can't be done. If you don't the mail order houses will soon take care of the business for you, for they DO furnish plans and estimates in romantic books called catalogues, and lots of hot hours for the local dealer. And simply because they study the customer and talk in his language. They tell him the things he wants to hear and other things he didn't know. I don't know some of them either, for after reading some of this well got up literature I was satisfied that there was a special kind of tree grown expressly for mail order houses and the poor local dealer can only get the "trimmins."

Your advertisement should tell a simple, straight story. Don't overstate the case—you don't need to. If you do not know what to say just write what you would say to your customer if he were in your office at the time and you were talking about buildings. **Work to CREATE business, don't take what comes to you alone; go after the business and you will have** to go quite a ways these days.

The old time ad—"See Bill Jones for Lumber, etc."—has had its day. Such an advertisement to-day is a waste of space, paper, and ink. Circular letters and space in your local papers will make retail sales. A good advertisement must first—catch the eye,—then the mind,—and then create a desire for the object advertised.

After all is said and done we get right back to the two things that are absolutely necessary to the success of any business and especially so to the dealer and manufacturer of wood—MODERN ADVERTISING and MODERN MERCHANDISING.

Reading Camp Association's Work

The Reading Camp Association, which sends men to lumbering and construction camps throughout Canada to assist the laborers in their education and to furnish them with many comforts they would otherwise lack, has carried on its work successfully during the war. At the outbreak of the war some friends of the Association thought that such a work might be suspended for the time being. To their representations careful consideration was given, but it was decided that it would be a short-sighted and dangerous policy even temporarily to relinquish such a work. Continued hearty support of the work is proof of the wisdom of this decision. The effectiveness of the methods pursued by the Reading Camp Association has been clearly demonstrated.

From sixty to seventy-five Christian young men—University graduates and undergraduates—each year go out under the auspices of the Reading Camp Association to the camps in the wilderness. They live side by side, not only with the Canadian navvies, miners and lumberjacks, but with the Russians, Italians, Bulgarians, etc.; eat at the same table, do the same work, and endure the same hardships.

They are provided with neat, clean, comfortable and attractive tents and buildings, where the men, irrespective of nationality, are invited to spend their evenings. The instructors write letters for their fellow-toilers, and help them in times of accident, sickness or trouble.

In the tents and buildings instruction is given in the evenings, on rainy days and on holidays, both to English-speaking men and foreigners. It includes the teaching of the English language and our ideals of citizenship to the non-Anglo-Saxons. The instructors demonstrate what it really means to be a Canadian. They carry on the process of assimilation in the only way feasible, namely, by personal contact.

The work of the Reading Camp Association, which commenced in a very small way in Algoma, has now extended to every province of the Dominion, except Prince Edward Island. Over five hundred instructors have been employed. Eight Provincial governments have assisted in the work, and have thus given to Canada the distinction of being the first country in the world where the government has made any effort to give an education to the frontiersmen at their work.

The Association renews its appeal to university men to give one or more years' service to the frontiersmen.

It also renews its appeal for contributions from all patriotic Canadians who want to have a part in this effort to mould the diverse elements into an harmonious national life.

The office of the Association is at 44 University College, Toronto.

Should Copy B. C.'s Campaign

The activity of the B. C. Government in seeking foreign markets for B. C. lumber is attracting a good deal of attention in the Western States. The "Oregonian," of Portland, Ore., in a recent issue refers at considerable length to this subject and after outlining the efforts already made by B. C. along this line says:—"The B. C. Government appears, in this respect, to be ahead of our own Government . . . If the United States Government is to extend the same aid to Pacific Coast lumbermen that is being given B. C. lumbermen by their local Government, it will be necessary without further delay to study the demand for lumber and to aid in building up a European market for Pacific Coast lumber." Referring to exports from B. C., to the United States, the report states that timber products exported to the United States, invoiced through Vancouver, for the three-quarters of the year ended September 30th, 1914 and 1915 were valued at $4,021,635 and $5,622,451 respectively.

Reports from B. C. state that the logging industry is very active at present. The camps of the Comox Logging Company are not to be shut down this year. Usually they close down for a period of two or three months in the winter. At present they have plenty of work to keep them going for some time.

Twelve loggers, who were on the tug Constance which foundered off Sechelt on October 2nd, have entered suit in the Supreme Court of British Columbia for $2,220 damages for loss of their belongings. The defendants are Hind Bros., owners of the tug, and the Terry Logging Company, by whom they were employed. The loggers allege that the tug was not licensed to carry passengers.

"Everything in Canvas"

Contractors to the Army and Navy of the British Empire

DURING the past few years our manufacturing facilities have increased fourfold. The amalgamation of the Woods Company, with the Smart Bag Co. into which it is now known as Smart-Woods, Limited, offers for your approval the products of one of the strongest and most reliable manufacturing corporations in the whole of Canada.

AS a result of this amalgamation, not only have our manufacturing facilities been wonderfully increased, but we are now in a much better and greater position to offer you all lines previously stocked, as well as many others that come direct from our recently added factories.

In addition we may say, "Our foreign trade has increased by leaps and bounds—both European and American—and we are prepared to enter into competition in every civilized portion of the globe."

Smart-Woods' Special Surveyor's Tent. Write for Catalogue.

WE are now open for competition in every thing that is possible to be made out of canvas, as well as all lines of Lumbermen's and Contractor's Supplies, such as Blankets, Clothing, etc., etc., it being one of our greatest pleasures to quote prices at any time. Our wonderful large stocks of raw material and increased number of factories, (Ottawa, Toronto, Montreal, Winnipeg, Renfrew and Welland), enable the execution of largest orders on shortest possible notice.

Samples and quotations will be furnished at any time and every possible expediency rendered to hasten shipments as soon after ordering as possible.

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Midland Quality Shoe Packs

WE are marketing a brand new line of "Midland Quality" Shoe Packs. Special care is exercised in the waterproofing of all leather. The models shown here are two of our several styles. You should see them to appreciate the true merit of these new Shoe Packs.

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Midland - Ontario

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WHOLESALE LUMBER
SANS DIEU RIEN
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also Basswood, Hemlock and Pine

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Dressed and in the Rough

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Limited
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Pine, Spruce Hemlock Hardwoods, Lath

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

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Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
Eastern Townships Bank Building, MONTREAL, Quebec

EDGINGS

Ontario

F. C. McInnes, Leeburn, Ont., will rebuild next spring the mill which he lost by fire a year ago

The Northern Tag Company Ltd., has been incorporated with head office at Port Arthur, Ont., and capital stock of $40,000 for the purpose of dealing in pulpwood and paper.

The Wood Products Company Ltd. has been incorporated with head office at Toronto and capital stock of $100,000 to carry on business as timber merchants, sawmill proprietors, etc.

The town of Stirling, Ont., has passed a by-law to grant a bonus of $1,500 to Messrs. Wallace, Chapman and Marshall of Oakville, Ont., for the erection of a box factory. The owners will be in the market for lumber.

The York Paper Box Company Ltd., has been incorporated with head office at Toronto and capital stock of $40,000 to carry on business as dealers and manufacturers in all kinds of paper, pulp, pulpboard and all articles manufactured from pulp, wood and paper.

McAllister & Sons, Ltd., have been incorporated with head office at Guelph, Ont., and capital stock of $40,000 to carry on business as lumber manufacturers, and to deal in timber, lumber, etc., of all kinds. The provisional directors of the company are J. A. McAllister, G. McAllister, and M. L. McAllister.

The Lindsay Woodworkers Ltd., have been incorporated with head office at Lindsay, Ont., and capital stock of $40,000 to carry on business as manufacturers and dealers in lumber, logs, etc. The provisional directors of the company are J. A. Peel, R. A. Pogue, H. Irvine, N. Smale, J. F. Maunder and T. H. Stinson.

A contract has been awarded by the McCallum Mfg. Company, 44 Dupont Street, Toronto, Ont., for the erection of a new wood working factory at the corner of Davenport Road and Lightbourne, to cost $7,500. The building is to be of brick construction, two storeys, 30 x 40 feet. The contractor is A. J. Peppiatt, 12 Wells Hill Ave., Toronto.

Eastern Canada

The E. B. Eddy Company, Ltd., Hull, P. Q., have secured an extra-provincial charter to carry on business in the province of New Brunswick.

P. H. Renaud., Lake Megantic, P. Q., is putting up a sawmill. He already has camps in the woods and expects to take out about 2,000,000 feet during the present winter.

The curator of the estate of Richer and Freres, sash and door manufacturers, 2607 St. Hubert Street, Montreal, is offering for sale, by sealed tenders, the property of the firm. This includes the saw mill and machinery and several vacant lots of land.

The Canadian American Corporation Ltd., has been incorporated with head office at Montreal, P. Q., and capital stock of $300,000 to carry on business as manufacturers and dealers in lumber, timber and logs. Those interested are L. A. David, L. E. Mailhoit and S. H. Bush.

Twenty-six thousand acres of timber land owned by the Londonderry Milling Company was sold by the sheriff for $107,850, at Truro, N. S., recently, to P. C. Black, of Amherst. It is understood that Mr. Black bid in the property for the Maple Leaf Lumber Company and the Canadian Car and Foundry Company.

Crandall Harrison & Company, Limited, have been incorporated with head office at Newcastle, N. B., and capital stock of $40,000, to carry on business as lumbermen, wood manufacturers, etc. Those interested include H. W. Harrison, Newcastle; J. H. Crandall, Moncton; A. Watson, I. F. Archibald, and F. R. Taylor, of St. John.

Excellent progress is reported on the construction of the Cape Breton Pulp Company's plant at St. Anns, C. B., which is to work the large timber limits in that vicinity. The rossing mill is now nearing completion. It is planned to start a big output of pulpwood this winter. The company is controlled by American capital.

The Bathurst Lumber Company, Bathurst, N. B., have added a fine steel tug to their fleet, having purchased the "Betty D," one of the most powerful boats of her size in the Maritime provinces. She is being fitted out with new boilers and the machinery is being overhauled, so that she will be ready for the opening of navigation next year.

At Truro, N. S., recently, Sheriff McLennan sold at the instance of the Eastern Trust Company, the wood lands, about 22,000 acres, of the Londonderry Iron and Mining Company, Limited. The property was sold for the reimbursement of the first mortgage bondholders, in London, England. It brought $107,850, and was secured by the Maple Leaf Lumber Company, Ltd.

Murray & Gregory, of St. John, N. B., are erecting a mill at English Lake, on the Quebec Central Railway, in Quebec Province, where they have large lumber interests. Their largest mill is at St. John, where they have also a large woodworking factory equipped for a wide range of work, but they have also a sawmill at St. Camille, Quebec. The firm's annual cut is about 30,000,000 feet.

Stanley Douglas of Stanley has a contract to get out and saw four million feet of hardwood at Napadogan for the Partington Pulp and Paper Co. It is understood that the bulk of it will be shipped to the Old Country. It is expected that the Partington Company's lands on the Nashwaak river contain half a billion feet of hardwood lumber, and this is the first attempt being made to put it on the market. A New York manufacturer, who lately visited the locality, declared it the finest hardwood proposition in Canada.

The Gres Falls Co., Three Rivers, P. Q., the St. Gabriel Lumber Co., Ltd., St. Gabriel de Brandon, P. Q., and the Charlemagne & Lac Oureau Lumber Co., Ltd., three Quebec subsidiaries of the Union Bag and Paper Company, New York are to be consolidated into a new concern, the St. Maurice Paper Co., which will be controlled by the Union Bag & Paper Company. A news-

print mill and sulphite mill will be erected by the new company at Cap Madeleine, P. Q. The Gres Falls Co. already has a ground wood mill, which is turning out 100 tons of ground wood a day. The erection of the news and sulphite mills will round out a complete production unit, enabling the concern to turn out the finished product. About 80 tons of the ground wood will be required daily by the company, and the remaining 20 tons will be shipped to the plant of the Union Bag and Paper Co., at Hudson Falls, N. Y. In addition to the newsprint and sulphite plant, it is proposed to construct at Cap Madeline, a kraft mill, the output of which will also be shipped to Hudson Falls. Work will be soon commenced on these new plants. The Union Bag and Paper Company has made arrangements to sell its undeveloped water power at Gres Falls to the Shawinigan Water and Power Company, which will furnish all the power required by the Union Bag & Paper Company. The water power is thirteen miles northwest of Three Rivers, P. Q., on the St. Maurice River.

Western Canada

The sawmill equipment and timber berths of Shaw Bros., Dauphin, Man., will be sold by auction on January 15, 1916.

The sawmill at Fernridge, B. C., which has been closed for over a year is now being operated by a number of Hindoos under the name of the Cheam Lumber Company.

Mutchenbacker Bros., are contemplating the erection of a lumber mill at Mafeking, Man. The new mill will cost $20,000. Work will start next June. The owners will be in the market for general sawmill machinery and equipment.

Sealed tenders are being received up to January 5th by the Minister of Lands for B. C., for the purchase of License X529, to cut 2,200,000 feet of balsam, cedar and hemlock on an area adjoining Lot 489, Nimmo Bay, Mackenzie Sound, Range 1, Coast District. Two years will be allowed for the removal of the timber.

The Benton Pole and Lumber Company, Benton Siding near Erie, B. C., have received an order for 20 cars of poles from the E. T. Chapen Company of Spokane, Wash. The Benton Pole and Lumber Company have bought the mill of Feeney Bros., at Salmo, B. C. They will ship the equipment of this mill to Benton Siding, and use it in the erection of a plant to replace the old mill now in use.

The Pitt River Shingle Mill Company, Port Moody, B. C., have started operating their plant. They have dismantled the old Cutler mill and installed machinery of the latest design. The company will also put in a new dry kiln and engine immediately, also additional shingle cutting machines. Two machines are now operating and in a few months the company expect to have eight machines installed, and an output of 200,000 shingles per day.

The shingle mill of the Raven-Roy Shingle Manufacturing Company Ltd., at Hatzic, B. C., has changed hands and is now being operated by the Munn and Murphy Shingle Company of which Mr. A. E. Munn of Vancouver is president; Mr. H. D. Murphy vice-president and Mr. Ewart V. Munn secretary and manager. Mr. W. D. Raven remains as mill superintendent for the new company. Extensive improvements including the erection of a dry shed are being carried out and the plant is running night and day.

The S. C. Mitchell Company, an extra-provincial company, has been registered to carry on business in the province of British Columbia as lumbermen, loggers and to operate sawmills, planing mills and such other manufacturing plants as may be necessary or proper in carrying on a general lumber and sawmill business. The head office of the company is at 1304 Old National Bank Building, Spokane, Wash., and the provincial office is at Davis Block, Bridge Street, Grand Forks, B. C. Walter Blair Cochrane is attorney for the company. The capital stock of the company is $30,000.

A second English revised edition of "The Utilization of Wood Waste" by Ernst Hubbard, translated by M. J. Salter, has been published by Scott, Greenwood and Son, 8 Broadway, Ludgate, E. C. The book is published in handy pocket size edition and has been brought well up to date. It will unquestionably furnish valuable suggestions to all who are interested in the subject. A large number of excellent illustrations are included. Every manner in which wood waste may be utilized is thoroughly discussed and practical information is given regarding the various processes. The value of the book is considerably enhanced by the inclusion of an extensive index.

The lumber business at Aberdeen, Wash., has been so active lately that the sawmills are face to face with a shortage of logs, and the possibility of several mills having to close down. At least five mills are now running on short time waiting for rafts. There has been so good a demand lately that several mills doubled their output and the small amount of logs placed in the water has brought about the shortage.

Damages to the extent of $3,375 were awarded by the jury in the Supreme Court at Nelson, B. C., recently to Percy Lyon, against the Nicola Valley Lumber Company. Lyon was injured by a log while in the employ of the company. The log broke through the guard rail and rolled down the deck. The damages were awarded under the Workmen's Compensation Act, being the sum of three years' wages upon what Lyons was receiving before the accident.

Twelve French Canadian lumbermen who were cutting timber for contractors employed by the Connecticut River Lumber Company, Colebrook, N. H., have been arrested for alleged violation of the Federal Contract Labor Law. It is alleged that the Connecticut River Lumber Company let out work to a number of contractors who employed Canadian lumbermen to assist in the operations.

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Dressed as Required, Spruce and Pine—1914-15 cut.

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Merchantable 1 x 5 x 10/13
Merchantable 1 x 6 x 10/13
Merchantable 2 x 4 x 10/13
Merchantable 2 x 5 x 10/13
Merchantable 2 x 6 x 10/13
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all can be P. 1 or 2 S. and matched.

V Joint or Novelty Siding. Approximately 60 to 75 per cent. 12/13 ft.

Roofing P 2 S & Matched—1914 cut.

1 in. x 4 in. up x 8/13. Approximately 60% 12 and 13 ft.

First Quality and Clear Spruce

1 x 4 in. up x 6/13—'15 cut.

Cull Spruce—1914 cut

3 in. x-4 in. up x 10/13 3 in. x 9 in. x 10/13

60% Sawn May and July, 1915.

200 M. ft. 50% Best End of S. C. Pine, 1 x 4/6 x 6/11
175 M. ft. M. C. Pine 1 x 4/7 x 12/13
350 " " " 1 x 4/7 x 14/16
200 " " " 1 x 8up x 12/13
600 " " " 1 x 8up x 14/16
200 " " " 1 x 12 x 6/11
250 " " " 1 x 12 x 12/13
750 " " " 1 x 12 x 14/16

All F.O.B. Cars or Boat Ottawa.

1,000,000 pcs. Mill Run Spruce Lath 4 ft. x 1⅜ x ⅜—'15 cut.
500,000 pcs. No. 2 & 3 W. Pine Lath, 4 ft. x 1¼ x ⅜—'15 cut.

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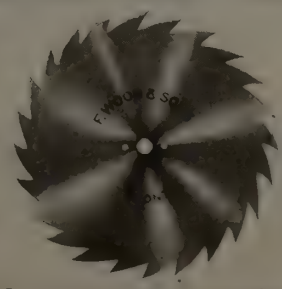

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Free samples and literature mailed on request.

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Johnson's Horse Liniment, No. 1 (Alcoholic)

1 gal. jugs (Imperial)	$4.50 gal.
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1 gal. jugs (Imperial)	3.00 gal.
1 lb. bottles	6.00 doz.
2 lb. bottles	11.00 doz.

Johnson's Horse Colic Remedy

A sure and speedy cure for all kinds of Colic

1 gal. jugs (Imperial) 40 doses	5.00 gal.
1 lb. bottles 4 doses	8.00 doz.
2 lb. bottles 8 doses	15.00 doz,

Johnson's Veterinary Healing Ointment (Gall Cure)

2 lb. tins	2.00 per tin
4 oz. tins	3.50 doz.

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1 lb. Packages	3.60 per doz.

Johnson's Camp and Household Remedies, such as Cough Syrup, Healing Ointment, Headache Powders, Big 4 Liniment, Stomach Bitters, Cathartic Pills, etc., etc., have stood the test of twenty-five years and are in use all over Canada, from the Atlantic to the Pacific. Prices are lower than those of all other manufacturers. Letter orders receive prompt attention.

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NONE BETTER

For Sportsmen

For Lumbermen

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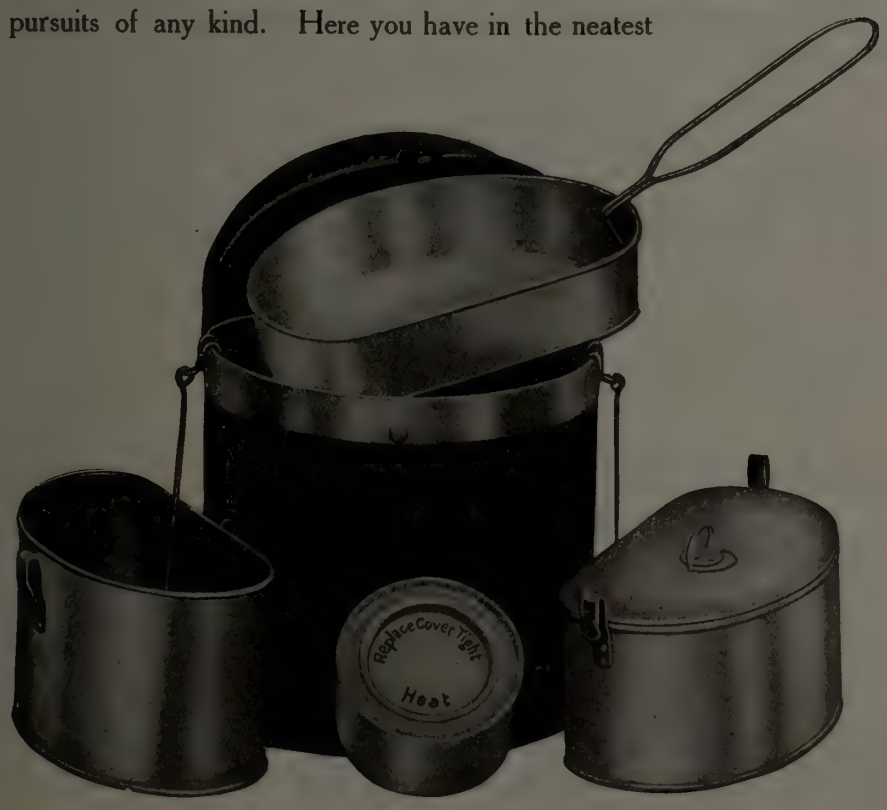
This outfit is made of sheet metal, covered in khaki waterproof duck, interlined with asbestos. It is made with belt loops. Size 7 x 7½. Weight 3 lbs. complete. Every outfit contains enough "canned heat" to cook nine hot meals. Extra cans at $2.50 per dozen wholesale.



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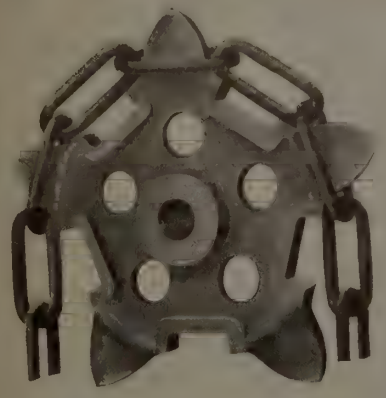

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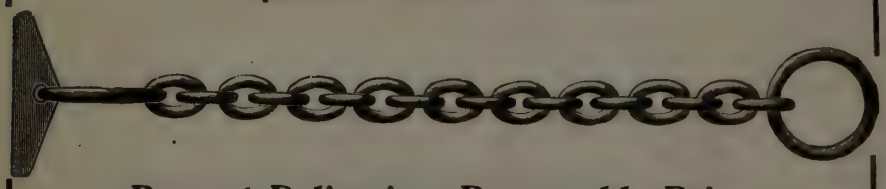

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Simply delicious with porridge, and hot bread of any kind.

The best sweetener for all kinds of cooking and far cheaper than Molasses or sugar.

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½ " " 350 "
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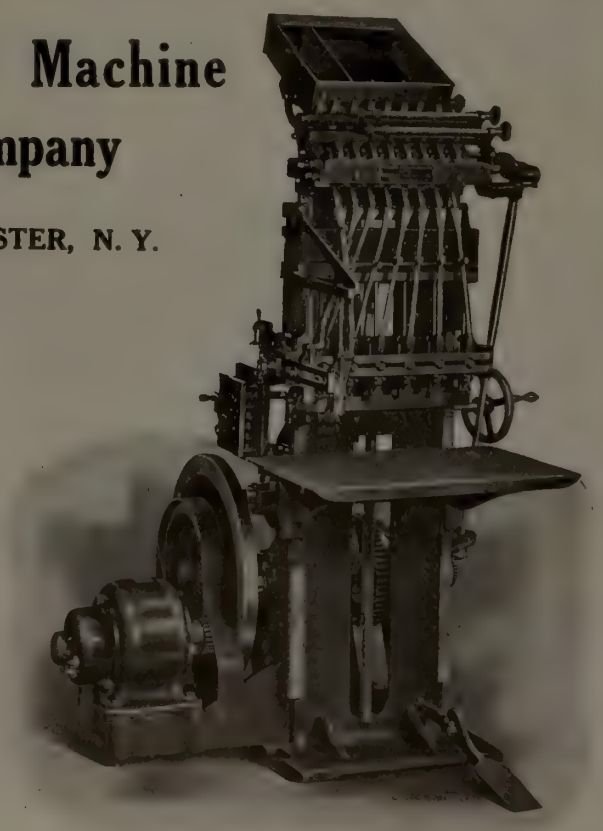

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Take as illustration the boiler plants of the Minnesota & Ontario Power Company, Fort Frances, Ontario, and International Falls, Minnesota:

Before the stokers were installed in the latter plant 3,000 tons of coal were required each month, costing them nearly $3.50 per ton. Since installing Jones stokers, under normal conditions, only five tons of coal are burned per week, the balance of heat required being obtained from "hog feed" and paper mill refuse—heretofore a waste product, entailing an enormous and continual expense for its disposal.

The saving is, therefore, 3,000—22=2,978 tons at $3.50=$10,423.00 per month, or more than $300.00 per day.

The equipment is entirely automatic, and should a drop of a few pounds occur in the steam pressure, or should there be a shortage in the supply of refuse, the stokers immediately feed in more coal and the blower equipment supplies more air, so that the normal pressure is promptly restored. If for any reason the "hog feed" is temporarily abandoned, the stokers automatically make the change over, carrying the load with coal alone.

Jones Underfeed Stoker Co., Limited

National Trust Building, TORONTO

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is the Flooring that is manufactured expressly to supply the demand for the best. It is made by modern machinery from carefully selected stock, and every precaution is taken throughout our entire system to make it fulfil the requirements in every particular. Write us for prices.

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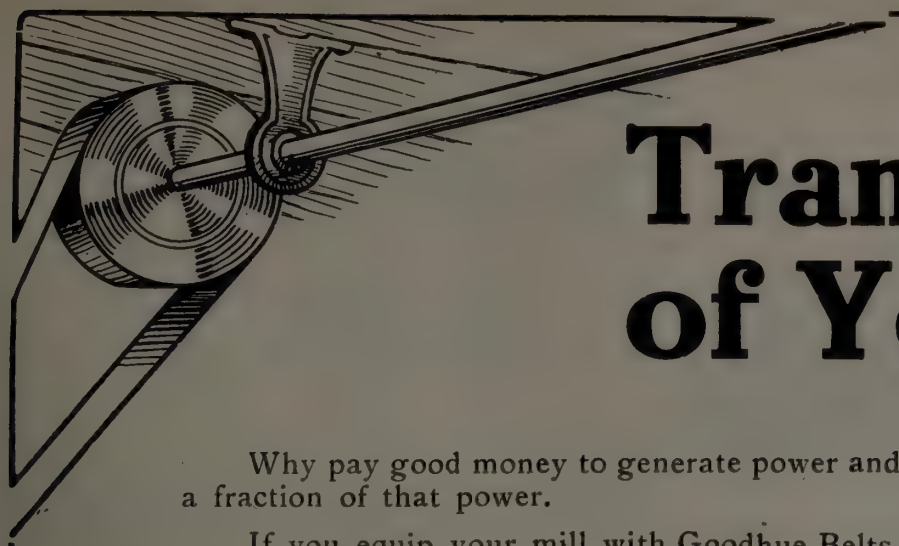

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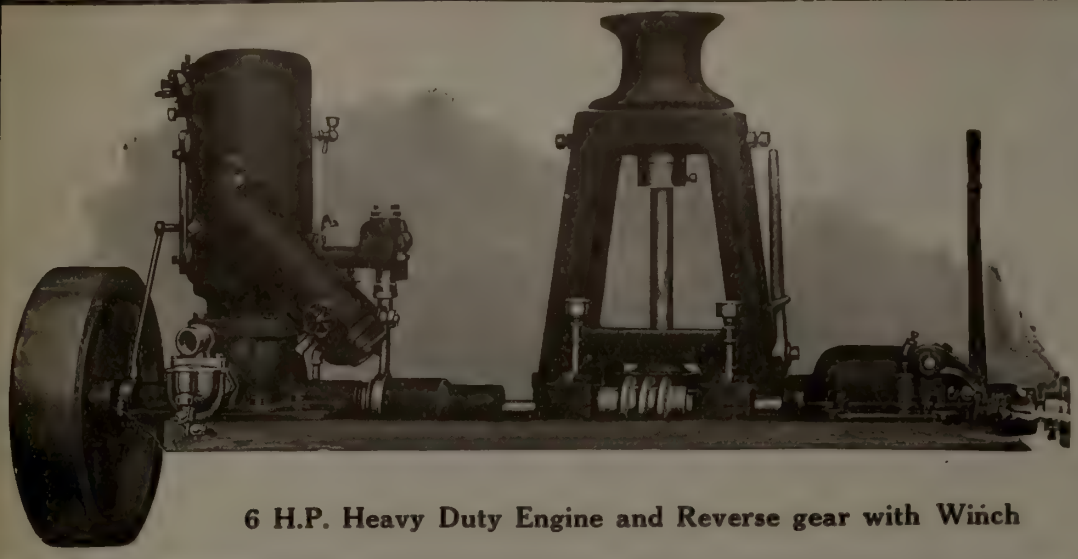

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will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

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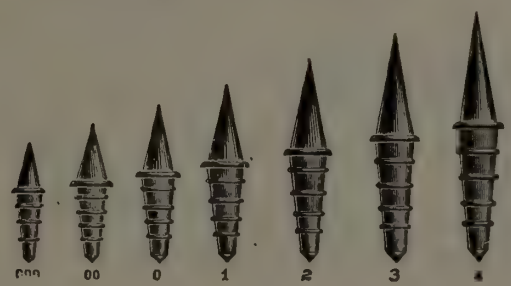

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Because it contains the proper amount of sugar necessary for hard working horses.

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The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
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Manufacturers of Lumber Tools
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When you have something to sell that another is likely to want, or if you want something, a sure way to get in touch with your party is through a "want ad." This class of advertising the world over is a rapid and positive means of finding your man.

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will convince you of this fact:

That it is cheaper to use two files where you now use only one.

Take a certain piece of work and give one man a new file, and another a half worn file on a similar piece of work.

The man with the new file is doing what you are paying him for. The other man is filing away your time.

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KEARNEY & FOOT
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Made in Canada by a plant controlling 90% of the file business.

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Send for your FREE copy of "File Filosophy" NOW.

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Port Hope, Ontario

DEALERS EVERYWHERE.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1 in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing ..	27 00	29 00
1 x 8 common and dressing ..	27 00	29 00
1 x 10 common and dressing..	31 00	32 00
1 x 12 common and dressing..	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common.	25 00	26 00
1 x 12 inch box and common..		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1 in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and c. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ...		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8-in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft. ...		16 00
2 x 4 to 12, 10 and 16 ft.		19 00
2 x 4 to 12-in., 12 and 14 ft. ...		19 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet: 8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		31 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16, 16x18, 18x18, 20x20, up to 32 ft.		32 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.		32 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x20 up to 32 ft.		33 00
10x20, up to 32 ft.		33 50
6x18, 8x18, up to 32 ft.		34 00
6x20, 8x20, up to 32 ft.		35 00
Timber in lengths over 32 feet take the following additions: 33 to 35 ft., 50c; 36 to 40 ft., $1; 41 to 45 ft., $3; 46 to 50 ft., $5; 51 to 55 ft., $7; 56 to 60 ft., $9; 61 to 65 ft., $12.50; 66 to 70 ft., $15; 71 to 75 ft., $18; 76 to 80 ft., $22.		
Fir flooring, edge grain		35 00
No. 1 and 2 cedar 1-in. Fir rough		38 00
No. 1 and 2 clear 1¼, 1½ and 2-in. Fir rough		40 00
1½-in. No. 1 4-ft. pine lath..		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 25
XXX 6 butts to 2-in.		2 90
XXXX 6 to 23-16-in.		3 10
XXXXX		3 35

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1sts and 2nds, 4/4	39 00
Birch, No. 1 com. and bet., 4/4	30 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00
Birch, 1sts and 2nds, 10/4 and 12/4..	45 00
Birch, 1sts and 2nds, 16/4	50 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4..	30 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood. 4/4, No. 2 com. and bet...	28 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	28 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1sts and 2nds, 4/4	37 00
Hard maple, common and better, 4/ .	28 00
Hard maple, 12/4 & 16/4, 1sts and 2nds.	46 00
Red oak, plain 1sts and 2nds, 4/4..	59 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	65 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain, 1sts and 2nds, 4/4.	59 00
White oak, plain, 1sts and 2nds, 1½ and 2-in.	65 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	75 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	85 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	88 00
White oak, ¼ cut No. 1 common	55 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up $52 00		54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No.. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ..	29 00	30 00
Pine, No. 1 dressing shorts ..	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ..	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips ..	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips ..	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips ..	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	25 00	26 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1¼ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in..	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	17 50	18 00
1"x3" to 6", 12'-16'	19 00	20 00
Pine mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine mill culls stock 1 x 12 ...	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	15 00	17 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1¼-in.	19 00	21 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
Mill culls, white pine, 1"x7" and up	20 00	21 00
Mill run Spruce:		
1"x4" and up, 6'-11'	17 00	18 00
1"x4" and up, 12'-16'	18 00	20 00
1"x9"-10" and up, 12'-16' ..	22 00	24 00
1¼"x7" 8-9" and up, 12'-16'	22 00	24 00
1¼"x10" and up, 12'-16'	22 00	24 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 White Pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
White Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	55	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	70	75
According to average and quality, 30 to 35 feet	50	60

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Quebec Spruce Deals

12 ft. and up x 8 x 9 and up.	$22 00	23 00
Oddments	17 00	18 00
Boards, 1 and 2 in.	16 00	18 00

Birch Planks

1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in. $54 00	
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00

Cuts and Better

4/4 x 8 and up No. 1 and better	55 00
6/4 x 8 and up No. 1 and better	65 00
8/4 x 8 and up No. 1 and better	65 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00

No. 1 Cuts

1 in., 8 in. and up wide	42 00
1¼ in., 8-in. and up wide	55 00
1½ in., 8-in. and up wide	57 00
2 in., 8-in. and up wide	60 00
2½ and 3 and 8-in. and up wide	75 00
4 in., 8-in. and up wide	85 00

No. 2 Cuts

1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	47 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in.	25 00
1-in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00

No. 1 Barn

1 inch	31 00 45 00
1¼, 1½ and 2-in.	36 00 45 00
2½ and 3-in.	45 00
4 inch	50 00

No. 2 Barn

1 inch	28 00 36 00
1¼, 1½ and 2-in.	30 00 36 00
2½ and 3-in.	38 00

No. 3 Barn

1 inch	21 00 28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00 25 00

Box

No. 1, 1, 1¼, 1½, 2-in.	22 00 25 00
No. 2, 1¼, 1½, 2-in.	19 00 23 00

Mill Culls

Mill run culls, 1-in.	19 00
1, 1¼, 1½ and 2-in.	20 00
No. 2	17 00 18 00

Lath

No. 1, 32-in. pine	1 75
No. 2, 48-in. pine	4 25
No. 1, 48-in. pine	4 75
No. 3, 48-in. pine	3 75

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1 E.			
	6 ft.	8 ft.	10 ft.	14x16 ft.
2 r 4, 6, 8	14 00	17 00	20 50	18 50
2 x 10	18 00	18 50	21 50	19 00
2 x 12	18 00	19 00	23 50	20 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	18 50
2 x 4-10-18-20	20 50
2 x 6, 8 to 16	18 50
2 x 8, 8 to 16	18 50
2x4 6 and 8-in.; 24,26,28, 30, 32 ft...	26 50
2 x 10 and 2 x 12; 8-10 ft.	23 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	25 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	27 50

No. 1 Common Boards

4 inch	19 00
6 inch	21 50
8, 10, 12 inch	23 50
Mixed widths	22 50

Flooring

4 or 6 inch No. 1	33 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00

Shiplap—Finished

6 inch	20 00
8, 10 and 12 inch	21 00

Siding

6 inch No. 1	33 00
6 inch No. 2	31 00
6 inch No. 3	21 50

Lath

No. 1 Cedar, pine, spruce (not mixed)	4 00
No. 1 Cedar, pine, spruce (mixed) ...	3 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	25 10
3 x 8 in.; 8 to 16 ft.	22 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	25 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	27 00

BRITISH COLUMBIA COAST FIR

Dimension S 1 S, and E.

2 x 4 in.; 6 and 8 ft.	17 50
2 x 4 in.; 12 x 14 ft.	18 50
2 x 4 in.; 10 x 16 ft.	19 50
2 x 4 in.; 18 x 20 ft.	20 50
2 x 4 in.; 22 x 24 ft.	21 50
2 x 4 in.; 26 x 32 ft.	23 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	20 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	22 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	23 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	25 00
2 x 14 in.; 10 to 16 ft.	25 00
2 x 14 in.; 18 and 20 ft.	27 00
2 x 14 in.; 22 and 24 ft.	28 00
2 x 14 in.; 26 to 32 ft.	30 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	21 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	22 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	23 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	24 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	26 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft. ...	24 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ...	24 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ...	25 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ...	25 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	32 00
Nos. 1 and 2, 1 x 4 in., E. G.	31 00
Nos. 1 and 2, 1 x 6 in., E. G.	29 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	23 00
No. 3, 1 x 4 in. or 6 in.	20 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	19 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ...	20 00
No. 2 Shiplap, 6 in.	19 00
No. 2 Shiplap, 8, 10 and 12 in.	20 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	19 00
Common Boards, 8 to 12 in.	20 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 75

LATH

Fir lath, 3/8 x 1 3/8 in. x 4 ft., bundled in 50's	4 00
Cedar lath 3/8 x 1 3/8 in. x 4 ft.	4 50

BUFFALO AND TONAWANDA, N.Y.

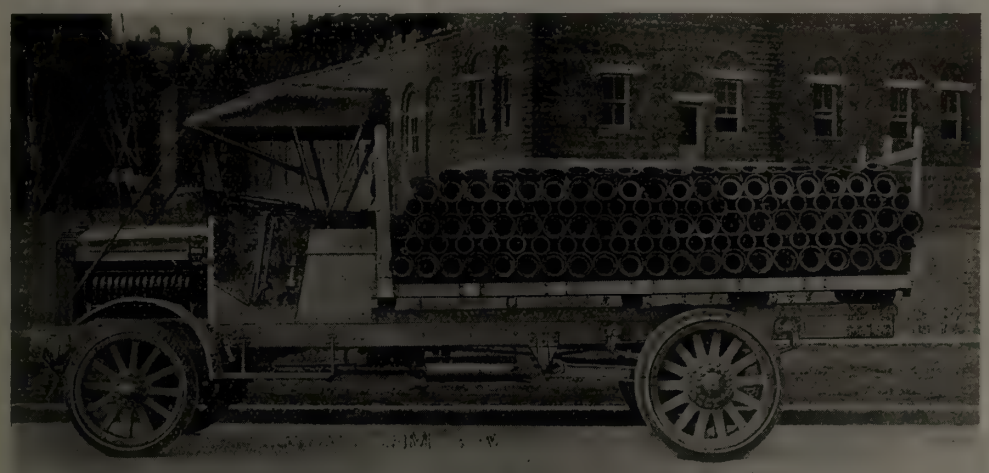
White Pine

Wholesale Selling Price

Uppers 4/4 ....$94 00	
Uppers 5/4 to 8/4	92 00
Uppers 10/4 to 12/4	97 00
Selects 4/4	84 00
Selects 5/4 to 8/4	82 00
Selects 10/4 to 12/4	92 00
Fine common 4/4	61 00
Fine Common 5/4	65 00
Fine common 6/4	65 00
Fine common 8/4	67 00
No. 1 Cuts 4/4	51 00
No. 1 Cuts 5/4	57 00
No. 1 Cuts 6/4	59 00
No. 1 Cuts 8/4	61 00
No. 2 Cuts 4/4	32 00
No. 2 Cuts 5/4	43 00
No. 2 Cuts 6/4	45 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	33 00
No. 3 Cuts 6/4	34 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	46 00
Dressing 5/4 x 10	51 00
Dressing 5/4 x 12	52 00
No. 1 Moulding 5/4	58 00
No. 1 Moulding 6/4	58 00

(Continued on page 62)

The National Truck



Specifications in Brief:

MOTOR—the famous Waukesha.

TRANSMISSION
Our own design. 2 and 3½ ton Models, 4 speeds forward and a reverse. Transmission is placed midway between rear axle and motor.

CLUTCH
Enclosed dry-plate variety.

IGNITION
Dixie Bosch or Eiseman, high tension. Independent.

CARBURETOR—Zenith.

RADIATOR
On both 2 and 3½ ton models, is of built-up type, having cast top, bottom and sides, enclosing fin and tube centre core.

STEERING GEAR
Is of the Worm and Nut, fore and aft type.

FRONT AXLE—Timken.
2 x 3 in. I-beam section.

REAR AXLE
Is the well-known Timkin, David Brown worm drive.

SPRINGS
Are semi-elliptic front and rear, and are of silico-manganese steel, self lubricated.

WHEELS
Best oak of artillery design with squared spokes, 14 to the wheel. Front wheels 36 x 5, rear, 40 x 5, dual.

TIRES
36 x 5 in. front. 40 x 5 in. dual, rear. Solid rubber and demountable rims.

FRAMES
High carbon, open hearth ship channel. Cardan shaft is tubular, made from seamless, drawn-steel tubing of .35 carbon steel, heat-treated.

EQUIPMENT
Three Adlake pressed steel truck lamps, jack and a full set of tools.

1000 lb., 1500 lb., 4000 lb. 7000 lb. capacities

National Trucks are built to do a Truck's work. The rugged construction of every part of the Truck is a revelation in advanced Motor building. While strength is a prominent feature, care has been taken not to create excessive weight. National Trucks are proven by day after day service, crrrying usual loads and under usual conditions—the absolute test of reliability. Economy in operation, minimum of repairs, our own guaranteed Service Stations and the best Truck that money can buy is what you get when you purchase a National Truck.

Enquiries regarding the National Truck should be addressed to Hamilton office. Complete illustrated catalogue with full particulars will be gladly mailed to interested firms.

Front view of National Truck Chassis.

The National Steel Car Co., Limited

Works and Operating Office:
HAMILTON, ONT.

LONDON, ENG.
PARIS, FRANCE

Montreal Office:
Shaughnessy Building

CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	58 00
No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	29 - 31	19 - 21	13 - 15
5/4 to 8/4	32 - 34	21 - 23	13 - 14
10/4 to 16/4	36 - 38	26 - 28	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	34 - 36	22 - 24	16 - 18
5/4 and up	36 - 38	24 - 26	16 - 18

SOFT ELM

4/4	34 - 36	23 - 25	14 - 16
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	32 - 34	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	44 - 46	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	60 - 62	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in.	92 00	98 00
Selects, 1 to 2 inch	80 00	88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	70 00	72 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	36 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 00	34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	28 00	29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		28 50
Spruce, 8 in. and under dimen.		26 00
10 and 12 in. random lengths, 10 ft. and up	25 00	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	22 50
All other random lengths, 7-in. and under, 10 ft. and up	21 00	23 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	20 00	21 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	21 00	22
1½-in. spruce laths	4 10	4 20
1½-in. spruce laths	3 55	3 75

New Brunswick Cedar Shingles

Extras	3 30	3 40
Clears	2 75	2 90
Second clears	2 40	2 60
Clear whites	2 25	2 30
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.	3 45	3 50
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfection, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in. extra red clear		3 30

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We make a special offer to lumbermen to send this complete book of veterinary advice absolutely free to any lumberman who will write for it.

The Book's Contents

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200 Rooms, Private Bath, $2.00 Single, $3.00 Up Double.
100 Rooms, Private Bath, $2.50 Single, $4.00 Up Double.
100 Rooms, Private Bath, $3.00 to $5.00 Single, $4.50 Up Double.

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is essential to the working energy of your lumber jacks. It is our pride that all products leaving our mills are inspected to see that only the highest quality is shipped.

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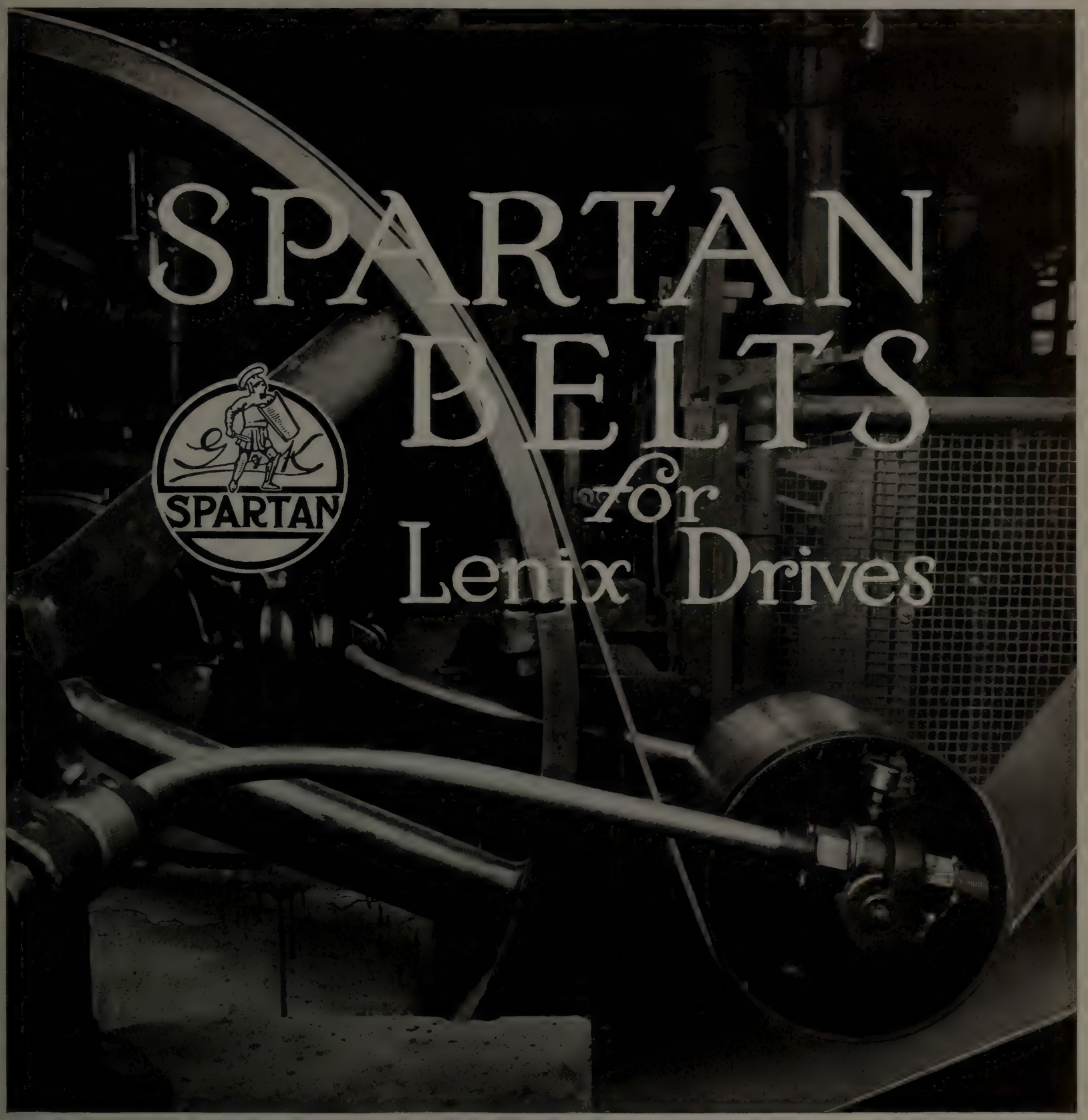

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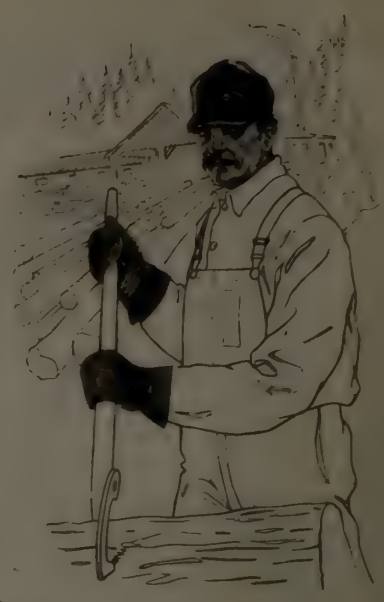

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Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

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VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

The Peter Hay Knife Co., Limited

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MANUFACTURING WOODWORKING

Machine Knives, Circular Cutters and Mortise Chisel

PRESSES
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Boving Hydraulic & Engineering Co.
Dodge Mfg. Company, Limited
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PULP MILL MACHINERY
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Jeffrey Manufacturing Company

PUMPS
Smart-Turner Machine Company
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SAW SHARPENERS
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SAW MILL MACHINERY
Berlin Machine Works
Huther Bros. Saw Mfg. Company
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McLennan Foundry & Mach. Works
Parry Sound Lumber Company
Payette & Company, P.
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Campbell-MacLaurin Lumber Co.
Can. H. W. Johns-Manville Co., Ltd.
Christy-Moir Company
Fesserton Timber Company
Fraser Limited
Gillespie, James
Harris Tie & Timber Company
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McGibbon Lumber Company
North Shore Shingle Association
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SILENT CHAIN DRIVES
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Arkansas Lumber Company
Arkansas Soft Pine Bureau
Cameron & Company
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Eagle Lumber Company
Edgar Lumber Company
Freeman-Smith Lumber Company
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Garrett Lumber Company, T. H.
Gates Lumber Company
Hobart & Company
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Stout Lumber Company
Valley Lumber Company
Wilson Lumber Company
Wisconsin & Arkansas Lumber Co.
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Brown Corporation
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Fenderson & Company, John
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Gillies Bros.
Grant & Campbell
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Mason, Gordon & Company
New Ontario Colonization Company
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Columbus Chain Company
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STEEL DRUMS
Smart-Turner Machine Co.

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STOKERS
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Cant & Kemp
Farnworth & Jardine
Lacey & Company, Jas. D.
Smith & Tyrer Limited

TIMBER ESTIMATORS
Sewall, James W.

TIMBER CRUISERS
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Canadian Link-Belt Company
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West & Peachey

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Hoffman Brothers Company
Webster & Bro., James

VENEER MACHINERY
Perrin, William R.
Philadelphia Textile Machinery Co.

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Berlin Machine Works
Canadian Blower & Forge Company
Long Manufacturing Company, E.
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WOOD PULP
New Ontario Colonization Co.
River Ouelle Pulp & Lumber Co.
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A Sure Way To Increase Your Profits

Use the best Saws. We guarantee that ATKINS STERLING CROSS CUT SAWS will cut twenty-five per cent more timber than any other Saw with less cost for re-fitting. We not only claim this—WE GUARANTEE IT—and we'll make our Guarantee good.

Write to the nearest address below—say *"I want to know about your proposition in the Canada Lumberman."*
No obligation. Just write us if you want to increase your profits.

ATKINS NO. 5 PERFECTION

ATKINS NO. 69 EUREKA

Two of our most popular patterns. We make others. Let us show them to you.

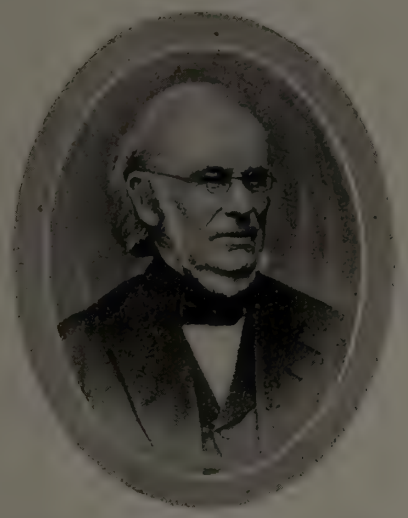
Write to-day to

E. C. ATKINS & CO.

Makers of Sterling Saws

Factory—HAMILTON, Ont. ***VANCOUVER BRANCH—109 Powell St.***

United States Factory—Indianapolis, Ind.



Bourne Spooner, Founder

The Story of Plymouth Rope

Ninety-one years ago this spring the first Plymouth Rope was turned out, on the site where now stands the world's largest cordage factory and by the company whose success has built that factory and kept it steadily busy making the same high grade of rope.

The story of this substantial business growth, in which Plymouth Rope has come to be recognized as the world's standard of quality, is an interesting narrative. And the story of the rope itself is still more interesting.

The series of advertisements, of which this is the first, will describe the things which make Plymouth the standard, will illustrate how that standard works out in actual practice, and will show what it means to you as a user of rope.

PLYMOUTH CORDAGE COMPANY

NORTH PLYMOUTH, MASS. WELLAND, ONT.

INDEPENDENT CORDAGE CO., LTD., TORONTO

CANADIAN SALES AGENTS

PLYMOUTH 1824 TRADE MARK

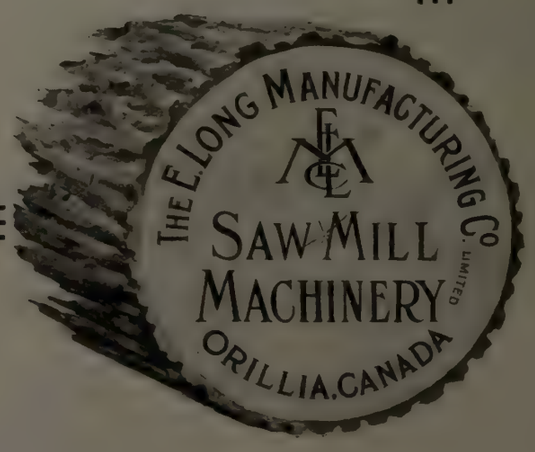
To the Lumbermen of Canada,

we extend

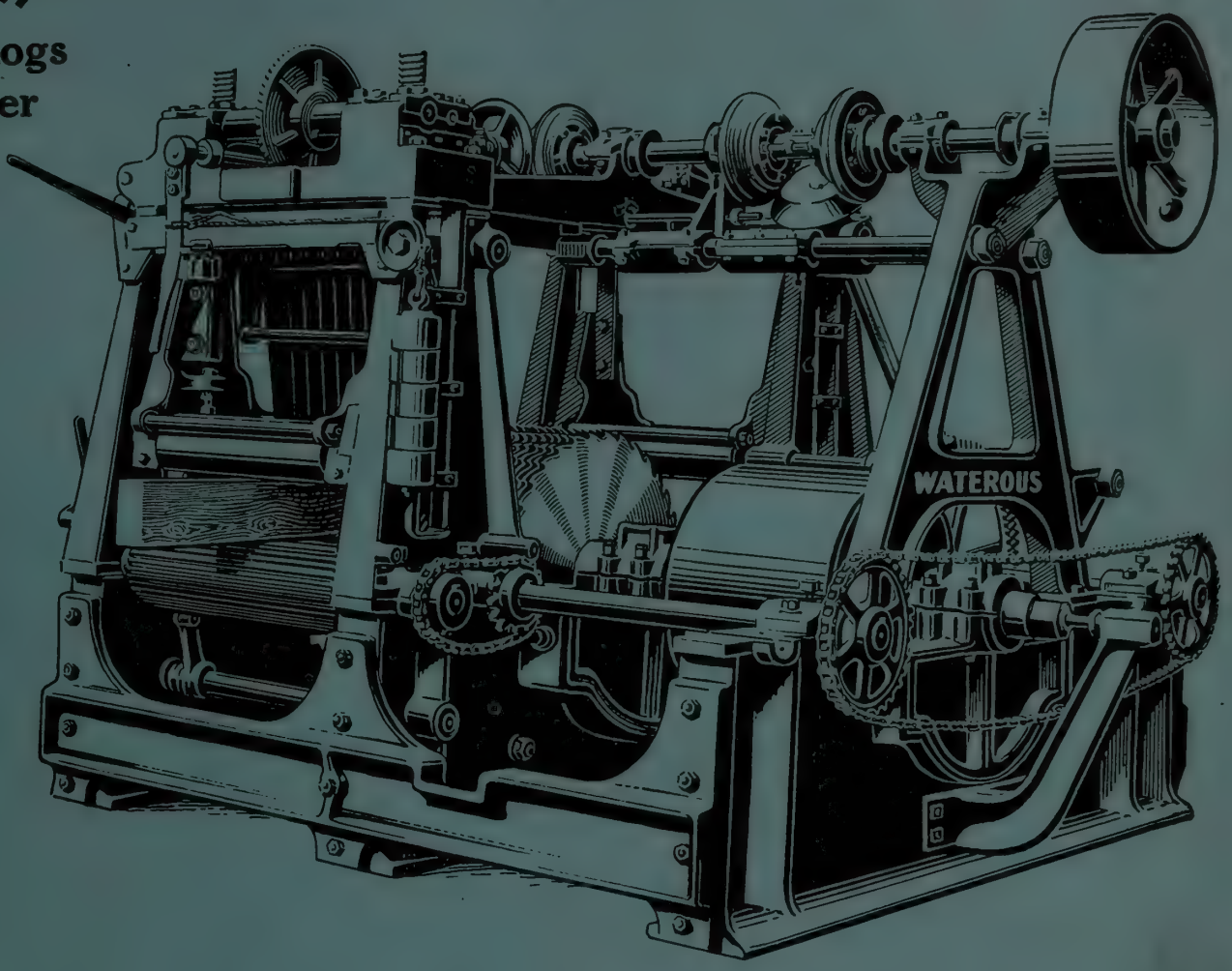
Our Heartiest Wishes

for

A Happy and Prosperous New Year



Cut Those Small Logs Into Perfect Lumber Economically—



With The "1916 Model" Kendall Circular Gang

The Kendall Circular Gang meets the demand for a machine to turn small logs into merchantable lumber economically—*profitably.*

Having an enormous capacity as compared to the Band Saw or Circular, this machine, by reducing the time of handling small logs, keeps up mill production and keeps down costs.

The Kendall Circular Gang takes cants from 4 in. to 12 in. thick, and at the rate of 2500 to 3000 a day turns them into lumber, perfect in finish and cut evenly from end to end.

Other Gangs will cut lumber fast, but none of them can equal the Kendall on *quality* of lumber sawn.

The "1916 Model" machine is the latest development in the Kendall patents. New features that mean increase in capacity, increase in cutting quality, greater safety and convenience, have been added.

Let us show you why it will reduce lumber sawing costs for you.

A Letter

"We have sawn as many as 2,500 logs in 10 hours, and if we could keep the Gang running without any stops or delays we could run 3,000 through it in 10 hours. But taking into account delays, changing saws, etc., we can easily saw over 2,000 cants per day. We run five logs per minute, which is about 65 to 75 feet feed per minute. It does not make any difference what sized cant we run, the feed is the same. We run 11-in. cants when our saws are full size and only 10-in. after the saws are worn down too much to take 11-in. cants.

We have been well satisfied with our Circular Gang and would certainly advise any person requiring a machine which puts out a lot of lumber, to install one. This Gang does not only cut up a lot of lumber, but it cuts it even from end to end without any variation in thickness, which no Band Saw will do, neither any Circular Saw."

(Name on request)

The Waterous Engine Works Co., Limited

Brantford, Canada

Branch—Winnipeg, Man. Agency—H. B. Gilmour, Vancouver, B.C.

"FROST KING" METAL

$5,000,000.00
worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. **Price 30c per lb.**, Fort William and East; West of Fort William **35c per lb.**, delivered nearest railway station, packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.
Limited

General Mill Supplies MONTREAL

AJAX
Loading Chain

is the loading chain that 90% of all the lumbermen in United States and Canada use and swear by. Do you?

Made by

Standard Chain Company
Pittsburgh, Pa.

Montreal
Alexander Gibb, St. Nicholas Bldg.

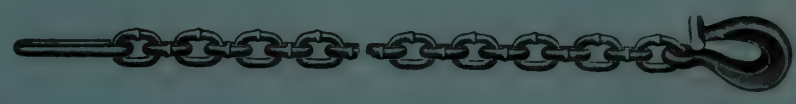
Winnipeg
Bissett and Webb

Canada Lumberman & Wood Worker

WATER WHEELS
GOVERNORS, PUMPS

Highest quality

Boving Hydraulic & Engineering Co.
LINDSAY, ONT. Limited



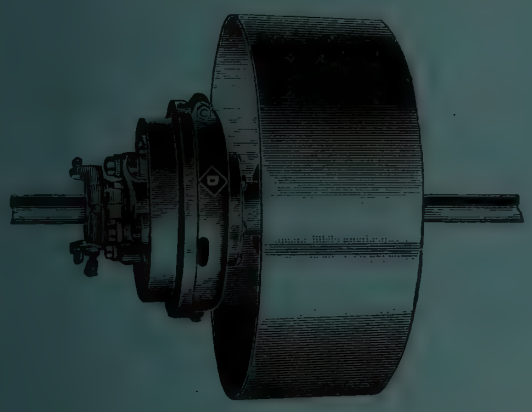
Made in all styles

Electric-Welded Boom Chain

We also specialize
Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.



DODGE FRICTION CLUTCH PULLEYS

For Saw Mills and Planing Mills

A simple, positive, durable clutch! Every Friction Clutch Pulley we sell is guaranteed suitable and satisfactory for the work or money refunded. All sizes split or solid for quick shipment.

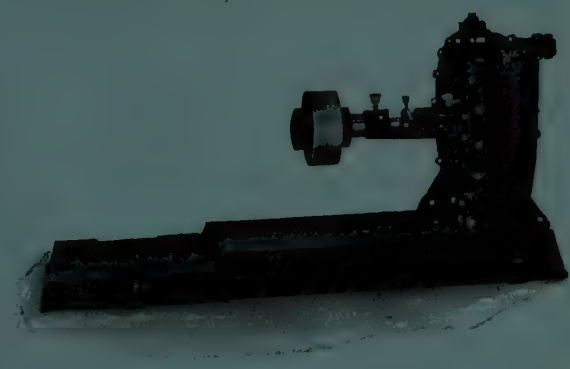
Dodge Manufacturing Company, Limited
TORONTO -:- MONTREAL

"TOWER"
HAIR BELTING

Woven from Camel's Hair Yarn

Manufactured and guaranteed by

Turner Bros. Canada Limited
Montreal



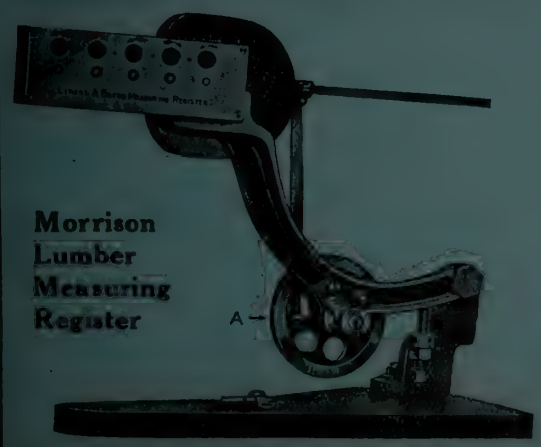
The Best Insurance

against expensive delays caused by breakdowns.

A Reliable Pump

as built by

The Smart-Turner Machine Co., Ltd., Hamilton Canada



Measure Every Stick in the Order

Too much lumber in a definite order will hurt your profits while too little may damage your reputation. Equip your machines with Morrison Lumber Measuring Registers and have an accurate count, either in board or lineal feet, of every stick of lumber in every order you turn out.

Our literature will interest you.

The James Morrison Brass Mfg. Co., Ltd.
93-97 Adelaide Street West, TORONTO

Alphabetical Index of Advertisers, Page 54 Classified Directory to Advertisements, Page 60

A waterproofed leather belting made from the very best materials in the very best way—with a surface that "grips" the pulley.

Ensure Efficiency

by using

A Good Belt on a Good Machine

If you are proud of the good machinery you possess, it is surely a pity—to say nothing of poor business—not to get the most out of it.

And you are not getting the most out of it unless you use "Amphibia" belting to drive it.

"Amphibia" has a surface and flexibility which make it the most efficient and "gripping" belt on the market.

By adopting "Amphibia" belting you ensure your machinery working at its maximum efficiency; you prevent the loss in transmission of valuable—and costly—power because you are using a medium of transmission which is perfectly designed for its task; you do away with the expense involved in the readjustment necessitated by the "stretching" of belts; you obviate the cost of renewals, because "Amphibia" is made from the best of butts procurable and is tanned in our own tanneries by a secret waterproof process which renders the leather impervious to oil, steam, water and fumes.

Your "economy" in buying a cheap and common belt to drive a costly and high-class machine is a false economy—and bad business. Try a sample run of "Amphibia" and prove it.

"Leather like gold has no substitute."

TORONTO
38 Wellington St. E.

ST. JOHN
149 Prince William St.

Sadler & Haworth
Tanners and Manufacturers
For 39 Years Tanners and Manufacturers of the Best Leather Belts
MONTREAL, 511 William Street

VANCOUVER
107-111 Water St.

WINNIPEG
Galt Building

Geo. Gordon & Co., Limited

Cache Bay, Ontario

Red and White PINE

Dressing done on short notice. ***Send us your inquiries.***

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

QUALITY LUMBER

Attractive Prices Can be Quoted You on

B. C. Products

DOUGLAS FIR
in
Flooring — Mouldings
Ceiling — Heavy Timbers
Trim — Doors
Silo Stock

RED CEDAR
Bevel Siding
No. 1 Com. Barn Boards
T. & G. Quality brand Shingles
Silo Stock

Ontario Products

WHITE PINE
RED PINE
JACK PINE
SPRUCE
HEMLOCK
LATH
TIES
POSTS
CEDAR SHINGLES

WE SOLICIT YOUR ENQUIRIES

Terry & Gordon

Confederation Life Building
Toronto, Ont.

Vancouver Branch: 852 Cambie St.

Pine and Veneered Doors

Our pine and veneered doors for domestic and export trade are made on the principle of "Not how cheap, but how good."
Our guarantee of faultless workmanship and choice materials goes with every door.

SEND US YOUR ENQUIRIES

Benson & Bray, Ltd., Midland, Can.

HEMLOCK
AT
LONGFORD

500,000 4/4 No. 2 Hemlock, 1914 and 1915 cut.
500,000 8/4 No. 2 Hemlock, 1914 and 1915 cut.
500,000 2 x 4 No. 2 Hemlock, 1914 and 1915 cut.
150,000 4/4 No. 1 Hemlock Sidings, 1915 cut.
40,000 1 x 4 Hemlock Stocks, 1915 cut.
20,000 1 x 6 Hemlock Stocks, 1915 cut.
10,000 1 x 7 Hemlock Stocks, 1915 cut.
15,000 1 x 8 Hemlock Stocks, 1915 cut.
20,000 2 x 4 — 12 No. 1 Hemlock, 1915 cut.
200,000 2 x 4 — 14 No. 1 Hemlock, 1915 cut.
30,000 2 x 6 — 10 No. 1 Hemlock, 1915 cut.
60,000 2 x 6 — 12 No. 1 Hemlock.
70,000 2 x 6 — 14 No. 1 Hemlock.
30,000 2 x 8 — 14 No. 1 Hemlock.
15,000 2 x 10 — 10 No. 1 Hemlock.
60,000 2 x 10 — 12 No. 1 Hemlock.
125,000 2 x 10 — 14 No. 1 Hemlock.
150,000 2 x 10 — 16 No. 1 Hemlock.
20,000 2 x 12 — 14 No. 1 Hemlock.

Write us for prices.

The Long Lumber Company
HAMILTON, ONT.

"Beat It"
If it is HOCKEN'S HEMLOCK You Can't

You simply can't beat the unvarying good quality of Hocken's Hemlock. We can make any size shipment—promptly.

Hocken Lumber Company, Limited
Otter Lake Station, Ont.
Toronto Representative :—L. M. Dougherty, 77 Lindsay Ave., Phone Park. 2170

Our Mills Produce and We Market as Much

GENUINE LOUISIANA RED CYPRESS

As All Other Concerns Combined

250,000,000 feet constantly in stock insures filling any reasonable order promptly.

Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

Our salaried salesmen receive credit for mail orders. Try us.

LOUISIANA RED CYPRESS COMPANY

Hibernia Building New Orleans, La.

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

KLIM

SPELL IT BACKWARDS

The Lumberman's Milk

In Powder Form

Klim is pure—cheaper than fresh liquid milk. One-third the cost of condensed milk. No freights on useless water—keeps in any temperature—no waste.

Packed for camp use especially in 10 pound tins $2.00 each, the pound makes one gallon. Case lots, special price.

Write for samples, etc.

Canadian Milk Products Ltd., Toronto

Plants:—Belmont, Ont., Brownsville, Ont. Head Office:—Mail Building

Wanted - White Pine

We are at all times in the market for dry White Pine all grades and sizes, also will Contract for your this Season's Cut.

Write us and we will call on you.

South Coast and Northern Lumber Co., Inc.

Saranac Lake, New York

Bartram Brothers

Cable Address, "Bartram"
Code, ABC 5th edition.

Ottawa, Canada

Limited

Large Stocks on Hand

Red Pine

Spruce

White Pine

Shingles —— Lath

"Most of the lines listed are dry"

EXPORTERS OF DEALS TO U. K. AND EUROPE

Watson & Todd Limited

WHOLESALERS

Shell Box Stock

4 x 5—1915 Cut Norway

Send us your enquiries

OTTAWA

Also

Montreal and Liverpool, Eng.

The

Harris Tie & Timber Co.

Ottawa - Canada

Lumber - Lath - Shingles

Cedar Poles and Posts

Railway Ties - - Piles

Fraser Limited

Fredericton, N. B.

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Cabano, P. Q.

Fraser Lumber Co., Limited
Plaster Rock, N. B.

F & M Lumber Co., Limited
Whitworth, P. Q.

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Spruce Lumber
Rough and Finished

Shingles, Lath, Piano
Sounding Board Stock, etc.

Fraser Bryson Lumber Co., Ltd.

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Wholesale Lumber Dealers
and Selling Agents for

Fraser & Co.

Mills at

DESCHENES - - - QUEBEC

White Pine
Red Pine
Spruce
Lumber and Lath

River Ouelle Pulp & Lumber Co.

Manufacturers of

SPRUCE

Lumber Lath Pulpwood

Head Office and Mills at:

St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of
Quebec City

Also Mills at:

Crown Lake, Powerville, Riv. Manie
On Nat. Transcontinental Ry.

The Canadian White Cedar Shingle Association

Successors to

The North Shore Shingle Association

This Association is comprised of the following Cedar Mills :

Price Brothers & Co., Ltd.	Quebec
The Shives Lumber Co., Ltd.	Campbellton, N. B.
The Richards Mfg. Co., Ltd.	"
B. A. Mowat	"
Edwards & McLean	Bonaventure, Que.
The Forest Reserve Pulp & Paper Co., Ltd.	Gaspe, Que.
The Restigouche Lumber Co., Ltd.	Dalhousie Jct., N. B.
The Dalhousie Lumber Co.	Dalhousie, N. B.
The Continental Lumber Co.	Charlo, N. B.
The Bathurst Lumber Co.	Bathurst, N. B.
The Miramichi Lumber Co.	Chatham, N. B.
Fraser Limited	Fredericton, N. B.

Standard Grading Rules at all the mills assure uniform grading. We can now furnish dry stock in all grades for prompt shipment. Delivered prices at all points West of Campbellton, N. B.

For quotations address :

F. G. WHEATON, Amherst, N. S.

Canadian Sales Agent

Special: To reduce stocks we are quoting special prices on

Clear Walls Specials Extra No. 1s.

These grades are bone dry and can be shipped at once.

JOHN McKERGOW, President — W. K. GRAFFTEY, Managing-Director

The Montreal Lumber Co. Limited

Wholesale Lumber

Ottawa Office: 46 Elgin St. — Montrea Office: 759 Notre Dame St., W

James P. Grant — John K. Campbell

Grant & Campbell

Manufacturers of

SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

New Glasgow, N. S.

FOR SALE
HARDWOOD LUMBER

Dimension Stock, Mattress Frames, Hard and Soft wood slabs cut to lengths required. Hemlock, Cedar, Posts.
Orders receive prompt attention.
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JOHN P. NEWMAN Wiarton, Ont.

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Being next door to the Patent Office, we have personal interviews with Examiners, thus earlier allowance of your Patents. We have access to all Records and solicit the business of Manufacturers, Engineers, and others who realize the advisability of having their Patent business transacted by Experts. Send for our Booklet, etc.

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PRESTON ONT.
FINE BANK, OFFICE, COURT HOUSE & DRUG STORE FITTINGS
OFFICE, SCHOOL, CHURCH & LODGE FURNITURE
SEND FOR CATALOGUE

It Just Depends

Advertising and Dynamite are both useful, but the results of each depend upon how it is handled.

Canada Lumberman and Woodworker

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Lumber

Good Grades — Right Prices — Prompt Shipments

Canadian Hardwood. National Grading Rules

Birch
Basswood
Maple
Elm
Beech

All Thicknesses

Also full line in

White, Red

and

Jack Pine

All grades and sizes.

Get in touch with us for prices

C. G. Anderson Lumber Company, Limited

Manufacturers and Strictly Wholesale Dealers in Lumber

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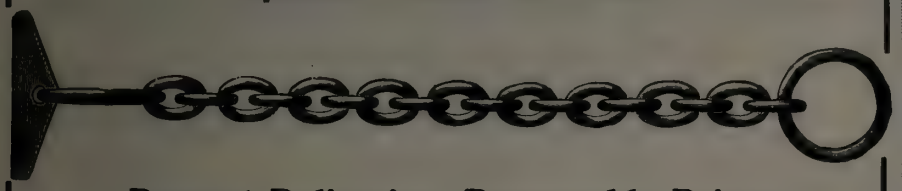

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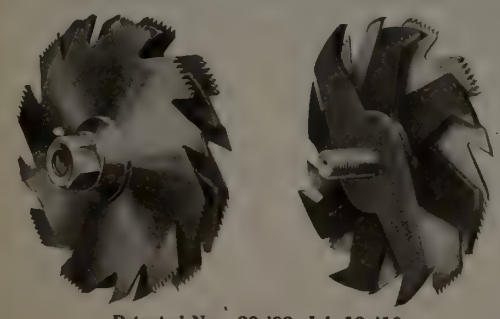

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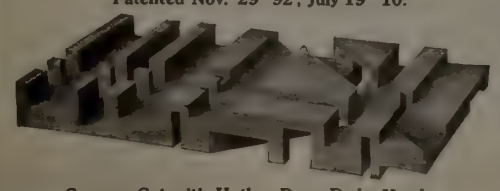

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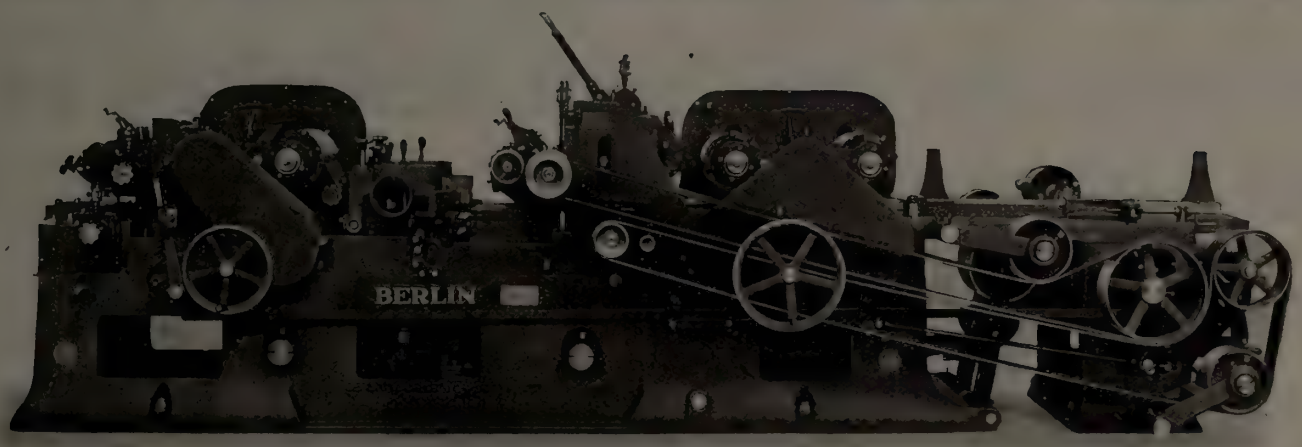

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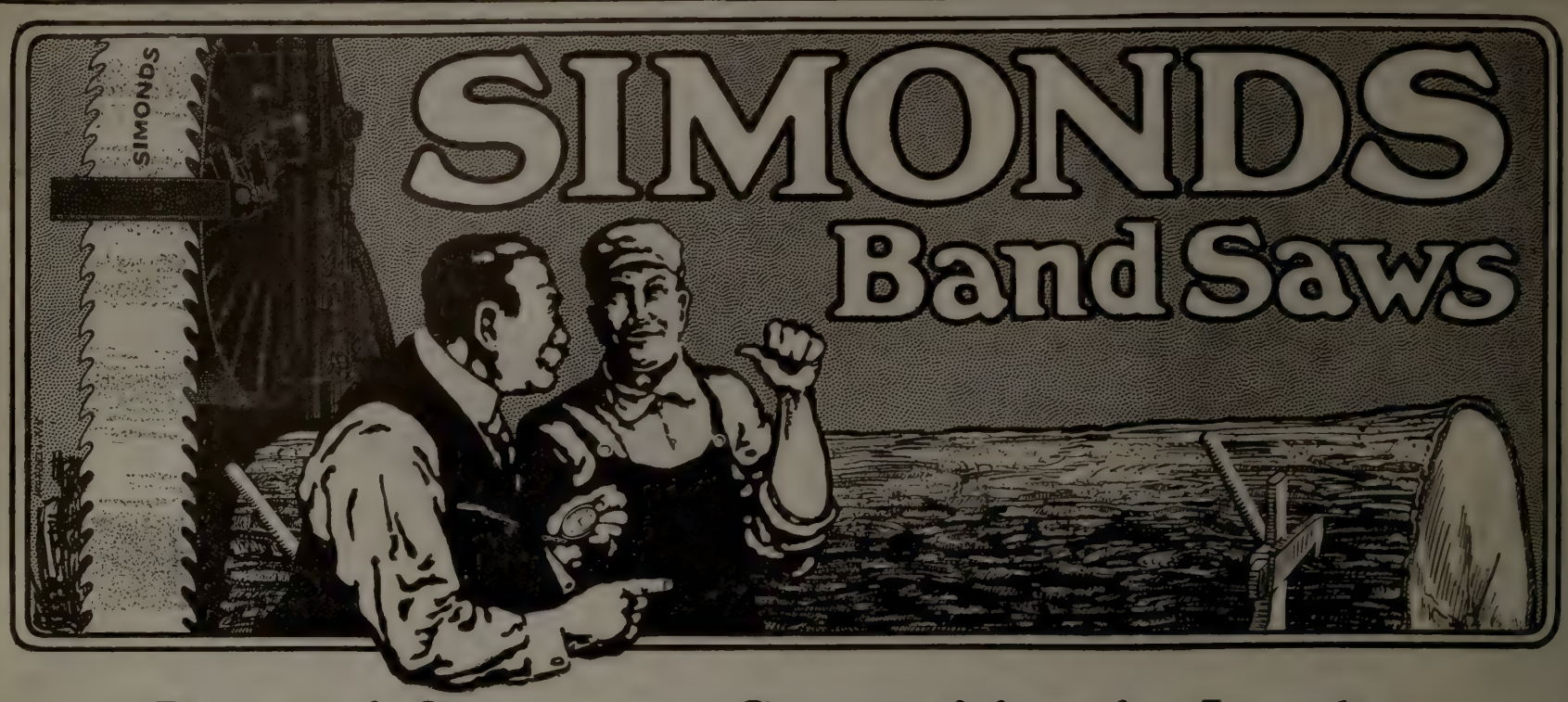

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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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Shell Box Patronage in a Cabinet Minister's Constituency

The publicity which we have given recently to the manner in which many shell box contracts were let by the Shell Committee has met with approval from our readers in all parts of Canada. From the letters we have received regarding this matter, we are convinced that nearly everyone who is interested in the production of boxes of any kind has come across instances similar to those we have already described, in which contracts have been let to parties who are not in any way entitled to them, while others, well equipped, with their machinery idle and their men out of employment, have been unable to get contracts.

Although we have published the facts in connection with several of these cases, nothing has been done by the Government in the way of investigating the situation. The facts which have come to our attention unquestionably indicate the necessity for an investigation. The reports we have published disclose a state of affairs that is intolerable, namely, the giving of contracts for the production of shell boxes to political friends who are in many cases without the necessary experience or equipment, while firms which are justly entitled to secure contracts because of their experience and equipment, have been neglected in spite of their repeated applications for the business.

In times like the present, the first consideration in the giving of contracts by the Government should be economy and efficiency. Political consideration should never be permitted to enter into the letting of contracts for shell boxes or for anything else, yet we find case after case in which only an investigation will ever convince us that political considerations have not been the chief factors. An instance which has come to our attention recently is similar to others we have already reported. We have enquired into the circumstances of this case and believe that the following is a plain account of the facts:

A contract for 5,000 shell boxes to hold four 18-lb. shells and fuses, at $2.50 per box, was secured by C. W. Burgoyne, of Fenelon Falls, Ont., which is located in the Dominion riding of Victoria, which included shipment to the point designated for delivery. C. W. Burgoyne, who secured this contract, is in partnership with his father in the firm of W. Burgoyne & Company, which carries on a general store business at Fenelon Falls. Not being in a position to manufacture the boxes himself, we are informed that he was willing to sub-contract with anyone who would undertake to handle the contract or parts of it. The contract was finally allotted to Mr. Alfred Tiers, of Fenelon Falls, who conducts a small planing mill at that place. This contract has now been completed and the boxes were delivered some time ago.

While this contract was being worked out, an additional contract for 25,000 boxes was secured, according to our information by C. W. Burgyone, and this also was taken over by Alfred Tiers. We understand that this contract was known as an optional one, which we suppose means that Burgoyne was at liberty to take it or leave it, as he desired. It included the stipulation that no more than 3,000 boxes were to be paid for in any one month. The price for this box was a trifle less than the price for the box covered by the first contract. By the end of the year 3,000 boxes had been produced under this contract. We are informed further that Tiers was not able to fill the first contract entirely by himself, but purchased the tops and bottoms for a number of the boxes, securing them at 14c. per pair; and that in connection with the second contract he is purchasing the ends ready to be dovetailed, at 5c. each, securing them from a manufacturer at Lindsay.

Two or three things stand out clearly in connection with this case. In the first place, the contract was apparently secured through personal or political influence by a party who had no apparent right to it. In the second place, the contract was apparently handed on, or sublet, to Tiers, a proceeding which is understood usually to involve remuneration to the first party, although he actually produces nothing. In the third place, another contract for a much larger quantity of boxes was secured by the same parties. We cannot see how such methods of handling the shell box business can be justified. Even in ordinary times, the letting of contracts in this way could not be defended, and at a time like the present it is quite indefensible.

The suspicion that this contract was handed over by Burgoyne to Tiers for a definite monetary consideration is strengthened by the fact that these two parties formed a partnership under the name of C. W. Burgoyne & Company. Evidently they wished to give the transaction a more respectable appearance; but we cannot see how this can be considered as lending the affair any respectability. It amounts to the same thing in the end, namely, that a party quite unable to produce the boxes, secured the contracts and turned them over to another party. The fact that he entered into a partnership with Tiers indicates rather clearly that he did so in order to make it appear that he was entitled to a share of the profits which he was securing and towards which he had contributed nothing. When one considers that throughout Canada there are hundreds of planing mill plants which have suffered heavily through business depression and would be greatly benefited by securing shell box contracts, he is thoroughly justified in criticizing a government which has permitted the letting of contracts in such a manner.

What can the public think of such proceedings as these? There is one conclusion which is being very generally drawn, namely, that the giving out of shell box contracts has not been in the interests of economy or efficiency, or in the interests of the legitimate box making or planing mill industries, but has been used as a means of distributing favors to political friends. Nothing whatever has been done in the way of holding an investigation into these matters. The Commission which has been enquiring into the letting of various war contracts has been devoting its attention to other matters, the reason given for not including box contracts being that the scope of the Commission does not entitle it to investigate such matters.

The cases we have referred to in previous issues and in this issue seem to us to carry clear conviction of improper methods and to demand an investigation. We do not think the Government will actually seek to avoid such an investigation on the ground that the

Shell Committee was spending British money and not Canadian money. Theoretically there may be reason for taking such a position, but no government which is jealous of its good name can afford to stand idly by and see shell box contracts given to its friends who are not entitled to them, while others who are well entitled are neglected. The Government has definite powers to order an investigation into these matters and to bring out the facts.

What the public wants to know is whether the letting of shell box contracts has been used to promote the interests of a political party. We believe that many contracts have been so let and that it is incumbent upon the Government to throw light upon the whole situation. Such information as we have gathered upon the subject is at the service of the Government any time it desires to open an investigation which shall be thorough and impartial. Our object is to help in clearing up a most unsatisfactory and intolerable situation. The cases we have already referred to cover a large part of Ontario and part of Quebec and they strongly suggest party patronage in the giving out of contracts.

Low Stumpage Values Restrict Scientific Development

In Ontario one of the most frequent remarks heard among lumber manufacturers relates to the high price of stumpage, compared with the low price of the finished product. By stumpage price in this case is meant the cost of the standing timber to the manufacturer and there is no doubt that, in view of the price of lumber, the cost of the standing timber in Ontario has been excessive for many years. The value of stumpage to the man who has secured it, is quite a different thing from its cost, and the variation in these two factors has much to do with our forestry and lumbering situations. The low level of stumpage values in this country is the greatest hindrance to the progress of forestry. Not until the timber owner can secure for the sale of his product a price that makes his stumpage value much greater than it is at present, will he be inclined to give to forestry questions more than a passing consideration. If the foresters of Canada want to make more rapid progress this is the feature of their problem that they must attack most seriously. Dr. J. F. Clark in a recent discussion brings out this point strongly. Stumpage, he says, is that which remains when the cost of marketing the forest product has been paid out of the returns from the sale. Obviously, there are but three ways of increasing stumpage values, namely, by raising the price of the product, by eliminating waste, or by reducing the costs of marketing. Unhappily, the price of lumber, the main forest product, is determined by a great variety of considerations, most of which are wholly beyond the control of the friends of the forest.

The utilization of materials previously wasted makes slow progress. There have not been nearly so many by-product developments as could be wished, and every step in advance—no matter how rich in early promise of good financial returns—largely defeats its own hopes on account of the overwhelming supply of raw materials on the one hand and market limitations for the product on the other. Until lumber prices substantially and permanently advance, the main hope of bettering forest finances, and thereby widening the field where forestry may be practised, rests in lowering the costs of marketing the forest crop. The cost of marketing the forester's crop may be roughly divided into logging costs, milling costs, lumber transportation, and selling costs.

The sawing and finishing of lumber, together with lumber transportation, have already been highly standardized. No doubt many further economies will be effected in these departments from time to time. A start, which has every promise of large results, has already been made in the, heretofore, much neglected field of lumber salesmanship. But perhaps the largest field for economies is that of logging, and the hope for greater efficiency in this quarter is in the development of the art of logging engineering.

As agriculture calls to its aid so much of the sciences of chemistry, physics and biology, so the logging engineer, in the development of his profession, takes toll from the whole field of mechanical science, and calls for much of the best that has been produced by that modern alchemist, the metallurgist. No occupation calls for greater resource and adaptability. Every logging unit differs from every other in the complexity of variations in topography and stand; of the thousand ways in which logging may be done there are not many profitable ways, and there is, of course, only one best way. The man who knows and can effectively carry out one or more of these better ways is a potential logging engineer.

The successful logging engineer of the past has compelled success by a more than average ability and adaptability. How may the average logging foreman improve his methods and thus take the first steps to qualify as a logging engineer? Must it not be through bringing to him the results of the best thought of the thousands of men who are devoting their lives to this work?

The graduate of the forest school, with a special training in the department of logging engineering, may hope to be of considerable service to a logging company from the start, but, to be of the greatest service in the end, he must be willing to start his practical apprenticeship at the bottom and work up.

That these ideas are not fanciful or merely theoretical is amply shown, as Dr. Clark points out by the numerous examples in Europe. where labor is much cheaper and stumpage values are several times higher than with us, and where forest properties may be maintained on a perpetual yield basis and pay a fair return on the investment. In a large measure the solution of the problem in this country will be found in the development of the art of the logging engineer.

U. S. Trade Envious of B. C. Progress

The activity of the lumbermen of British Columbia in co-operation with the Provincial Government in developing export markets for the lumber products of that province have not only brought definite and practical results, but have stirred up much envious enxiety among the lumbermen of the Pacific Coast States. An indication of this feeling on the part of Pacific Coast lumbermen in the United States is afforded by the testimony given recently by Hon. Joseph N. Teal, of Portland, Ore., when addressing the Federal Trade Commission in a recent hearing at Washington.

The question of Canadian competition was considered at some length by Mr. Teal, who spoke of the great co-operation between the lumbermen of British Columbia and their government, characterizing it as a regular "partnership" between the two parties. The officials in British Columbia, he said, were "progressive and awake to the opportunities of the day." Developing the idea further, he said that after the war there was little doubt that a commercial unit would be formed, just as now there was a fighting unit, the object of the commercial co-operation being to lay the foundation for a preferential tariff.

Referring to the situation in the Northwestern States in regard to Canadian competition, Mr. Teal said:—

"To the north an active, virile commonwealth, producing the same commodity and competing in the same markets, is aiding its own lumber industry in every reasonable way. British Columbia competitors enjoy not only the same rail rates to the markets in the United States, to which fact reference has been made, but by reason of the operation of our navigation laws such competitors can charter ships under any flag in normal times for delivery at any port in the United States on the Atlantic coast at from $2.50 to $3 a thousand feet less than the shipper in the United States. Some preferential tariffs are

now in effect between Canada and other British colonies, and the establishment of such tariffs between all the British possessions is being urged with vigor."

Referring to the export trade situation, Mr. Teal said:—

"In the past the Pacific coast states have done by far a greater export business than has British Columbia. It must not be assumed, however, that this condition will continue unchanged.

"The war, while affecting this country as all others, has necessarily borne harder on Canada than on us. But some day—and God speed the day—the war will end, and it may be accepted as a certainty that everything an intelligent government can properly do will be done by Canada and by every other country engaged in this war, to rebuild and reconstruct their industries and to heal their commercial wounds. It would, therefore, seem that simple, ordinary prudence and business sagacity should impel the Government of the United States in like manner, and with like persistence to aid, foster and further its own industrial and commercial interests."

Mr. Teal also discussed the shingle industry, which, he said, had not been a paying one, the main cause being competition from B. C. "No branch of the lumber industry in the northwest has been the subject of more thought and discussion than that of shingles," he said, "and yet, notwithstanding the product is an article of common use and the business one of some years' standing, it is putting it mildly to say that it is in a very unsatisfactory condition. Wide fluctuation in prices and unstable demands, with more or less demoralization as a result, have been the history of this branch of the industry since its inception. Various reasons have been assigned in explanation, and many have studied the subject in order to find a remedy for a condition which all concede exists."

"The testimony of those engaged in the industry shows that, taken as a whole, the business is not only not profitable, but is being conducted at a loss. The northwest states produce red cedar shingles. In 1912 cedar shingles represented 78.9 per cent. of the entire production of the United States, and the State of Washington produced 84.2 per cent. of the cedar shingles and 66.4 per cent. of the total shingle output of the United States."

A higher grade of shingle was made in B. C., Mr. Teal said, than in the United States. He hoped that this would continue to be the case, so that the competition on the low grade would not be so keen. However, he said, there were already some concerns in B. C. making a low grade shingle.

"The British Columbia manufacturers as yet make on the whole a higher grade shingle than is made in Washington, but some of the newer mills are now manufacturing practically the same grade. The tendency, moreover, on both sides of the line, is gradually to approach the same standards. That is, in Washington there is a decided trend towards higher grades, better grading, more careful packing, and better manufacturing, while in British Columbia there is a tendency to produce larger quantities of the medium grade."

Taking up the question of the advantage under which the British Columbia mills work as regards raw material, he said:—"There is no question but that British Columbia has a decided advantage in the raw material, it being estimated that this advantage in itself represents about 25 cents a thousand feet; also in the shingle mill about 75 per cent. of the labor is oriental. The labor cost, besides, is somewhat less in British Columbia than in the United States. Attention has heretofore been directed to the active interest the British Columbia Government takes in promoting the lumber industry. It is but current legislative history of the United States that while formerly foreign shingle manufacturers paid 30 and 50 cents a thousand duty, shingles now enter free. The shipping laws, particularly as affecting shipments to the Atlantic coast by water, work as much hardship to shingles as to lumber; and under existing laws, with normal conditions, the British Columbia manufacturer has an undoubted advantage on shipments via the Panama Canal. While as yet the movement of American manufacturers to British Columbia has not assumed large proportions, it is, nevertheless, in progress."

Government Co-operation Helping the Trade

One of the surest ways of getting a man's business is to give him more than he expects, or more than he has been accustomed to getting for his money. It is not possible to give him continuously more in the form of goods than he pays for, but in the shape of useful information one may often give a customer something the value of which cannot be estimated in money. This is the keynote of modern selling methods. Its importance is being recognized and its principle put into practice in a large way by the Department of Lands of B. C., by distributing among the farmers, and the retail lumbermen of the prairie provinces a series of bulletins about farm buildings. Each of these bulletins contains complete information, details and plans in connection with a definite class of farm buildings. The latest bulletin is concerned with implement sheds and granaries, and while the information given is applied specifically to the farms of the prairie provinces, it can be taken profitably to heart by the farmers in eastern Canada as well. The introduction to this bulletin is in part as follows:

The depreciation of farm machinery on the prairies, due to the lack of housing and care, is as great as that due to the actual use in the field. When a machine is not properly housed and cared for, it loses at least ten per cent. of its value each year. The average life of a binder, for example, is almost doubled by protecting it from the weather. Recent investigations made by the Commission of Conservation show that the majority of western farmers do not appreciate these facts. Out of nearly 100 representative farmers visited in different parts of the Prairie Provinces, only a few were found who kept their implements and machinery under cover and painted.

This is the more unfortunate because the matter is of particular importance on the prairies, where more farm implements are used than anywhere else in Canada. The Dominion census of 1910 gave the total value of the farm implements in Manitoba, Saskatchewan and Alberta as $110,000,000, or over forty per cent. of the total value of the implements on all the forms of Canada. The total number of prairie farms was 203,000, and the average value of implements per farm was $540, as compared with the average for all Canada of $360 per farm. Proper care in the way of housing and painting, etc., would effect a saving on the average prairie farm of at least ten per cent., or $54 each year, and in many cases a great deal more.

As a rule it is most desirable to make the implement shed a separate building, the advantages being greater convenience, better appearance, lesser fire risk, and ease of enlargement. Space in barns is generally too expensive and inconvenient for storing the implements. A narrow shed may, of course, be built on the side of a barn, but has the disadvantages of greater fire risk, difficulty of enlargement and darkening that side of the barn.

A workshop equipped with carpenter and blacksmith tools is very useful, especially on farms a long distance from town, and at critical times such as harvesting, when long delays for repairs would be ruinous. All the necessary tools can be obtained generally for around $50. The workshop may conveniently form a part of the implement shed.

During winter all implements should be carefully overhauled and made ready for work in the spring. It is a good plan to put a tag on each machine when its work is finished for the season, stating just what repairs and adjustments are required, so that any necessary new parts may be procured and repairs made before it is needed again. In order to prevent rust all bearings and wearing parts should be thoroughly oiled the last day the machine is used.

Paint protects both iron and wood from the weather. It fills the pores and cracks, prevents checking, prolongs the life of the machine and much improves its appearance. For the woodwork, a mixture of pure linseed oil with red or white lead and a small proportion of liquid dryers is good. Raw linseed oil may be used alone, allowed to soak in and dry and followed by a coat of paint. The paint, of course, should always be of a kind suitable for outdoor use.

Lieut. H. W. Larkin Enlists in Field Artillery

Lieut. H. W. Larkin, Toronto.

The accompanying portrait of Lieut. H. W. Larkin, will be recognized by a great many members of the lumber trade in Ontario on account of Lieut. Larkin's connection with the C. A. Larkin Lumber Company Ltd., wholesale lumber dealers, Toronto. Lieut. Larkin is one of the large number of lumbermen throughout Canada who have enlisted to serve Great Britain in her present crisis. He was born at Brandon, Man., on January 13th, 1887, and is a son of Mr. C. A. Larkin, president of the C. A. Larkin Lumber Company Ltd. In 1891 the family moved to Toronto.

Lieut. Larkin's education was received at Upper Canada College, which he left when 19 years of age, in order to take a position in his father's office. When the business was incorporated in 1909 Lieut. Larkin was made secretary treasurer of the company. He has had a wide experience in the lumber business, covering all departments of the wholesale trade, and he possesses an intimate knowledge of lumber grades and values. During the last two or three years he has taken an active part in the management of the business. It was intended that he should succeed his father as manager at an early date. This plan however, has been laid aside temporarily and Lieut. Larkin recently attended the Artillery course at Kingston in order to qualify for a commission. He is now attached to the 30th Battery of Field Artillery which is in training at Exhibition Park, Toronto.

Not Representing Belgian Government

A report was recently published in the press of the Southern States to the effect that the Belgian Government had sent H. Helaers and John Schobben to the United States to obtain material for 10,000 five roomed houses, material for trench timbering and about 1,500,000 railroad ties, as well as other items, totalling in all some 100,000,000 feet. Special enquiries have been made for the Canada Lumberman by the Department of Trade and Commerce in regard to this report and we are advised that when Messrs. Helaers and Schobben arrived at New Orleans, the local papers interviewed them and exaggerated their importance by representing them as official agents of the Belgian Government. They explained to the Belgian Consulate at New Orleans, however, that they had come out on their own accord and were endeavoring to secure orders for American goods from the French and Belgian Governments. They recently purchased 80,000 railroad sleepers. We understand that the same Mr. H. Helaers recently visited Winnipeg, Man., and is studying the possibility of opening up trade in lumber, etc., between Canada and Belgium.

Lumbermen and Foresters Meeting at Ottawa

The series of meetings to be held this month at Ottawa, in connection with lumbering and conservation interests are attracting attention from all parts of the Dominion. The attendance is likely to be larger than in past years when the meetings were held at different dates. The Canadian Lumbermen's Association will hold a full day's discussion of business conditions on January 19th, at which reports of officers will be received, the 1916 officers elected, and a number of addresses delivered. The same evening will witness a joint banquet in which the Canadian Lumbermen's Association, the Commission of Conservation, the Canadian Forestry Association and the Canadian Society of Forest Engineers will participate. Hon. Arthur Meighen, Solicitor General will speak as the special guest of the lumbermen.

The Conservation Commission will meet on the 18th and 19th, the Canadian Forestry Association on the 20th, and the Forest Engineers on the 18th, thus grouping together a series of important meetings dealing with more or less allied topics. Hon. W. R. Brown, of Berlin Mills, N. H., will address the Forestry Association on "Closer Utilization of Forest Products" and other addresses will be given by S. L. de Carteret, President of the St. Maurice Forest Protective Association, R. H. Campbell, Director of Forestry for Canada, and E. J. Zavitz, Provincial Forester of Ontario.

Mr. William Rutherford, of Wm. Rutherford & Sons Company, Limited, Montreal, has been selected by acclamation a member of the Westmount Board of School Commissioners.

Lieut.-Col. Gilbert in Command of 117th Battalion

Lieut.-Col. L. J. Gilbert, Bishop's Crossing, P.Q.

Many prominent lumbermen have enlisted to take their share in the task of defending Great Britain against the armies of Germany. We have had the pleasure of publishing a number of portraits and descriptive articles in regard to well known lumbermen who are thus helping Great Britain. The accompanying portrait is of Lieut.-Col. L. J. Gilbert, officer commanding the 117th Eastern Townships Overseas Battalion, C. E. F. Lieut.-Col. Gilbert was born on June 2nd, 1870 at Bishop's Crossing, township of Dudswell, P.Q. He received his early education at the local high school and at the Cookshire Academy. The greater part of his early life was spent on the home farm and during several winter seasons he was employed in the office of J. O. Gilbert & Son, lumber manufacturers, Bishop's Crossing, P. Q., who are well known to a large number of our readers.

Col. Gilbert's ability as a military officer has brought him an enviable record. He joined the 58th Battalion of Infantry as a private in 1888. He was appointed a provisional lieutenant in 1895 and captain in 1898. Upon the conversion of the 58th Battalion into the 7th Hussars he received the rank of major. In 1912 he became Lieut.-Col. and in 1915 he was made brigade major of the 3rd Eastern Townships Mounted Brigade. He successfully passed the Militia Staff Course in 1914 and is therefore entitled to the use of the letters M. S. C. after his name. In 1914 he was presented with the Colonial Auxiliary Officers' Decoration by his Royal Highness the Duke of Connaught.

Col. Gilbert's command now consists of 12 townships, forming what is known as the "Eastern Townships" and his popularity is evidenced by the fact that in his "Overseas Battalion" he will have serving under him five Lieutenant Colonels, several Mayors serving as Captains and several Captains who have enlisted as Lieutenants.

Huge Trade Coming to Canada

A cable from London, Eng., to the Toronto Star on January 4th said: "Forty million dollars worth of lumber is the estimate given by a Professor of Forestry who has been on the British purchasing commission for the allies, as the amount of orders given or about to be given in the Dominion. The war has caused a tremendous famine of all kinds of wood, he declared. It is being destroyed day by day on all fronts in colossal quantities. It is needed for modern warfare almost as badly as metals or cotton. He says that Australia has just been given an order for ties by one British railway amounting to £400,000, and before the war, ties even from the same district would not have cost a quarter of the price. Norway and Sweden are being swept clean as fast as the cutting can be done, for Russia and Germany, too. Huts have taken the place of canvas on all fronts. Water-laden trenches all have had to be lined, and when the armies move there is no time to demolish the huts or tear up what is left in the trenches. The British Government is taking the keenest interest in the question, and several experts will soon visit Canada and other Dominions to take a census of cut and uncut timber, and also impress on various bodies the need for careful economy and prompt replanting. Wood will not get back to the low value of before the war for another ten years, was the professor's prediction."

National Wholesalers at Philadelphia, March 15th and 16th

Mr. Gordon C. Edwards, Ottawa, Ont., President of the National Wholesale Lumber Dealers Association, visited New York recently and accompanied by Secretary E. F. Perry, went to Philadelphia and made arrangements regarding the annual meeting which is to be held in that city. Wednesday and Thursday, March 15th and 16th have been selected as the days of the meeting and the headquarters will be at the Bellevue-Stratford Hotel. On Tuesday evening, March 14th the Trustees will hold their annual meeting and consider many matters which will come up for discussion at the convention.

Secretary Perry states that reports so far received from members indicate that the convention this year will be very largely attended and that the selection of Philadelphia as the convention city was enthusiastically received among the membership.

Sudden Death of Canadian Commissioner of Commerce

The Late Richard Grigg, Ottawa.

We regret to report the sudden death of Mr. Richard Grigg, Canadian Commissioner of Commerce, who has been in charge of the publication of the Weekly Trade and Commerce reports of the Dominion Government, and has been successful in developing the value of these reports greatly and making them of much practical service to Canadian business men. Mr. Grigg's death occurred at Ottawa on January 6th. He was waiting his turn to purchase a ticket to Montreal at the Central Railway Station when he was seized, presumably with heart failure, and fell dead.

The late Mr. Grigg was born at Plymouth, England, in 1847. He came to Canada as a boy and spent the early part of his life on an Ontario farm. Subsequently he went to Great Britain, where he had a successful career as a manufacturer. During his life in England he was active both in the press and on the platform in developing public opinion regarding the urgent need for a better understanding of Canada's greatness by the Mother country.

Mr. Grigg retired from business in 1905 and accepted a commission from the Imperial Government to visit Canada and report upon the economic condition of the country with special regard to British trade. He made his headquarters at Montreal, and compiled a report which attracted world-wide attention and probably enjoyed a larger circulation than any other blue book ever published. Practically every important paper in Great Britain, and indeed throughout the Empire dealt with this report, both in editorials and extracts. Extensive extracts were also translated and published in leading foreign journals. It was stated in the Canadian press at that time that no single influence had had so important a share in attracting favorable attention to Canada, with a resulting good effect upon the money market and emigration, as this report.

In 1907 the British Government appointed Mr. Grigg as head of the British Commercial Intelligence Service in Canada. After he had been in the service of the Imperial Government at Montreal for four years, the Canadian Government sought Mr. Grigg's services, and he was appointed to the position of Commissioner of Commerce, with the rank of deputy minister in the Department of Sir George Foster. The Weekly Report of the Department has doubled in size and more than doubled in circulation under his charge. Mr. Grigg made a special effort to include in these reports the latest and fullest information regarding export markets for lumber. He was to a large extent responsible for the decision to appoint Mr. H. R. MacMillan as a special trade commissioner to visit all the important export markets for Canadian lumber. Mr. Grigg's great executive ability and remarkable perseverance will be greatly missed in the Department of Trade and Commerce.

Mr. Grigg is survived by his wife, one son and one daughter.

Death of J. D. McDonald, Owen Sound, Ont.

Mr. J. D. McDonald, Owen Sound, Ont., who was engaged for many years in the lumber business died recently at his home in that town. The late Mr. McDonald was for a time connected with the McDonald-Rowland Lumber Company. When he retired from this company he went into business alone under the name of "The Lad From Glengarry Lumber Company". Mr. McDonald had been in failing health for the past two or three years. He is survived by his wife, one daughter and one son.

Death of Thomas L. Shevlin

Thos. L. Shevlin, widely known throughout the United States, and also in Canada, on account of his connection with the Shevlin lumber interests, died of pneumonia at his home in Minneapolis, Minn., on December 29th, after an illness of one week. The late Mr. Shevlin was born in Muskegon, Mich., in March 1883. Upon the death of his father, Thos. H. Shevlin, he succeeded to the headship of the various Shevlin corporations and gave them his active interest. One of the Shevlin companies, with which the late Mr. Shevlin was closely connected, is that of the Shelvin Clarke Company of Fort Frances, Ont., which operates one of the largest and most up-to-date mills in Canada.

The late Mr. Shevlin was perhaps more widely known throughout the United States as a famous football player, having been a star member of the Yale Football Team for four years and captain in 1905. He graduated from Yale in 1906 and put into his business interests the same vim and energy as he had formerly devoted to football. Mr. Shevlin was president of the Northern Pine Manufacturers' Association in 1913 and was a director of the Association at the time of his death. As a result of Mr. Shevlin's death life insurance companies will pay close to two million dollars into the Shevlin Estate. Mr. Shevlin had carried insurance amounting to $500,000 and recently took out additional policies aggregating $1,000,000. Mr. Shevlin is survived by his wife and two small children.

Death of Hon. Allan Ritchie

The death of the Hon. Allan Ritchie, one of the Miramichi's best known citizens, occurred on January 2nd at the age of sixty-eight. He had been ill about six months and his death was not altogether unexpected. The deceased was born near Paisley, Scotland, the son of David Ritchie, and came to Restigouche County when four years of age. He was educated there and at Chatham, N.B. In 1865 he entered the Chatham lumber business of his half-brothers, D. and J. Ritchie, of Liverpool, and with him his brother Robert became a partner in 1868. D. Ritchie returning to Liverpool, the deceased and his brother Robert carried on the Miramichi business, having their sawing done at various mills and shipping from Chatham.

In 1871 they removed to Newcastle and bought the Rundle site, where they erected a large mill of their own. They maintained the old firm name and prospered. Robert died in 1907 and left the deceased, who later associated his sons with him, as sole proprietor. The deceased took an active interest in public questions and was appointed to the old legislative council in 1890, and voted for the dissolution of that body in 1892. He was Newcastle's first mayor in 1899 and an alderman several times after that. He had been president of the Southwest Miramichi Boom Company for thirty years. Three sons survive, Allan J., Harold H., and David.

Jack McNab, bookkeeper for Wm. Milne & Son, at their Selwood Junction plant, died recently as the result of injuries sustained during a fire at the company's office.

Prosperity Wave Headed for Pacific Coast

"Prosperity in the East is on the high gear and is undoubtedly headed for this Coast," said Mr. H. F. Alexander, president of the Pacific-Alaska Steamship Company, who returned to Vancouver from a six weeks' business trip to New York and Boston recently. "I was amazed at the change in conditions I found when I arrived in the East since I was last there in August," he said. "Everything is booming business in every line is greater than it has been for years. The factories are filled up with orders for months ahead; shipyards are so overcrowded with orders that they will not listen to any proposition for vessels for less than two years ahead; shops and stores are filled from morning until night; hotels are crowded, while the rail and steam transportation companies say that business is better at present than at any time in the history of their organizations.

"The lumber mills of the South are stocked with foreign orders that will keep them busy for two years and the lumbermen say the Mississippi Valley, the Middle West and the Atlantic coast will have to depend on the mills of the Pacific Coast for their lumber needs. While the closing of the canal has put off the business to a certain extent, they all agree that they will be compelled to come West for their lumber.

"While the war is undoubtedly responsible for heavy steamship business and trade in munitions of all kinds, the executive officers of the many railroads and concerns that I talked with also tell of an immense increase in domestic trade. I personally saw the executive of the Great Northern, Milwaukee, Northern Pacific, New York & New Haven and others, and they, without exception, said the transportation business was better now than at any time in the history of the roads. Furthermore, they all state that the wave of prosperity is rapidly extending to the Pacific Coast. This is the opinion of men who have made a study of conditions, and not mere talk of the moment."

That the lumber market in the Pacific Northwest is in healthier tone than for several years past was the consensus of opinion expressed by more than one hundred lumbermen who attended the quarterly meeting of the West Coast Lumber Manufacturers' Association at Portland, Oregon, recently. The attendance was representative of all lumber districts in Pacific Northwest territory. Mill stocks generally were reported as pretty thoroughly cleaned up and logging camps were said to be preparing to resume activities earlier than for several seasons past. Optimistic reports were received from Eastern lumber market points, where it was said there was a very definite belief that railroads had resumed heavy buying.

Important Operations at Fassett, P. Q.

Fassett lumber company's plant kept running winter and summer—logging railroad from camps to mill.

Shipping scene on Ottawa River at Fassett, P. Q.

The Fassett Lumber Company, Fassett, P. Q., operate one of the few mills in Eastern Canada that are kept running both winter and summer. In order to operate at all times of year the company have constructed an extensive logging railroad into their limits, which enables them to bring logs from the bush to the mill in very short time and to handle special orders to great advantage. The illustrations accompanying this article represent the mill as it appears to-day. This is an entirely new mill built to replace the one formerly operated by the company which was destroyed by fire in June, 1913. The new mill was running on January 1st, 1914. The equipment includes two single cutting 8 ft. bands, two heavy duty edgers, automatic trimmer and slashers, all furnished by Clark Bros., Olean, N. Y.; a 650 h.p. Corliss engine, and the other minor equipment necessary to complete a modern mill. The filing room equipment was furnished by the Covel Mfg. Company, of Benton Harbor, Mich.

The main mill is 55 x 160 feet and the sorting shed is 140 feet by 38 feet. The capacity of the plant is 100,000 feet in a ten hour day. Its output consists of spruce, hemlock, pine, birch, maple, beech, basswood, ash, oak and elm. The plant is operated upon its own refuse fuel and the surplus refuse which cannot be utilized in this manner is sold to the Standard Chemical Company who have a plant a few yards distant. One of the illustrations shows the planing mill operated by the Fassett Lumber Company. This mill adjoins the main sawmill and is equipped with one No. 65 American Wood working Machinery Company's planer and matcher, one American Woodworking Machinery Company's rip saw and trim saw, all connected up with a blower system for removing sawdust, etc. The planing mill is driven by an electric motor which is operated by a 125 h. p. engine connected to a 70 k. w. generator.

Splendid Shipping Facilities

The shipping facilities at Fassett are excellent. The company is able to make shipment very conveniently either by rail or by water, being located on the C. P. R., about fifty miles east of Ottawa and seventy miles west of Montreal, on the north side of the Ottawa river in the County of Labelle. Adjoining their mill they have piling room for 14,000,000 feet of lumber. Through their yards they have eight elevated tramways running from the sorting table at the mill. None of their finished lumber is hauled by horses. In fact, the company do not employ any horses at their mill. Each tramway is connected up with a spur to the railway which enables the company to switch cars from any part of the yard and load them direct from the pile.

There are several features connected with the operations of the Fassett Lumber Company, to which we have already referred

Plant of Fassett Lumber Company, Fassett. P. Q.

briefly, which render it quite unique among Eastern Canadian lumber producing firms. The production of logs and of finished lumber is extensively a problem of transportation and nearly every firm in Eastern Canada transports its logs to the mill by means of water, often taking a year or even two years in the process and thus eating into the profits of the mill. The logging operations at Fassett are operated entirely by rail. The limits of the company are situated some distance inland on the Salmon River in what was originally known as the old Papineau Seignory. The area of the limits is about 80,000 acres. The company have cut over, including this year's cut, 38,000 acres. They have been operating about ten years and estimate that they have sufficient timber left to keep the mill in operation for another ten years. Their logging railroad now extends for 22 miles of main line and includes also some ten miles of switches. The logging operations are handled entirely by a contractor who has this year in the woods some 350 men divided among eight camps. Every day the logging trains bring down a sufficient quantity of logs to keep the mill running. These are dumped into a hot pond, 400 x 150 feet, at the foot of the jack-ladder, which is kept hot throughout the winter by means of exhaust steam from the plant. The logs are thus thawed out and ready for the saws. During the winter the company operates almost entirely upon hardwoods and during the summer time upon soft woods.

The main line of the logging railroad runs through the northeastern portion of the limits. Branches run off this line which are

The Hot Pond—Fassett, P. Q.

View of Saw Mill, Planing Mill and Trams at Fassett, P. Q.

built annually into the sections in which the year's operations are to be carried on. Three Shea-geared Lima Ohio locomotives, one of 55 tons, one of 65 and one of 70 tons, in addition to one saddle tank switching engine of 25 tons and two Barnhardt steam loaders, 60 log cars and 26 flat cars comprise the rolling stock of the company. This is in operation daily, year in and year out, between the limits and the mill. During the winter season one engine is kept in the woods to handle the two steam loaders, while the other two engines, each handling 22 cars are kept coming and going continuously. Each of the loaders handles 65,000 feet per day.

Woods Work Handled By Contract

By letting out to a contractor the work of securing the logs, the company saves itself a great deal of intricate work and does away with the necessity for a supply store, the hiring of men and the employment of a large office staff, which is always required by logging operations. They are also enabled to know exactly how much the logs are costing them from time to time. The logging contractor has the logs cut and skidded the short distance to the switch. Here his work ends and the logs are taken in charge by the lumber company. Each section is completely cut over as the operations proceed, even the small stuff being removed and sold to the chemical company. The limits are thickly wooded with a splendid quality of timber running extensively to hardwoods.

Operating Costs Kept at a Minimum

With their railroad, hot pond and winter operations, the company claim that their costs of production are greatly reduced in comparison with other companies which operate only for part of the year and which transport their logs by water. The company gets quick delivery of its logs and is able to clear both the hardwood and the softwood at the same time. Its hardwoods are never water-stained and thus produce a high quality of product.

The officers of the Fassett Lumber Company are Hon. J. Sloat Fassett, Elmira, N. Y., president; A. E. Edgcomb, Knoxville, Pa., vice-president; Harry Thayer, Elmira, N. Y., sec.-treas., and S. J. Staniforth, Fassett, P. Q., manager.

Recently, in order to get into touch quickly and frequently with the operations in the woods the manager of the company worked out a successful scheme for converting an automobile into a means of conveyance along the logging railway track. Four flanged wheels were cast, of a special size to fit over the rubber tires of the automobile. These slip on easily when the tires are deflated. Then the tires are blown up firmly and the flanged wheels are thus held strongly in position. The car then runs along the logging railroad track and is under perfect control. It takes the grades and curves without any difficulty and can be run at a very high speed. The efficiency of this contrivance was clearly demonstrated to the Canada Lumberman upon the occasion of a recent visit when a trip was successfully made into the woods, in spite of the fact that quite a heavy fall of snow had rendered the rails slippery and difficult to travel.

This year the Fassett Lumber Company are taking out 14,000,000 feet of logs and have left over from last year' cutting 6,000,000 feet. Forty per cent. of these logs are hardwood. Last winter they cut 12,000,000 and had 8,000,000 feet left over from the previous year. On account of their special facilities for handling orders quickly the Fassett Lumber Company have felt the recent improvement in trade conditions more fully and earlier than many other manufacturing firms. They report business brisk for this season of the year, and are daily shipping the output of their mill. They are confidently expecting a continuance of good business throughout the winter and an increased demand in the spring.

Mill Type Construction Advocated

The advantages of mill type construction were outlined in a report recently by Paul Whitham, consulting engineer, presented to the Seattle Chamber of Commerce. "The 'mill' type of construction," he said, "that is, masonry walls with interior columns, beams and floors of wood, if well protected with automatic sprinkler devices and properly constructed, may be made practically as good a fire risk as a so-called absolutely fireproof building. It is also possible to erect entire structures of wood, so protecting them that they are more than a very fair fire risk. Such buildings will cost anywhere from twenty to fifty per cent. less than the so-called permanent fireproof buildings and will serve the purpose in most cases just as efficiently.

"There is an additional advantage that is particularly applicable to a newly developing country, in that the mill or timber type of buildings may be easily and cheaply removed or altered to meet new conditions or to allow for the re-arrangement or entire replacement of plants in connection with the expansion of business.

"Timber, of course, has its limitations as a construction material, and as to whether or not it should be adopted as the principal material of construction must be determined only after a careful consideration of the circumstances and purposes involved in each specific case. A thorough analysis in each instance, however, I believe will lead to the use of timber in a large number of cases, the economic advantages of which to the community will be twofold:

"First—The smaller capital investment required will enable industries to get under way that might otherwise not be able to make a go of it.

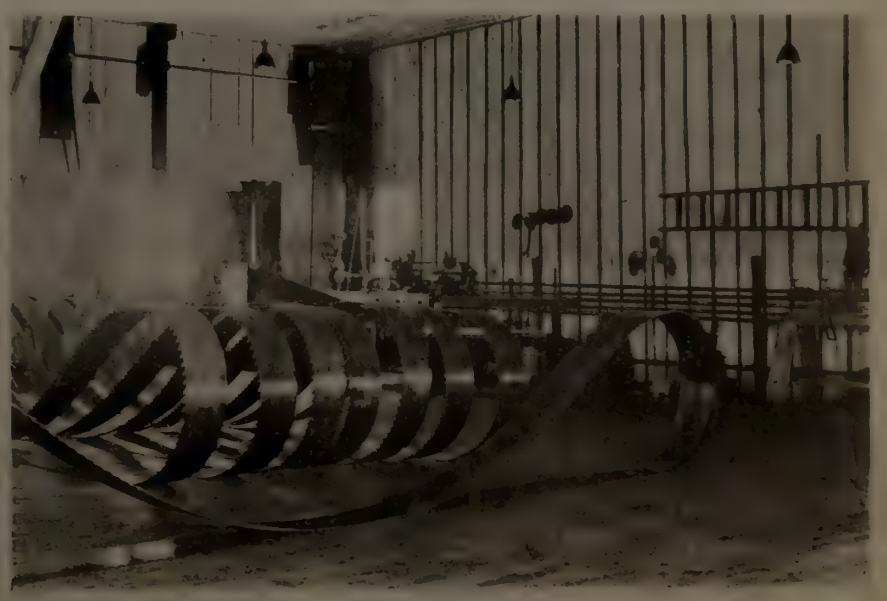
"Second—The increased use of timber will help out the lumber industry, thus reacting favorably on all lines of business in the community. In saying this, I am not overlooking the fact that the steel and cement industries also are important lines of activity, the development of which the community should foster. The prosperity of these industries, however, is very largely dependent upon the general industrial development of the community; consequently, if as a result of advertising the advantages of low cost mill factory buildings the growth of the manufacturing activities is accelerated, the cement and steel business is bound to prosper proportionately.

"The mill type of factory construction has witnessed its greatest application and development in New England, particularly in connection with the textile industries. Recently there has been a tendency to get away from the use of timber in the erection of textile buildings, largely for the reason that it has been difficult to get suitable structural timber, or, if it were obtainable, to get it at low enough prices. This should afford an opportunity to West Coast lumbermen, as soon as transportation through the Panama Canal is established on a normal basis.

"A notable instance of the use of timber in industrial building construction is in the central manufacturing district of Chicago, where a tract of approximately 300 acres of land is now largely covered with factory buildings and warehouses, eighty per cent. of which, I am informed, are of the mill type sprinkler-protected construction.

"In addition to the possibility of inducing a more rapid industrial growth by the use of low cost timber buildings wherever circumstances will permit, this very use should develop a high class of 'mill' construction, the advertising advantages of which would be of great value to the lumber interests in the more distant and foreign markets."

General Interior View—Fassett Lumber Company's Plant, Fassett, P. Q.



The Filing Room—Fassett Lumber Company, Fassett, P. Q.

In the Public Eye

A budget of comment on men and things of moment presented in the interest of our readers, independent of party politics and with malice toward no one.

General Bertram has paused to dig a few trenches around the grave of the late lamented Shell Committee and train the heavy guns of his typewriter on the critics of the dear departed. But, sad as it may seem, General Bertram's defence, which appears in an open letter to Sir Sam Hughes, is at points strongly at variance with some statements made by D. A. Thomas, who, at the instance of Lloyd George, came, saw and spoke ere he departed. And what he said misled even the Government organs into thinking that certain contractors had "striven to get large profits out of their contracts." But hear what General Bertram says:

"For various reasons while chairman I have refrained from giving out a statement of prices as compared with prices in England and the United States. But I can assure the public that in nearly every case our prices are lower in this country. I have before me a comparison of prices which will prove my statement."

* * *

But hold a minute! Perhaps we can reconcile the above with Mr. Thomas' remark that certain manufacturers were getting larger profits than they were entitled to. Perhaps General Bertram is speaking of the prices of to-day. And Mr. Thomas may have been thinking of the prices before those famous interviews in which Mr. F. P. Jones denies taking so important a part. This really looks like a reasonable conclusion, for further on in his letter General Bertram goes on to say:

"As the business developed in Canada, as experience was gained, we were enabled greatly to reduce the cost of production, so much so that on our present contracts we expect to save the Imperial Government probably $30,000,000 as between the price of the original orders and the prices now being paid to the manufacturers."

You'll remember it was reported that the aforementioned interviews, the cancellation of approved tenders that followed, and the subsequent letting of contracts on new tenders, saved the British Government $21,000,000. The denial subsequently issued declared these figures to be incorrect. Has General Bertram at last given us the true figures? Or must Mr. Jones get credit for only part of the saving and part of the credit be given to the demand for contracts caused by the new policy of letting them by open tenders?

* * *

General Bertram appears to take credit for the Shell Committee from strange sources. For instance, he proudly asserts that Canadian manufacturers undertook contracts without any financial advance, whereas in England the Munitions Department advances the money for the complete equipment of their factories. In other words, he pats himself on the back because Canadian manufacturers were possessed of enterprise of which his committee and the Government behind it were utterly lacking. It is no fault of the Shell Committee that the shell making industry has made some progress in Canada. It is the fault of both the Shell Committee and the Government that the industry is not double its present volume.

* * *

By the way, we are still waiting to hear what Premier Hearst has to say to his wayward follower J. R. Follis, M.P.P. for Peel. Will he read him a little lecture on the evils of horse trading and tell him to sit low in the back benches till the trouble blows over? Or will he come out cold and hard and tell the errant James that he who would profit by Government horse deals has no place in the ranks of the grand old party of Sir James Whitney? By the way, what would Sir James have done? The Government is being weakened by this silence on the part of Mr. Hearst.

* * *

If shells are being made in Canada cheaper and more quickly than they are in the United States and England, why is it that hundreds of millions in contracts are being spent in the United States, where only tens of millions are placed here? Perhaps General Bertram, who is responsible for the statement, will write another letter and answer this question. In the same letter he might mention why, when a Hamilton manufacturer offered to make shells at cost, his offer was not accepted.

* * *

"We were asked to bid on 5 in. shells," says a manufacturer," and bid a price the same as other firms. A few days ago we received an answer that our tender could not be accepted, no reason being given." Perhaps when General Bertram writes his next letter he will give the reason.

Mr. McAvity, manager of the Buffalo Forge Company of Berlin, who has been engaged by the Imperial Munitions Board to act in an advisory capacity looks to me like the right man in the right place. He not only has expert knowledge of the manufacture of shells, but is a man of good judgment and wide business experience. He should give valuable assistance to the Board. The latter evidently means well and if it were built on a somewhat broader gauge could do much to repair the damage done by the Shell Committee. Anyway it is deserving of a chance to show what it can do.

* * *

And now the good old Tory Ottawa Journal has crawled over the fence into the camp of those who are demanding an investigation of the Shell Committee. It may have decided to take the hurdle after being assured that Liberals as well as Conservatives have been taking a hand in the shell game, for, as partial justification for its course, it quotes the following from the Hamilton Herald:

"The Montreal Herald has been extremely vigorous in its denunciation of war profiteering and profiteers. But the Montreal Herald's esteemed local contemporary, the Mail, discloses the fact that the editor of the Herald, the Hon. George P. Graham, is a director of a company which has been clearing a profit of 100 per cent. out of the manufacture of war munitions. The joke seems to be on the Herald."

Anyway, while the Journal does not think that Brockville's favorite orator has very much interest in any company so occupied it gravely arrives at the conclusion that "the important thing is that there should be an enquiry into the question of shell profits," and it winds up with the following: "Explanations are needed—not on behalf of the Dominion Government, which had nothing to do with the matter, but on behalf of the former Shell Committee and the manufacturers."

* * *

And, while I heartily agree that explanations are in order, I cannot accept the statement that the Dominion Government had nothing to do with it. The Dominion Government gave birth to the Shell Committee. It may be its "war baby" and the Government may be heartily ashamed of it. It may have shifted its burial to the Imperial authorities, but it cannot escape responsibility for its birth. It may make some reparation if it bares its record to the public. Who knows but there may have been good as well as bad in that record? But when the Government organs start in to disown it, the public can be excused for having a few suspicions.

* * *

Over on the battlefield the vultures fly; in each war-worn country the army contractors gather. Even poor old France, whose heroism has awakened the admiration of the world is having trouble with them. The Chamber of Deputies has found it necessary to appoint a committee to enquire into contracts. One of the duties will be to investigate a "horse deal" which is said to have involved several million francs paid in commissions. And in this connection the Winnipeg Tribune recalls "a statement published a few weeks ago that a prominent politician resident at Ottawa had received a contract from the French government to supply remounts for the war. By buying horses in the northwestern states and delivering them in France he made a profit, according to his own alleged admission, of $100,000. It is asserted that his secretary said the profits were $300,000."

Is nothing held sacred by our Canadian financier? Surely poor old France had suffered enough at the hands of the Kaiser! That she should also have to pass through the hands of an Ottawa politician is piling agony on the suffering. Belgium next.

* * *

"Gott strafe England" is the cry of baffled rage that comes out of Germany. And well may the Huns ask God to punish Britain, for after more than a year of war it is more than ever evident that the Kaiser can't. Germany, by her "preparedness," has been able to brutalize Belgium, seize the richest part of France, put the steam roller over poor little Servia, and drive the Russians out of Warsaw. But to-day, with the possible exception of one or two small posts in East Africa, she does not hold one foot of British soil. The Empire on which the sun never sets is, by reason of its far-flung dominions, the most vulnerable to attack of any of the allies. But though Germany may sing her hymn of hate she cannot touch even one of Britain's scattered island possessions! On the other hand, the blundering Britisher has swept German commerce from the seas and seized her Pacific islands and most of her African colonies. And in the meantime Britain's "contemptible little army" has grown to a quite respectable gathering of gentlemen in Khaki numbering in the neighborhood of four millions. Even if our politicians and generals do make an occasional blunder it is good to be a Britisher.

* * *

> It is good business for a political party to keep systematically in touch with its rank-and-file. The best men in Canada are not all in Parliament, and those green baize doors at Ottawa are wonderfully effective against new ideas.—Montreal Star.

This from a strong Tory paper. The clouds of the coming storm continue to gather.

* * *

Every day brings fresh evidence that the viewpoint of the Canada Lum-

berman on certain vital questions that have been touched upon in previous issues under this heading coincide with the sentiments of thinking business men. It is further gratifying to note that even the Conservative papers throughout the Dominion are demanding an investigation into conditions surrounding various munitions contracts.

* * *

The Minister of Finance hints at another War Loan of $300,000,000. Bring it along, Mr. Minister. The Canadians will take care of it provided it is for the benefit of the Empire. In the words of the song—

"We didn't want to fight, but by Jingo if we do
We've got the men, we've got the guns, we've got the money too."

* * *

Major-General Bertram has taken all the alleged sins of the Shell Committee on his shoulders and gone south in search of new health. On his way he passed through Toronto, where he was able to sit up and talk about a column and a half to The Globe. Possibly he figured that giving his side of the story publicity through the Liberal organ would leave it free from partisan flavor and give the people of Canada an unprejudiced view of a great patriot who has been misunderstood and misrepresented. Anyway, he, by his own announcement, stands before you a man who rose from mechanic to manufacturer; who offered his services to his country and was made chairman of the Shell Committee. He awarded all the contracts, and was responsible for the Committee in every way. He alone awarded contracts to the amount of $345,000,000, and doing it made a saving to the British War Office of $42,000,000. And after doing all this he has been criticized! Do you wonder that he picks out a Grit newspaper and cries through its columns, "The attacks are not fair. They are breaking my heart."

* * *

Surely Sir Robert Borden will not allow that great heart to break. He has been loyal to his country, to his King, and to Sir Sam Hughes. For does he not quote Sir Sam's instructions "No politics—no graft"? And do we not know out of his own mouth that he made them his watchword and reply? And yet his hard-hearted leader sits idly by while leading Conservative papers like the Ottawa Journal, the Hamilton Spectator, and the Montreal Mail clamor for explanations. Surely the Premier should be able to see that a thorough investigation into the workings of General Bertram's committee would not only clear that gallant officer of the attacks that are breaking his heart, but would also prove once and for all that Canada is not and never has been the home of the profiteer. For to Canada's mind, as well as to the mind of the chairman of the Steel Company of Scotland, "there is something absolutely revolting in the idea of anybody actually making profits out of the nation's agony."

* * *

And though General Bertram may be staggering south with the entire weight of the Shell Committee on his shoulders, it is to Sir Robert Borden and his Government that the public look for explanations. The Government appointed the Shell Committee, and even if it acted in behalf of the Imperial authorities and took its instructions from them it represented the Canadian Government in every transaction in which it took part. It was the servant or agent of the Canadian Government and to its employer we must look for explanation of its actions.

* * *

So far Sir Robert Borden has taken no action in regard to the matter. He was heard from once in regard to the F. P. Jones incident, or chapter of incidents. His Government has appointed Sir Charles Davidson as official investigator of war contracts, but apparently his powers only extend to contracts for materials to be paid for out of the Dominion treasury. The order in council appointing the Commission reads "concerning the purchase by and on behalf of Your Royal Highness's Government." Consequently it would appear that as the shells were purchased for the Imperial authorities the shell contracts do not come within the scope of Sir Charles Davidson's labors. If this interpretation is correct the Government is all the more to blame for its silence. It was supposed that Sir Charles, with his investigations of spavined horses and poulticed drug bills, was simply clearing the decks for the heavier work. Now we are left to believe that with the "war baby" lying in its unnamed grave, General Bertram hurrying south with his failing health and breaking heart, and Wall Street boosting stocks by reports of enormous war profits, no provision has been made for clearing the matter up in any way whatsoever.

* * *

What use, then to talk about taxing war profits? Without an investigation how are we to know that there are any profits to tax? General Bertram claims that he got the shells made for $42,000,000 less than the estimates of the British War Office. Can it be possible that his one sin was too much economy, and that the impoverished contractors are really entitled to allowances from the Patriotic Fund? Was the man who had a half a million to spend on a plant with which he offered to make shells at cost really asking more than contract prices? Are all those stories that come from Wall Street simply attempts to sell a little stock to tide over a losing season spent making munitions? If any or all of this is true surely others besides General Bertram are entitled to the credit that only an investigation can bring.

But on the other hand, if the charges mentioned by the Montreal Mail have foundation it is the public and not the committee or contractors who are entitled to explanations. The Mail in criticizing General Bertram's open letter to Sir Sam Hughes says in part: "It is with real reluctance that the Daily Mail suggests the incompleteness of what is termed General Bertram's 'valedictory.' A public duty, however, cannot be evaded, and it is a public duty to remind General Bertram that his statement, utterly lacking in detail and definiteness as affecting the criticism of the work of his committee, does not allay suspicion but tends to strengthen it. Major-General Bertram has been accused of enriching his private interests from business placed by the Shell Committee under his direction. He has been accused of showing favoritism in the distribution of shell orders, and of allowing prices to the manufacturers (including his own concerns) out of all proportion to the cost. Not one of these charges did he deal with in his valedictory, except in relation to the price of shells, and in this particular matter he withholds from the public the very information it desires." These are warm words. They are all the warmer that they come from a Conservative paper edited by M. E. Nicholls, a half-brother of Hon. W. T. White, Minister of Finance. It might be added, however, that in a more recent statement General Bertram states that he has only one share in the John Bertram and Sons Company, Dundas, Ont., which was the first firm to ship to England, and that he has never drawn a dividend from it.

* * *

For Mr. Flavelle's statement that contracts were to be taken from contractors General Bertram has an explanation. In fact, the Government apparently left him, not only all the work, but all the explaining besides. When the urgent call came from the trenches for high explosive shells the British War Office naturally turned to the Shell Committee. It had been doing wonderful work and saving immense sums of money. It had business genius. Exercising that sagacity, and realizing the need of securing these shells in the shortest possible time, the Shell Committee so placed these contracts that they haven't yet been filled. Consequently they are being recalled and placed with firms that can handle them.

* * *

One of our subscribers writes us that it is not the duty of trade papers to discuss politics or matters outside of the trade. He may be right. It is true that politics and politicians put the rules of trade carefully to one side before starting to run the biggest business in the country—the country's own business. It is true that no business man would think of running his business on the lines the country's business is run on. He would never think of putting a college professor in charge of a department he knew nothing about simply because he could make a good speech. He would never engage his employees for the simple reason that they had a pull with certain ward politicians. Consequently politics may be a trade apart. But the public have to pay the mechanics who work at this particular trade. Don't you think the said public is entitled to an occasional glance at what its workmen are doing? And how is it going to get it if some paper not "in the game" doesn't break loose occasionally? If a Grit paper criticizes, a Tory paper rushes to the rescue, and the issue is soon lost in the cloud of recrimination that is raised. So sometimes a trade paper stops to wonder why a Government cannot be run along honest business lines, and how long you or I would remain in business if we treated our customers the way the Government treats the public. It is our turn to furnish the public with its "look," and if our readers will bear with us yet a little longer they will discover that they are gazing on the body politic and seeing things, not as they are painted by a Government organ or the opposition critics, but exactly as they are.

* * *

When the cry went forth that this was a war of munitions Australia promptly began to mobolize its state-owned shops for munitions work. Did Canada do likewise? No; Canada—or rather the Canadian Government—promptly side-stepped by handing over the Transcona shops to a private syndicate which is doubtless doing a nice business at a nice profit. Had the Government been big enough to seize an opportunity it could have fitted up the Transcona shops with shell-making machinery at a cost of about $100,000, hired the best mechanics in the country, and turned out at least 5,000 shells per day. Moreover, it would then have been in a position to judge from its own experience just what price should be paid for shells. It would have had at first hand information which would have ended profiteering before it started. But probably the entire cabinet were busy making speeches when the opportunity offered. High-explosive speeches had to take the place of high-explosive shells.

* * *

Britain is said to have black-listed certain United States firms suspected of being affiliated with the Empire's enemies. And from the way the Kaiser's friends in the republic across the way have acted since the war began you would naturally expect the old land to be a bit careful as to whom she deals with. Canadians should follow suit. We have no quarrel with the United States. But within her borders are large numbers of the hyphenated, who are all the more dangerous that they are allowed at large among civilized people. Canadians should be careful that no business of any kind should be placed with them, either now or after the war.

* * *

The protection of the new industries created by the war and its conse-

quent shell orders is to be made the subject of a report from the Economic and Development Commission. And that report will require the closest scrutiny when it is presented. Even in official Ottawa it is admitted that prices obtained by some manufacturers have been sufficiently high to permit of the scrapping of their plants when the war is over. Of course if these plants can be kept going as business propositions, right and good. But the public will hardly stand for their being fed on Government pap. They've heard so much about munition profits that they'll want to know when the war is over that every Government dollar gives to the man who has fought for his country or those he has left behind him. He who has stayed home and made money will receive scant consideration.

* * *

When Tommy comes marching home he is going to ask the Government if it permitted the handing around of shell contracts "to prevent commercial depression" while his comrades were dying in the trenches for lack of the shells. Will the Government have its answer ready?

SEARCHLIGHT.

Canal Reopening Still Far Off

B. C. lumbermen, and the consumers of B. C. lumber in Eastern Canada have been greatly affected by the interruption in traffic through the Panama Canal. Many reports have recently been issued regarding the probability of the canal being reopened in the near future. We regret to note that an official bulletin issued about the end of December from the office of the Panama Canal Company holds out little promise of an early resumption of traffic. The bulletin states that conditions are very unstable and it is impossible to estimate in advance what the probable available channel will be at any succeeding date. The bulletin also says:—"The governor still states that no prediction can be made of the probable date of opening and he is extremely anxious to prevent a premature resumption of the routing of ships via the canal, which would be sure to embarras the work and would result in the delay of the final opening of a stable channel. He also calls attention to the fact that such a premature resumption would be expensive to shipping interests on account of unavoidable delays to ships that might have to be held for an indefinite period."

The fourteenth annual convention of the Hardwood Manufacturers' Association of the United States is being held at Cincinnati, Ohio, on Jauary 18th and 19th.

Important Announcement of B.C. Premier

Transportation for Tidewater Mills—Development of our Open Ports

In a message delivered on the occasion of his recent accession to the Premiership of British Columbia as a result of the retirement of Sir Richard McBride, the Hon. W. J. Bowser gave the following outline of the policy to be followed by his government in relation to the above important matters, in which our lumbermen are so vitally interested. Premier Bowser said:

"Ocean transportation must be provided for the tide-water capacity of our mills, now about 700,000,000 feet per annum, so that we may secure and enjoy our proper share of the world's trade. As the matter stands to-day, we have surpassing wealth of timber, an immense investment in manufacturing plants and every facility, save one, for large development. We have no shipping and overseas markets. We must have vessels operated directly in the interests of our own industries and also to carry our natural products. Only thus can the province market its own timber wealth, and so dissipate the depression that has hung over the industry so long. Recognizing the vital importance of this matter and the paramount need of a strong commercial policy to end the shipping crisis, the government will submit decisive legislation at the forthcoming session of the Legislature. The development of our water-borne lumber trade will benefit our Coast manufacturers and should, at the same time, give the Mountain millmen larger trade opportunities in the Prairie Provinces, their natural markets.

"The Western grain crop of 1915 has accentuated the necessity of using all Canadian ports to their utmost. The questions of shipping and elevator accommodation involved are primarily the responsibility of the transportation companies and the Federal authorities, but this Government appreciates the urgency and importance of this matter and proposes to take whatever action may be open to it to secure early attention for these developments so that the 'all the year around' open ports of British Columbia may be made use of to their fullest extent to export the annual crop of the Western Prairie Provinces as well as the output of the Peace River district, which will have railway connections at an early date."

Construction and Operating Costs of Power Schooners

In view of the decision of the British Columbia Government to build power schooners to be used in the lumber carrying trade, a series of tabulations prepared by Martin C. Erismann, for the West Coast Lumberman, will be interesting to many of our western readers. These figures refer to a five masted vessel carrying 1,500,000 feet of lumber. The B. C. proposition is for four masted vessels carrying about 2,000,000 feet of lumber. The figures are as follows:

Dimensions, Equipment and Capacity

Length (custom house)	225' 0
Breadth	42' 6"
Depth	18' 0"
Gross tonnage, about	1,250
Net tonnage, about	1,125
Speed, knots, loaded (engine)	7
Lumber capacity	1,500,000
Machinery, two oil motors, 160 h.p. each	320

Cost of the Vessel

Cost of Ship complete (wood construction)	$85,000
Machinery installation	19,000
All auxiliary installations	18,000
Cost complete	$122,000
Design, contracts, supervision at 5 per cent.	6,100

Cost of Operating

Crew—Captain	$125 per month		
First mate	90	"	
Second mate	75	"	
Cook	50	"	
Cabin boy	20	"	
Eight sailors at $30	240	"	
Chief engineer	100	"	
Assistant	75	"	
	$775 + 12		$9,300
Food at 68c per man, 15 men for 1 year			3,723
			$13,023
Crew expense per day			$35.67

Engine Room Expense

1 engine: 160 h.p. × ½ lbs. oil=80 lbs. per hour=¼ bbl. at 95c per bbl.	$ .237c	
Lubricating oil at 41c	.060	
Fuel and lubricant per hour	.297	
Fuel and lubricant, 24 hours	$7.13	
Operating cost per day, 2 engines	$14.26	
Operating cost per year	5,204.80	
Engine supplies	200.00	$5,404.80
Taxes at ½ per cent.		600.00
Dereciation, 5 per cent.		6,100.00
Insurance, 7 per cent.		8,540.00
Liability, 1½ per cent.		1,830.00
Upkeep and repairs		5,000.00
Total expense per year		$40.497.80
Operating cost per day (ship and engine)		110.95
Operating cost engine per day		14.26
Operating ship only per day		$96.69

To New York with Lumber

Loading time, 100,000 ft. per day			15 days
Expense of ship loading 15 days at—			
Captain, mate, engineer, cook	$12.00		
Food	2.72		
Fixed charges per day	60.47		
	$75.19×15 days		$1,107.85
Loading, at 85c per M. B. F. of lumber			1,275.00
Canal charges, $1.20 per net ton			1,350.00
Pilotage, canal			22.00
18 days engines	$ 256.68		
36 days ship	3,480.84		—$3,737.52
Unloading N. Y., 15 days×96.69			1,450.35
Unloading, stevedores			1,275.00
			$10,217.72
Laid down N. Y. per M. B. F.			$6.81

Earning Possibilities

	Distances from Puget Sound nautical miles	Days at 7½ knots	Rate per 1000 ft. Lumber. Shillings
Capetown, S. Africa	11,017	62	145
Durban, S. Africa	11,631	65	145
Sydney, Australia	7,267	40	90
Melbourne, Australia	7,766	43	110
Adelaide	8,172	46	110
Auckland, N. Z.	6,480	36	90
Wellington, N. Z.	6,705	37	90
New York	6,062	34	$14
Callao, West Coast S. A.	4,787	27	$22
Valparaiso	5,940	33	$22
Antofogasta	5,562	31	$22

Western Manufacturers and Retailers Hold Meeting

A meeting of B. C. lumber manufacturers representing the Coast and Mountain Associations and the Western Retail Lumbermen's Association was held recently at Calgary, Alta., with Mr. F. E. Sine of the Atlas Lumber Company, Calgary, in the chair. One of the interesting features of the meeting was an address by Geo. Ingram of the Security Lumber Company Ltd., Moose Jaw, Sask., who spoke of the necessity for all retailers making proper protection about and under their stoves and about chimneys. He pointed out the necessity of keeping their yards clean from hay, straw and other rubbish, so no fires would originate from within. He also said the retailers should see that those adjoining their property did likewise. This would keep fire losses in lumber yards at a minimum, and it would enable retail lumbermen to have lower insurance rates. Arrangements were being made for the registering of the Retail Lumbermen's Mutual Fire Insurance Company in Alberta. This company had been carrying insurance on many retail yards in Manitoba and Saskatchewan at only 48 per cent. of the Board rate, which was the rate that is being paid by most dealers, and this in itself was a great saving, reimbursing the dealer many times over for his expense in belonging to the Retail Lumbermen's Mutual Fire Insurance Company, and what could be done in Saskatchewan and Manitoba could and would undoubtedly be done in Alberta. In reply to the question as to how this would affect the lumber yard with the local insurance agent, Mr. Ingram showed clearly how the lumber yard could pay the local agent, as a bonus if he deemed necessary, the amount of money the local fire insurance agent would get by writing his policy and then save a third or more of his premium.

Retailers Must Give Service

Mr. N. G. Neill, secretary of the Western Retail Lumbermen's Association, displayed several pictures, drawings and blue prints of farm buildings which drew forth great admiration. Many enquiries were made as to obtaining poster pictures in retail yards. The building department of the Western Retail Lumbermen's Association offers to the retail dealer plans of all kinds of farm buildings, and, if he desires the blue prints, he can obtain a complete set for any building at a cost of only $1.50. This makes it possible for a retail dealer to give to his trade the very best of service. Mr. Neill explained the special Plan Department, whereby it is possible for a customer, through the retail yard, to send to the Association a rough drawing of a proposed building which the Association architects will work into a proper design and for which blue prints can be had for exactly what it costs the Association. This enables the retail dealer to give to his customer further and better service and at the very lowest price at which it can be obtained. Most retail dealers now fully realize that they must give service to the public and be merchants, and when they are, and that service is given, they have a satisfied public, and are able to compete against any competition.

President Galvin Wants Better Business Methods

Mr. W. D. Galvin, president of the Western Retail Lumbermen's Association, spoke before the meeting, urging the necessity of the retail lumbermen joining together in an association that would be progressive and constructive. He asked all the Alberta retail lumbermen to consider the idea of becoming members of the Western Retail Lumbermen's Association. He showed them that organization and co-operation on the part of all dealers is the means of promoting better methods of doing business and thereby rendering better public service. The community rightly demands adequate public service from any class of dealers, and more particularly from those who handle a commodity of universal necessity. If the public does not receive service, agitation will soon result in establishing a new medium of service, and those who have failed will no longer be allowed to serve.

The methods of the retail dealer must be constructive and progressive to hold his position, and he who denies that the change is in process will be swept off his bearings so completely as to be unable to get a footing in the new order of things should he endeavor to hang to the fogeyism of the past. The old order of things in retailing lumber must be thrown off and modern methods used, and the shackles of worn out methods must be thrown off by the retail lumbermen themselves or the business will pass into the hands of the new school of merchandising.

More Publicity is Required

While the promoters of wood substitutes were waging a consistent campaign through attractive advertising, the manufacturers and retailers of lumber had, up to the present time, done but little to counteract these energetic efforts to exploit wood by any effort to acquaint the public with the superiority of wood. Through the co-operation in the matter of publicity of lumber associations, provincial governments and the Dominion Forestry Departments, a far-reaching effect in its results both to the retailer and the wholesaler of lumber would materialize.

This educational campaign cannot be long delayed, and when a greater market is created for the manufacturers it means a great market for the retailers. The same reacts when the market is lost to the manufacturer; it is also lost to the retailer.

The British Columbia manufacturers also held a meeting at the Palliser Hotel, and an address delivered by Mr. R. Benedict, of the Forest Branch of the B. C. Government, was listened to with much interest by all. Mr. Benedict explained the work they were doing to show the various B. C. "Timbers" to use for different purposes and parts of farm buildings. He also explained their recently published ten bulletins on "Farm Buildings," and their four bulletins on "British Columbia Timbers," of which bulletin No. 12, entitled "How to Finish B. C. Woods," is of special interest to home builders, owners, carpenters, architects and building contractors.

B. C. Lumber Unequalled

At a joint meeting of the manufacturers and retailers, the representatives of the Mountain and the Coast Lumber Manufacturers' Associations explained to the retailers that they were in the best position to serve their needs and wants. They impressed upon the retailers the fact that the B. C. mills manufactured lumber which could not be equalled or excelled in quality or workmanship by mills in any other part of the world. It was unanimously agreed by the retail dealers present at the meeting that they encourage the use of Canadian manufactured lumber whenever it was possible or when it was within their bounds to do so.

Western Trade Improving

The Christmas holidays and the usual festivities attending the new year made business rather quiet in the lumber trade in the Prairie Provinces. The retail dealers are looking chiefly after their collections. All the farmers now have money and are paying their debts freely. It is expected that January will see a further revival in the lumber trade in the Prairie Provinces. A well-known B. C. lumberman discussing the lumber situation last week said there is now a vast variation in the price of logs according to how the seller is able to meet the buyers' demands. He expects the sensation in the near future in the lumber business will be furnished by hemlock, with which all the northern coast is carpeted and which, when cut into lumber, makes a product which takes a polish like fir and is nearly as durable, while the grain will compare favorably with curly maple. Hemlock is a heavy wood and not amenable to rafting except under special methods of handling, but in the years to come is expected to be the greatest source of income from the forests of Western Canada.

The following Western lumbermen are about to leave for the front: Capt. George R. Hanbury, as Adjutant of the 90th Battalion; Capt. W. R. Herchmer, transport officer of the 79th Battalion; and Lieut. G. R. MacPherson, of the Keewatin Lumber Company. Lieut. MacPherson is at the Port Osborne Barracks, Winnipeg, training with the officers' corps.

Other lumbermen of the West who have joined the overseas expeditionary force are Mr. Jas. F. Pike, late of the Finger Lumber Company, Le Pas, Man. He has joined the 90th Battalion, which is known throughout Canada as "The Little Black Devils." Mr. D. W. McDonald, of the Farmers' Lumber Company, Saskatoon, is at Winnipeg training for the front, as is Mr. J. F. Doak, of the Doak Sash & Door Company, Saskatoon, and Mr. R. M. Thompson, architect.

Thirty thousand feet of clear spruce was recently brought down from Masset, Queen Charlotte Islands, B. C., for shipment to England, where it will be used in the construction of aeroplanes. This wood is specially suited for the purpose, being light but staunch.

A Record for Winnipeg

The huge crop of Western Canada has made itself felt in the bank clearings at Winnipeg, for the clearings for the month of November are a record in the history of the city; while in the whole of the Dominion, Winnipeg stands only second to Montreal in the amount of bank clearings for last month. Winnipeg's clearings were $245,962,656, while those of Montreal were $282,487,024, the clearings of Montreal being $81,083,995 over the same month last year, and of $38,092,250 over November, 1913.

The bank clearances of Winnipeg for November were:

Year	Clearings
1913	209,574,750
1914	148,927,216
1915	$245,962,656

Timber Cruising Methods—Both Old and New

By Judson F. Clark, Forest Engineer*

As a precaution—in the event that one of the laity may read this—I shall at once define a "Timber Cruiser" as one who examines and reports on timberlands, giving the quantities, qualities, and values of the timbers thereon.

No doubt the earliest logger was somewhat of a timber cruiser, but be would not have known himself by that name. It was at a much later day, when the timber "looker" went out on long trips with a map for a chart and a compass as the most indispensable part of his equipment for roaming the trackless forest, that someone likened him to a mariner who similarly finds his way on the pathless sea, that the term "cruiser" was applied to him. It was an apt comparison, and the term has long since found general acceptance.

The evolution of the modern timber cruiser and of his profession is the necessary result of the changing point of view of the timberland owner. In the early days of the lumber industry, standing timber or stumpage was purchased solely for the purpose of converting it quickly into logs. Then the finest of timber trees encumbered the best of agricultural lands, therefore the logger could be interested only in high grade timber—mostly white pine and white oak—growing on level or gently rolling land. At this stage a cruiser who would include in his report the amount of hemlock, or balsam, or cedar, or gum, on a tract, or who would include even the white pine or oak that grew on a hillside where it would be inconvenient to log it by bull-team, would be very properly thought incompetent, and perhaps crazy, by his scandalized employer. The only permissible "cruise" at that stage was an estimate of the timber that could be profitably logged at the time the cruise was made.

But times change, and nowhere have they changed more extraordinarily than in the lumber buisness. The early logger of white pine logged out his limits and moved to new ground without a thought that any value had been left behind. He had found it hard work to make a living margin cutting only the best, and how under these circumstances could the inferior trees have any possible logging value? What, then, was his astonishment to find that ten or fifteen years later he could return to his logged-off pine lands and make a larger cut of sawlogs and a deal more money by logging over the same ground for cull pines, spruce, hemlock and cedar? This time he left nothing but trees too small for lumber and the worthless hardwoods. Another decade, and he finds that he can make a small fortune of easy money from this same twice-logged-over area by simply selling out to the pulp and paper man, or the stave manufacturer, or the wood alcohol distiller.

This story has been repeated with local variations within the business lifetime of a single generation of lumbermen in every important lumber district east of the Rocky Mountains, and what was more natural than that the lumberman should look to the virgin forests on the lumbering frontiers as an exceedingly promising field for the investment of the wealth that had thus been so unexpectedly forced upon him? Thus was born a new and vast factor in finance—the field of timber investment.

The march of progress in the utilization of the less favored kinds of timber has gone steadily onward, and with it the improvement of methods of log transportation, until it is generally admitted that sawlog timber, wherever found in considerable volume, has an actual or potential investment value.

The contrasts that fifty years have seen as regards log values may best be appreciated by comparing the average white pine log cut in Ontario or Quebec in the sixties with the present cutting in those regions of the formerly despised black spruce and balsam, down to three or even two inches in the top and four inches on the stump. And as regards log transit, by comparing the tedious transportation by ox-team on the best of logging ground, to the rapid flight of logs by aerial tramway from the Mount Kenia plateau in East Africa to the saw-mill plant located many miles distant and more than six thousand feet below.

Great as has been the progress in utilizing what was once waste wood, and in lessening the cost of getting the logs to the mill by devising new machinery and better methods, there is every reason to believe that progress is be to continued in both lines. Thus in the standard commercial cruise of today the modern timber cruiser is called upon to make a complete inventory of all the timber on a tract, with careful mapping of the location of the different kinds and qualities on the ground, together with full details of the topography of the area and of the outlet to rail or water transportation.

* Address delivered before the B.C. Forest Club, Victoria.

Just here it may be worth while to consider the validity of the word "merchantable" as applied to standing timber. It has already been given a good deal of attention by our "learned friends," the lawyers, and we are not inclined to have them make a profit from its eccentricities. Among timber investors and lumbermen generally it is understood to mean not only such timber as might be logged under existing conditions at a reasonable profit, but also to include such as might reasonably be expected to be so logged within a reasonable time! What a delightful opportunity for legal confusion!

On the other hand, many loggers who buy their stumpage from hand to mouth, so to speak, limit the term "merchantable" to what they find they can profitably log under current conditions as regards cost of logging and log prices. Notwithstanding the much wider use of the word in its broader meaning, it does seem that it is best suited to describe the loggers' case, and should be limited to that use.

If, then, we regard the merchantable timber as that portion of a stand that may be profitably logged at any given time, it follows that the merchantable cruise on any tract varies with the fluctuations of all factors affecting the profit of logging. If the price of logs falls the amount of timber on any area that may be profitably logged is decreased. If the cost of labor, foods, or machinery increases, the merchantable cruise is still further diminished, and may and will disappear entirely if the changes are such as to make the logging of the tract for the time unprofitable. Conversely, any increase in log values, or any lessening of the cost of logging, automatically increases the merchantable cruise. Where all the timber may be profitably logged the "merchantable" cruise becomes identical in amount with a commercial timber cruise which gives the total volume of sound timber, less a proper allowance for unavoidable breakage in falling.

A concrete case will further illustrate the point. A certain tract within towing range of Vancouver, which on account of the topography could not have been logged at all with the equipment used twenty years ago, was partly logged in 1906 and 1907 by donkey engines. The logs were sold in 1907 at $12.00 per M, camp run, at the loggers' boom. Stumpage was reckoned worth $1.00 per M.; the royalty was 50c per M. One dollar net was considered a fair logging profit for the logs that were hardest to get, hence the logger could afford to spend $9.50 ($12.00 less the $2.50 as above) in getting his most difficult logs. In other words, any timber that could be logged to tidewater for $9.50 or less was "merchantable." Practically every log on the tract could have been put in the water at that figure, and the limit which twenty years ago would have shown no timber on a "merchantable" cruise basis came to have an average of about 40 M per acre of "merchantable timber" in 1907, which was also the total amount of sound timber as shown by an ordinary commercial cruise. Had this limit been logged in 1915 instead of 1907, the average price at the boom for the camp run (as cut in 1907) could not have exceeded $5.50 per M. Allowing $1.00 for stumpage, 75c for royalty, and $1.00 for logging profit, the logger could not have put in any logs costing more than $2.75 per M. to log. In the case of the limit in question this would mean that he could not have opened it up at all, hence the "merchantable" cruise would have again returned to zero.

These considerations, together with the further fact that different loggers vary greatly in personal efficiency, and therefore what is "merchantable" to one may be profoundly unmerchantable to another, have long ago established the total volume of sound timber as the only admissible basis for commercial cruising, leaving the merchantable volume to be determined from time to time according to the varying local conditions of log costs and log prices. These supplementary merchantable estimates are invariably reported on separately—usually by letter—as are also current stumpage values, which are likewise influenced by the fluctuating factors of current log costs and values, as well as by the demand and supply of stumpage for investment and for operation.

In a new country such as the British Columbia Coast, where many limits are purchased for immediate logging, the determination of the merchantable stand becomes a very important part of timber cruising. In governmental reports on timber offered for sale for immediate operation (as in the case of government timber sales), it is of course the only cruise desired by either buyer or seller. In private work, such cruises, though frequently made for private owners, are seldom given publicity. This is no doubt partly due to the fact that they are good only for the conditions obtaining at the time of report, but the

chief reason is doubtless that cruises are usually made public only when owners are desirous of selling their properties, and they very properly desire to have the entire stand on the tract offered for sale and considered on its merits quite without regard to whether or not all of the timber could be logged at a profit at that particular time.

In the case of virgin forests the total volume cruise may be accepted as accurate for many years. That is to say, that in a mature virgin forest the rule obtains that the annual growth is approximately offset by the annual decay in the over-mature trees, and, barring loss by fire or windfall, a cruise made a decade hence would show little variation in wood volume or quality.

Incoming of the Forest Engineer

So much for the basis of modern timber cruising. The evolution in method is equally interesting.

The old-time cruiser was usually a man who had had experience in logging in the same district as that in which he undertook to cruise, and who, on examining a tract, could make a comparison between it and other tracts which he had seen before they were logged. And, having in mind the amount which had been cut from the logged areas, he could approximate the amount which would be cut from the area cruised if logged in a similar way. Many capable men thus trained gave a very good account of themselves as long as the standard of logging did not greatly change, and so long as they continued to cruise in the district with which they were familiar.

With changing logging standards in the old districts, and with the exploration of new districts where logging was still in its infancy, or where it was conducted with different equipment, and above all, with the demand for a detailed mapping as well as cruising of the timberlands, a new type of timber cruiser appeared.

The Forest Engineer, as the modern timber cruiser is called, is essentially a man of engineering training, and it has been his task to adapt standard mapping methods to meet the needs of the logging engineer, and to apply scientific methods to timber cruising, or, in other words, to standardize the measuring and valuing of forest stands. The methods of accurately mapping lands have of course long ago been standardized. It was part of the work of the forest engineer to adapt these methods so as to give a satisfactory topographic map without exceeding the cost that a lumberman could well afford to pay. Thanks to the aneroid barometer used in conjunction with more precise instruments, this has been accomplished.

The standardization of timber cruising methods called for two radical departures, namely—the development of volume tables, and the "gridironing" of the tract cruised by systematically covering it with a series of parallel cruise lines.

To take the latter first, the cruiser first establishes base lines which are carefully chained and levelled, and on which he marks the five or ten-chain points. The boundaries on two opposite sides of a limit will conveniently serve as base lines, provided they are not more than a mile apart. Should the logging of the limit call for a railroad, the approximate location of the main line should be traversed and levelled, and this will serve as an additional base line on which to "tie" the cruise lines. The cruise lines are then run from one base line to another at whatever intervals may have been decided on, having in view the regularity or irregularity of the stand. In large tracts the cruise lines are usually spaced ten chains apart, but where the timber is patchy a closer spacing is necessary. As he runs his cruise line the cruiser tallies all timber (classified by species, height classes, diameters and quality) on a strip 66 feet wide (33 feet on either side); makes note of the character of the surface and other topographic features (such as stream crossings, rock outcrops, etc.); and makes a complete record of elevations as shown by his aneroid. The cruiser also sketches all topographic features and type boundaries as far as he can see on either side of his line. This gives practically complete data on the area between the lines. On reaching the base line at the other side of the tract he "ties" his line to the nearest 5 or 10-chain point, checks has aneroid readings with the base line levels, and proceeds to run the next parallel cruise line at the desired spacing.

Elimination of "Guess" Estimates

In this way the entire area is "gridironed." If the spacing of the cruise lines is 10 chains apart, the parallel cruise lines (on which a complete tally of the timber and other data is taken) will occupy 10 per cent. of the tract. If the spacing of the cruise lines is five chains, complete data will have been taken on 20 per cent. of the tract. For any considerable area, a 20 per cent. cruise is sufficiently accurate even for high priced stumpage. In the East and South 100 per cent. cruises have been made for white pine and cypress, but it is at least doubtful if the resulting refinement in accuracy justifies the additional cost to owners. A 20 per cent. cruise costs about 50 per cent. more than a 10 per cent. cruise, and on small areas and where stands are very patchy the closer spacing is necessary. A 100 per cent. cruise costs about six times as much as a 10 per cent. cruise, or approximately $1.80 per acre, as compared with 30c per acre for Coast conditions in British Columbia.

Having determined the kinds, numbers and sizes of the trees on a tract, the next step is to translate these figures into feet board measure, log scale. This is done by means of "volume tables."

A volume table for any kind of timber, Douglas Fir, for example, is a table that gives the average scale for all Douglas Fir trees according to diameter and merchantable length. Thus in a volume table before me, prepared by the United States Forest Service, I note that a fir 36 inches in diameter, and having a log length of 170 feet, contains on an average 2,020 feet board measure if scaled according to Scribner's log rule. Our firm has during the last nine years collected a large amount of volume data for all Coast timbers. This data is gotten by scaling logs after the fallers on a large number of logging operations, using the British Columbia log rule.

In comparing our tables with those developed in a similar way by the U. S. Forest Service for the same species in Washington and Oregon we find, as might be expected, that ours average somewhat lower but in other respects resemble them closely. The lower scale is probably due to a somewhat higher stump in British Columbia, to the slightly lower scale given by the B. C. Rule as compared with Scribners, and to the well-known fact that the north temperate zone trees reach a better individual development towards the southern limit of their range. The members of the B. C. Forest Club will be interested to know that our tables check satisfactorily with those published by the B. C. Forest Branch. Our red cedar and hemlock tables are, however, appreciably lower.

In using volume tables it must always be recalled that its figures are average figures, and that there should always be secured local measurements of trees on each tract so as to determine whether the timber on the particular area cruised will scale better or poorer than the average shown by the table, and how much better or poorer.

The standardization of timber cruising enables different cruisers using standard methods to get closely uniform results for the same tract. The maximum variation for a 10-chain spacing of the cruise lines should not exceed 10 per cent. and should average less than 5 per cent.

Examples of great and even extreme variation in the amount of timber exported on the same tract by different cruisers whose methods were not standardized are so frequent as to be quite commonplace. Perhaps as extreme as any were two cruises on a group of 23 limits within fifty miles of Vancouver. The cruise on which the tract was purchased was 365 million. The cruise on which the limits were abandoned after the payment of $125,000 on purchase account was $16,000,000. Another case that comes to mind was a happier one for the purchaser. A single limit this, cruised some ten years ago at six and a half million. The owner logged five million from it and sold the "logged" limit on a basis of the remaining one and a half million. A later cruise showed less than 100 acres had been cut over and a stand of over fifteen million remaining.

The burden of checking different cruises which fail to harmonize has naturally fallen in increasing measure to the forest engineer. And in this connection it will be most illuminating to refer to our own experience in a couple of typical cases.

Some British Columbia Examples

In the summer of 1912, a large corporation desired to purchase a large tract on Harrison Lake. The owner submitted a very attractive cruise, made for him by an eastern firm. The prospective purchaser had the tract reported on by their own cruisers. Their report was favorable for the purchase of the tract at the price per M asked, but found a substantial shortage in the amount of timber on the ground. On the owner's refusal to make the required concession, he having every confidence in the accuracy of his cruise, the prospective purchaser asked our firm to check the cruise made by their own men on certain selected lots. This we did, with the result that their cruise was found to correspond very closely with ours on the lots examined. The owner, still unwilling to accept the lower cruise, asked for a joint cruise by his cruisers and our firm of three designated 40-acre blocks.

On going on the ground with two representatives of the other cruising firm and representatives of both prospective buyer and seller, the writer took along copies of the volume tables used by our cruisers in computing the cruise on this particular portion of the tract. In making the joint cruise both parties agreed closely as to the number of logs per tree, percentage of breakage, and all other important points, except the vital one as to how many feet board measure there was in any tree of given dimensions. We finally agreed to fall and scale 30 trees as a test of our different views. In order to make this falling-and-scaling test a direct check on our cruise, I handed the representative of the owner the copies of the volume tables that had been used by our cruisers, with the request that as each tree was measured he call out the corresponding scale from the volume tables, thus eliminating my personal judgment from the test. At the conclusion of the scaling of the fourteenth tree the other cruisers refused to scale any more. The showing at that point was that their average estimate was slightly over 30 per cent. too high, while the figures from

our volume tables averaged within 3 per cent. of the actual scale of the logs as measured on the ground.

The other case to which I shall refer had its origin in a case of "nerves" on the part of the owner—an eastern syndicate. They had had a large timber tract carefully cruised at the time of purchase by an old-timer in cruising who bore a good reputation, and who had had considerable experience on the B. C. Coast. Later, however, they became anxious to have the cruise checked, and placed the matter in the hands of their business representative at Vancouver with instructions to use the most competent cruiser available. The checking cruiser reported a shortage of some 700 million feet, or about half the original cruise, and further complicated the case by the most extraordinary variations in the case of individual forties, where he in some cases found four or five times as much timber as Cruiser No. 1, notwithstanding the fact that his cruise as a whole was so much lower.

The distressed owners came to us explaining that they did not want another cruise, but did want to know if there was not some way of determining by precise measurement the exact amount of timber on a forty. We advised them that a measurement which would silence all doubters would be to survey out the boundaries of the forty, measure the breast-high diameter of each individual tree thereon, plainly marking each tree as measured to avoid error, and finally to get the scale of 10 per cent. of the trees by accurately scaling the logs therein contained with a special tree-scaling instrument. They responded by indicating 25 forties which they wanted thus scaled. The scaling of the 25 forties showed that the higher man was safely below the actual amount of timber on the ground, and that his cruising was as consistent as could reasonably be expected. The comparison with the second man's work showed that he had been lost when he was supposed to have been doing his work, if the results turned in were actually from data taken on the ground.

The standardizing of timber cruising resembles standardizing in other lines in that it consists of eliminating in so far as is practicable the element of personal judgment. Perhaps in no other calling concerned with the determination of quantities and values has the element of personal judgment played so large a part in the past. Nor is it possible to wholly eliminate it. It has, however, been very largely replaced by real measurement, and to that extent timber cruising has been reduced to a scientific basis, and the forest engineer is entitled to his name and place in the ranks of the engineering profession.

Well-Known Lumberman Now Optimistic

President John Hanbury, of J. Hanbury & Co., Ltd., Vancouver, B. C., returned recently with Mrs. Hanbury from a trip to Eastern points. Considerable time was spent with Ottawa friends, and on the return journey a number of prairie centres were visited. Mr. Hanbury left the Coast holding rather uncertain views as to the future of the lumber industry—he returned a pronounced optimist, the change being the result of actual contact with conditions and effects which cannot fail to produce an abundant prosperity throughout the entire Dominion.

The West, in Mr. Hanbury's opinion, is assured of good times as a consequence of the phenomenal grain crop in the prairie provinces—day after day new records are being established owing to the acreage yield in many districts having been considerably underestimated. There is no "spotted" territory, as in other years, and practically every farmer in the three provinces will have plenty of money for all purposes. What this means to the lumber industry can scarcely be grasped, states Mr. Hanbury, it being well known that for the past two or three years the average farmer has been unable to do business with the lumber retailer. In the meantime he has learned a lot about the money-making possibilities of mixed farming and has been hoping for a big crop which would put him in the way of erecting the necessary buildings. Everywhere there will be a demand for lumber for one purpose or another, and it looks as if there will be business for most of the mills in the province if an outlet can be secured for the usual cut of the export plants. This seems probable in view of the more cheering report from the Panama Canal and the fact that steps are being taken to secure governmental assistance in solving the transportation problem by building a fleet of lumber carriers.

Prosperity is assured the eastern portion of the Dominion, states Mr. Hanbury, as a result of the tremendous activity in manufacturing lines, the good crops, and the enormous war orders about to be placed in addition to those now in hand. Good times in Ontario will mean a better demand for B. C. lumber, a fact which should not be lost sight of by our millmen.

U.S. National Forest Timber Sales

Bids have been accepted by the United States Department of Agriculture for two large bodies of National Forest timber estimated to contain 188,100,000 board feet. One is in California and the other in Utah. With one exception, these are by far the most important sales made this fiscal year, which is expected by forestry officials to run considerably above last year in receipts from timber sales, the first five months having shown an increase of nearly 40 per cent.

The California sale is on the Plumas National Forest in the Sierra Mountains. The most valuable timber is sugar pine, for which $3.25 per thousand was bid, with an estimated total of nearly 26,000,000 board feet on the tract. For yellow pine, of which the amount is put at over 37,000,000 feet, $2.60 was bid.

Douglas fir, white fir, and incense cedar, which have a much lower market value, brought an average of only about 70 cents a thousand for a total of over 43,000,000 feet. The purchaser will be allowed an operating period of fifteen years, besides a year at the beginning for the construction of necessary improvements; but the prices to be paid are subject to readjustment every five years.

The Utah timber is in the Wasatch National Forest, and will be cut chiefly for railroad ties. It comprises, according to the government's estimate, 82,100,000 board feet of green and dead lodgepole pine, Engelman spruce, and alpine fir. The sale price is 10 cents for each tie cut and ½ cent per linear foot for mine timbers.

Notwithstanding that since the current fiscal year began, July 1, there have been two large previous sales of National Forest timber, one in Arizona of less than 50,000,000 feet, the other in Washington of nearly 100,000,000 feet, the vast bulk of the sales from the National Forest are of small quantities for the supply of local needs. The total cut from all the National Forests last year was 689,000,000 board feet, of which nearly one-fourth went to local residents allowed free use, while out of a total of nearly 11,000 individual sales only 109 involved timber worth more than $1,000. With timber receipts during the last fiscal year in excess of $1,175,000, the forestry officials say that if the rate of gain already made this year continues the receipts will exceed all past records.

Cargo Orders for St. John Spruce Stocks

A St. John, N. B., despatch says that several Government orders have been received there for steamer cargoes of spruce lumber for war purposes in Great Britain and France. No doubt more will be received. This is good business and is the more welcome because the stocks of lumber carried over are about 25 per cent. larger than those of last winter. The cut of logs during 1915 was larger than that of the previous year and prices were higher. The operators had a profitable year, but the big shippers had some difficulty because of the high freights, and this Government business helps them out. The British lumber market has advanced a little of late, with more active demand than a year ago, but tonnage is still scarce and the freight outlook so uncertain that the big houses are not booking orders ahead as usual at this season but are awaiting market and freight developments. The winter thus far has been the mildest for many years. Swamps were not yet frozen hard at the end of December, and there had been no sleighing in the southern part of New Brunswick or in Nova Scotia. In both provinces, therefore, operations in the woods have been delayed.

Law Suit Over Forest Fire Losses

The Attorney-General, the Parry Sound Lumber Co. and the Bank of Montreal are plaintiffs in an action against Angus Sinclair, the Canadian Northern Ontario Railway Co., and Mackenzie, Mann & Co., to recover $68,720 for damages said to have been caused to timber in the township of Street, by trespass and fire. The bill is itemized for some 77,000 trees, which it is alleged have been destroyed. Of these some 2,200 were cut in trespass, it is said, for poles and bridge timber. A fire caused by railway construction started a fire which destroyed 11,047 pine trees and 24,453 other trees on May 24th, 1914. A steam-shovel in a gravel pit started a fire in July, 1914, in which 12,205 pine trees and 27,015 other trees were destroyed. The plaintiffs ask $16,000 for the increased cost of operating the limit and for damage to the rest of the township.

It is estimated that 2,000,000 to 3,000,000 sleepers will be required by the British railways in 1916, and, owing to the European war, which has cut off supplies from the countries bordering the Baltic Sea, the requirements for next year will be met largely by Canada and the United States. English railways are accustomed to use sleepers 5 in. by 10 in. by 8 ft. 11 in. in size. The sleepers imported into Great Britain from all sources during 1914 were valued at $3,192,400. "Sleepers" is the English term for cross-tie.

The College of Forestry at Syracuse offers a correspondence course in lumber and its uses to any person in the State of New York. This phase of its general educational work has been developed as a result of an increasing number of inquiries from every section of New York regarding the technical qualities of various American woods.

Box-Making in British Columbia

The rapid expansion noted in all lines of business in British Columbia prior to the declaration of war had an especially stimulating effect upon the box-making industry; and it is worth noting that while the depression due to the dislocation of the world's commerce has been felt most severely by the lumbermen of the province as a whole, the box manufacturers have been enjoying a good run of orders at fairly remunerative prices. This is to be ascribed in the main to the rapid development of the fruit and vegetable industry, together with the deep sea fisheries, which call for enormous quantities of containers for shipping purposes. In addition to the largely increased home demand for boxes a considerable foreign trade has developed, with the result that several sawmills having box factories in connection are now filling huge orders for the United Kingdom, Australia, New Zealand, and elsewhere, the material being shipped in shook form, to be assembled as required.

One of the best of the Vancouver factories is that of the Pacific Box Company, Limited. The business was established in a small way on Prior Street in 1906, but in 1913 the present company erected works on False Creek, at the foot of Smythe Street. Here—in the very heart of the city—they occupy a site of three acres with valuable water frontage. The modern factory erected at the land end is 109 x 108 feet in dimensions, of two storeys. Between the building and deep water there is piling ground for a large stock of lumber. At the present time over two and a half million feet are being carried in order that it may be thoroughly seasoned before use. The lumber is transferred on trucks from the pile to the machines on the mill floor. The equipment includes a fast-feed Woods planer (capacity 250 ft. a minute), a large Berlin planer, pony planer, horizontal and vertical resaws, and the latest design of dovetailing machine (three machines in one) which has a capacity of four thousand finished boxes every ten hours. In all, the plant has twenty-one different machines, two fans and one blower, to operate which there are twenty-four electric motors ranging in horsepower from 5 to 80. Some of these are direct connected to the machines. The equipment represents the latest and most improved machinery for making boxes, either in shooks, nailed or dovetailed. At the south end, on the first floor, is a filing room having Covel and other machines for saw and knife sharpening and repairs.

The capacity of the sawing floor is 40,000 feet of spruce, hemlock and pine lumber a day. When sawn the shooks are transferred by hoist to the second floor for assembling, nailing and printing. There are two printing machines, one having double cylinders for two-color work.

Mr. R. W. Sharpe, under whose efficient management the company has made steady progress, says that the plant can supply boxes for any purpose and in any quantity. The business is largely with manufacturing concerns, fish packers and fruit growers, but numerous orders for special sizes are received and filled from time to time. So far, the firm has not accepted any foreign orders, the demands of the B. C. and prairie trade having taxed the capacity of the plant.

Pacific Box Company's plant at Vancouver, B.C.

The Waterous Engine Works Company, Ltd., Brantford, Ont., are favoring their friends this year with a fine large office calendar with reproductions of views of their plant and a generous sized calendar pad with figures that can easily be seen across a large office.

The Modern Retail Yard

At a recent convention of retail lumber dealers at Little Rock, Ark., Mr. C. K. Nicoll, of the Arkmo Lumber Company, read an interesting paper, entitled, "Practical Suggestions for Arrangements, Equipments, Accommodations and Conveniences in a Retail Lumber Yard."

Mr. Nicoll gave the retailers present at this meeting many practical suggestions regarding the ideal arrangement of a lumber yard.

First of all, he insisted upon sheds for the lumber—sheds with studding set at regular intervals so as to be uniform. By this arrangement the lumber dealer had a permanent advertisement for his stock, for nothing catches the eye of the public more than "LOOKS." Looks are the first requisite in selling.

Next he favored bins 7 feet high and 4 feet and ½ inch wide, with a shelf where required. This height permitted a man to reach the lumber easily, and the width permitted the stacking of lath in them.

Mr. Nicoll advocated plenty of light in all sheds, and made the suggestion that a cupola with 10 x 12 twelve-light windows with weights every four feet would meet the situation nicely. This would provide the necessary circulation of air and light at the same time.

Alleys at least 20 and preferably 24 feet in width were recommended by the speaker. Such alleys permitted the stacking of lumber in the alley if necessary and the pulling out of 20-foot timbers without inconvenience. The stacking of all lumber the full width of the bins with a lath placed between every tenth layer of the boards kept the piles straight, permitting checking of stock-taking in haste, and in addition prevented slovenly yardmen from pulling from the side of the pile. He also recommended the stacking with tongue out in all lumber having such, for injury to tongue did not depreciate the value of the commodity, while a break in the groove caused a loss. Mr. Nicoll also advocated the cutting of all bundles and declared that in this manner the stacking could be done for 35 cents a thousand feet, and there was, moreover, a saving in time over the handling in bundles that would not permit straight nor rapid stacking.

In the handling of moulding he advised the retailers to erect a shed near the office with bins for 2,500 feet each, the reserve stock to be kept in bundles overhead. He declared that the bins should be numbered so that an ignorant laborer could be sent to pick out the stock and make no mistake if necessity demanded it. Lumbermen should also use colored crayon to mark the ends of their moulding, using a different color to designate length, and in this way no time would be lost in pulling out the length of moulding required.

In conclusion Mr. Nicoll advocated the placing of doors flat with the ones least used in top racks. He said he always numbered his doors from the bottom. In this way he knew at a glance the number in stock, without having to wait and count them. He also keeps a door which, while not numbered, is covered with paper on top, thus protecting the others from the dust. In handling sample doors, he advised lumber dealers to hang them by a hook from the top, permitting them to swing out when desired for display. In this way doors could be kept free from dust and at the same time make a good showing.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Wanter to buy Cedar Ties. Apply Box 269, Canada Lumberman, Toronto. 23-1-2

Wanted to buy 1-in. cull Basswood and 1½-in. good Basswood. Apply Box 270, Canada Lumberman, Toronto. 23-1-2

WANTED—Four cars 1-in. No. 2 Common and Better Hard Maple. State when cut, lengths, widths, and price, with Toronto Freight rate. Box 286, Canada Lumberman, Toronto, Ont. 2-5

WANTED—A quantity of Hard Maple and Birch, both for immediate and future delivery. 1 inch and thicker. State quantity you have to offer, price and full particulars. Box 285, Canada Lumberman, Toronto, Ont. 2-5

Hemlock Wanted

Want block about 500,000 feet 1 in. and 2 in. Hemlock. Write the Elgie & Jarvis Lumber Company, Limited, 18 Toronto St., Toronto. 1-2

Wanted

500,000 ft. or any portion 4/4 dry White Pine, Box grade, for immediate shipment to Boston, Mass. Widths to run 5 inches up, and lengths, 8 to 16 ft. Box 268, Canada Lumberman, Toronto. 23-2

Wanted for shipment whenever in shipping condition:
2,000,000 ft. 3 in. No. 1 Com. & Bet. Soft Elm
1,000,000 ft. 2½ in. No. 1 Com. & Bet. Soft Elm
1,000,000 ft. 2 in. No. 1 Com. & Bet. Hard Maple
500,000 ft. 2½ in. No. 1 Com. & Bet. Hard Maple
Box 274, Canada Lumberman, Toronto, Ont. 24-3

WANTED—During summer will need—
Soft Maple
Hard Maple
Birch
Beech
Elm
Ash
Basswood
Can use all grades or whatever you cut at your mill. What have you to offer?
Box 284, Canada Lumberman, Toronto, Ont. 2-5

For Sale–Lumber

For Sale

White Pine and Hardwood, estimated 300,000 feet, will cut to order. G. A. Patrick & Son, Delaware Saw Mills R. R. 2, Lambeth, Ont. 1-6

FOR SALE—Considerable quantity of hemlock ties suitable for Electric Railways, Sidings, etc., ready for immediate shipment. Monteith Bros., Rosseau, Ont. 24-3

We Have a Full Stock

of Hardwood, Hemlock and White and Norway Pine Lumber, Norway and White Pine Piling, up to 60 ft. Keenan Bros., Limited, Owen Sound, Ont. 3t.f.

Lumber For Sale

Purchasers of White Pine would save money in buying now from our three million feet, 1916 cut, because we require financial assistance. Sawing to begin early. Apply Box T., Sturgeon Falls, Ontario. 1-2

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal

GEO. C. GOODFELLOW,
c Montreal, Que

White Oak For Sale

Thirty thousand feet White Oak, cut, 1, 2, 3, 4 inches thickness, various lengths from 12 to 32 feet. Also odd sizes, including squares 4, 6, and 8 inch. A snap for quick sale.

CAMERON & CAMERON,
24-3 Beaverton, Ont.

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

WANTED—Office position, Timekeeping, Cashier, Bookeeping, or general assistant to Manager. Small town or country district in New Brunswick or Quebec preferred. "Experienced," Box 289, Canada Lumberman, Toronto, Ont. 2-2

WANTED to hear from lumbermen who anticipate needing a mill foreman this spring, by an experienced mechanic who can give results, open to engagement. Any capacity. Box 283, Canada Lumberman, Toronto, Ont. 2-5

Position Wanted

A young married man, 32 years of age, will be open for a position on or before March the first. Fifteen years' experience as inspector, scaler and estimator; will consider any other capacity; will go anywhere. Box 281, Canada Lumberman, Toronto, Ont. 2-4

WANTED—Position as superintendent of planing mill. Six years' experience in charge of largest up-to-date plants with modern methods and machinery. Gets splendid results and handles plant and men to best of advantage. Would accept American position. Excellent reason for wanting change. Address before January 25th, Box 288, Canada Lumberman, Toronto, Ont. 2-2

Wanted

Position as Lumber Inspector or Salesman. Fifteen years' experience in lumber yards, mills and office; thorough knowledge of White Pine Grades or British Columbia grading; also a general knowledge of export grades for United Kingdom. First class references given. Apply Box 273, Canada Lumberman, Toronto, Ont. 24-2

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

Machinist wanted. First Class. Experienced in up-to-date saw mill practice. John B. Smith & Sons, Toronto. 24-24

WANTED—First class hardwood lumber grader and inspector for mill in the Province of Quebec. Must understand National Hardwood Lumber Association rules. Box 291, Canada Lumberman, Toronto, Ont. 2-2

WANTED at once, an up-to-date Band Sawyer for left-hand mill, Maritime Provinces. Must be a hustler and be able to [illegible] capacity. None other need apply. Box 292, Canada Lumberman, Toronto, Ont. 2-3

Wanted At Once

Competent warehouse and commissary manager for large lumber company in Maritime Provinces. Must have excellent recommendation and be thoroughly reliable. Good position for the right man. Box 282, Canada Lumberman, Toronto, Ont. 2-3

WANTED—By lumber firm in Northern Ontario a first-class office man who has had experience in the mercantile business, and who has a general knowledge of the lumber and logging business as far as office work is concerned. Single man between 30 and 45 years preferred. Apply Box 290, Canada Lumberman & Woodworker, Toronto, Ont. 2-3

For Sale–Machinery

FOR SALE—Second hand Bull Lathe, 60-in. swing, 84-in. bed. $150.00 cash; also a lot of Rubber Belting, 6 in. to 16 in., at Low Prices.

MOORINGS MACHINE SHOP,
1-4 40 Pearl Street, Toronto.

For Sale

One No. 3 American Saw Mill, friction and rope feed, complete; and one J. I. Case 36 horse-power portable engine and boiler combined. Both used a short time and in first-class shape. A bargain to a quick buyer. J. D. Campbell, Cornwall, Ont. 2-2

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

Engine For Sale

Corliss Engine, 150 h.p., 18 cylinder, 24-inch leather belt, heater and pump, first-class condition, no fault, changing plant to electric. Inspect at Guelph Lumber Co., Guelph, Ont. 24-3

For Sale

One Water Wheel, 40-in. Turbine arranged for vertical setting in open flume. Provided with Hand Wheel for operation from Mill floor. Will be sold cheap. Apply G. C. Jackson, Auditor of Claims, C. P. R. Offices, Montreal. 2-2

Machinery For Sale

One McGregor Gourlay second hand Resaw, 54-in. wheels, carries 5-in. saws, machine in first-class condition, only used on light work. Located in Central British Columbia.
Two second hand McGregor Gourlay Q. Y. Planers and Matchers, one 9-in., one 15-in. wide, in good condition, ran every day till October, when fast feed Matcher was installed. Located in Saskatchewan. Box 275, Canada Lumberman, Toronto, Ont. 1-4

WOODWORKING MACHINERY FOR SALE:—1 10-in. Berlin four side Moulder; 1 New Britain chain mortiser; 1 Defiance rounder, borer and jointer; 3 pole rounders; 2 automatic knife grinders; 1 26-in. Whitney smoothing planer; 2 26-in. revolving bed double surface planers; 6 30-in. Ideal pedestal bandsaws; 1 20-in. American wood scraper; 2 two-spindle wood shapers; 2 power feed rip saw tables. H. W. Petrie Limited, Toronto. c

Saw Mill Machinery For Sale

Second-hand Machinery for Complete Saw Mill, all practically new, in excellent condition, including Bullwheel, Steam Kicker, Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8-ft. Waterous Bandmill, 5-saw Slab Slasher, 48-in. Edger, Trimmer, also Independent Lath-mill, and Filing Room outfit. Power Plant complete. Offers accepted for all or any part. On view at the Waterous Engine Works Company, Brantford, Ont. t.f.

For Sale

Steam Log Hauler with 14 Sleds, Wooden, heavily ironed. A Bargain. Apply G. C. Jackson, Author of Claims, C. P. R. Offices, Montreal. 2-2

For Sale

Two 54 in. x 12 ft. Stationary Boilers, in use only 8 months, complete with full arch fronts, smoke box and stack, and all regular fixtures and fittings, working pressure 100 lbs.

WILLIAMS & WILSON, LTD.,
2-2 Montreal, Que.

Business Chances

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1 t.f

Saw, planing, shingle and chopping steam mill, capacity 20 M. First-class order, six acres land site on C. P. R. Stock about $1,000. Plenty of logs, good farming district. Hydro lights in village of 400, would make best of factory site. Death of owner reason for selling. Snap for quick sale, as present owner has other interests. Price $7,000 for land, stock and mill. Apply Box 287, Canada Lumberman, Toronto, Ont. 2-2

Miscellaneous

Timber Limit For Sale

Newfoundland timber limit, 112 square miles, well situated right on railway and within several miles of ocean shipping port; will average nine cords pulp wood and two thous. saw logs per acre, spruce and pine. Present demand for pulp wood and with duty removed by Newfoundland Government, makes this an exceptional opportunity for investment at a minimum of outlay. Particulars from Box 277, Canada Lumberman, Toronto, Ont. 1-4

Automobile for Exchange

We have a "Light Six" Chandler, 1915 model, electric light, self starter, and all up-to-date equipment, in good condition. Cost new $2,350. Will sell in exchange for lumber, any kind of lumber, dead cull and better, and will make a big cut in the price of the car. J. & W. Duncan, Limited, 1801 Ontario East, Montreal. 24-3

30 Replies

are often received to "Wanted" and "For Sale" ads. on this page. Even 50 replies are not an uncommon return from the investment of the small amount a condensed ad. costs. And isn't that good business—to get right into close touch with so many people interested in what you have to buy or sell? For you can be sure their transactions with you will not end when they have closed the business your single ad. announced.

Eight Months at Sea

The British owned ship Wm. T. Lewis arrived recently at Plymouth, England, after a journey from Everett, Wash., which occupied eight months, with a cargo of 2,000,000 feet of lumber destined for Sheerness, England. The vessel had an eventful passage, having been attacked and shelled by a German submarine. Her crew expecting her to founder, abandoned the vessel. The ship was picked up by tug the next day and towed into Bantry Bay, Ireland, after being out over 5 months.

Miscellaneous Items of Interest to Lumbermen

Mr. R. M. Cox, of Robert Cox and Company, Ottawa, is now on a visit to England.

Mr. T. Z. Pariseau, of Pariseau Freres Ltd., box manufacturers, Outremont, P. Q., has been elected a member of the Montreal Board of Trade.

Jos. Bedard and Sons, manufacturers and dealers in lumber, Richmond, P. Q., have sent out a calendar for the year 1916 to their friends in the trade. The calendar contains an attractive colored photograph entitled "The Forest Stream," which will make it welcome in the offices of lumbermen.

Blair and Rolland, Limited, wholesale lumber and pulpwood dealers, 20 St. Nicholas Street, Montreal, have sent out to their friends an excellent calendar with a fine picture in colors, of the Grand Canyon through the Pines, by Thomas Moran, N.A. The calendar is of large size, a feature being the clear character of the date figures.

Serg't A. Grant MacDonald, formerly of the 125th Battalion, who was assistant superintendent of construction for the Schultz Bros. Company Ltd., Brantford, has been transferred to the Canadian Aviation Corps with the rank of Flight Lieutenant. Lieut. MacDonald's recent departure from Brantford was made the occasion of a presentation to him, by the firm, of a handsome portmanteau.

The Fassett Lumber Company Ltd., Fassett, P. Q., manufacturers and wholesalers of lumber have sent a large calendar to their friends in the trade this year. A colored photograph entitled "The Edge of the Lake" is handsomely mounted upon the calendar. The picture represents an attractive woodland scene with white birch and evergreens in the foreground and a glimpse of water in the middle distance. The picture and calendar pad are handsomely mounted on white board with green margins.

A California despatch states that a lumber buyer who was in that city early in January was negotiating for 200,000,000 feet of lumber for the use of the French Government. Five of the largest mills on the west coast were expected to have to co-operate so as to fill the expected order. Among the concerns reported to be bidding for the business were the E. K. Wood Lumber Company, Chas. Nelson Company, Hammond Lumber Company and Pope and Talbot. The despatch stated also that the British Admiralty was expected to furnish tonnage for the shipment of this stock.

Reports from St. John, N. B., state that the lumber cut in St. John County this year is not expected to be more than 35 per cent. of what it was last year. The lack of snow has delayed operations, and lumbermen are not anxious to take out as large stocks as formerly. Mr. A. F. Bentley of St. Martins expects that the cut may even go below 35 per cent. In the district along the St. Martin's-Hampton Road, for example, he says that the cut last year was between 12 million and 13 million feet and that this year 4 million feet will be the outside limit. Conditions throughout the county, he says, are about the same. He also expects that in other parts of the province similar conditions will prevail and the general cut in New Brunswick will not be more than 50 per cent. of what it was last year.

Klim a Valuable Camp Supply Article

H. B. Clark, who has been demonstrating for and representing Canadian Milk Products Limited for a long time has left on a trip through the lumber district of Ontario. "Klim", the lumbermen's milk in powdered form, is well known to many large lumber companies in Ontario who use it regularly for camp milk. Mr. Clark is specializing with Klim and is visiting those lumber companies who are either using Klim regularly or wish to know more about it with a view to using it in their camps. The company state that Klim is the only form of milk used in all the soldiers' camps throughout Canada today. Klim was adopted by the Dominion Government as a regular army ration and milk at the beginning of the war, after most exhaustive tests were made with it. The lumbermen should be familiar with a product which needs no better recommendation of its purity, genuineness, food value, economy and convenience. Canadian Milk Products Limited, Mail Building, Toronto, have been manufacturing powdered milk in Canada for twelve years and two years ago perfected the process for producing Klim which, when reconstituted with water, produces a liquid that can hardly be distinguished from fresh, liquid milk.

A number of annual meetings of Georgian Bay Associations were held at the Queen's Hotel, Toronto, on January 11th and 12th. The companies holding meetings were:—The Vermilion River Boom Company; the Spanish River Improvement Company; the Sable and Spanish Boom and Slide Company of Algoma, Limited; the Mississaga Improvement Company, and the Georgian Bay Lumbermen's Association. Matters of routine constituted the business of all the meetings.

Union Lumber Co.
Limited

Dry Norway Lath

No. 1 6/4 x 3/8 x 4'
No. 2 6/4 x 3/8 x 4'
No. 3 6/4 x 3/8 x 4'
32"

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

For Sale or Lease

As a going concern—Situate at Sault Ste. Marie, Ont.

Up-to-date Saw Mill, Shingle, Lath and Picket Mill

DAILY CAPACITY		
	Lumber	120 M
	Shingles	12 M
	Lath	30 M
	Pickets	12 M

High level land tram to piling ground. Mill served by railway with 3 spur sidings. Approximately 160 acres available for booming logs adjacent to Mill, together with convenient dockage facilities.

For further particulars write

Algoma Steel Corporation, Limited
SAULT STE. MARIE, ONT.

Review of Current Trade Conditions

Ontario

There is practically nothing new to report in connection with the lumber trade in Ontario. At this time of year all firms are more or less busy with their stocktaking operations and in making up their annual reports. The result is that enquiries fall off extensively for a brief period. In former years, after the stocktaking period it has been customary to consider that trade would continue quiet until the opening of spring business. This year there is a fair likelihood of a better situation. The stimulus given to trade by Canada's great crops during the past year and by the extensive war orders for all kinds of supplies and boxes in which to ship them have created an abnormal situation and it is not unlikely that a fair demand for lumber will be worked up within the next few weeks and continue until it is added to by the opening of the usual spring business. The extensive trade resulting from the Government's requirements in shell boxes has to some extent shown a falling off as the Government has not been so great a buyer of boxes during the past month. Since the Shell Committee was superceded by the Imperial Munitions Board, the old system of shell box purchasing has been altered. We understand now that the Munitions Board is sending out specifications whenever it requires boxes and that the specifications are accompanied by blank forms upon which to tender. Prospective tenderers report that the result of this is much keener competition in the production of boxes and much less dissatisfaction from parties who formerly were not permitted to tender. While this situation may reduce the profits to be made in shell box production and may keep the volume of production down to some extent, the clearing of the air from the great number of complaints will be a benefit to all concerned. We hope to see it react to some extent and cause a fairly good and steady market for shell box material. There is a fair demand for most varieties of stock in Ontario, and although the actual volume of trade is light at present, prices are well maintained and stocks are light. Production this winter will in all probability show a considerable decrease as compaerd with previous winters and even as compared with last winter. Practically all the important factors are working together in the direction of a firm and steady market in the spring and if the building situation and the manufacturing activity of the country develop as present conditions would indicate, the year 1916 ought to be a very prosperous one for the lumber trade.

Eastern Canada

The lumber trade at Montreal is rather quiet on account of the winter weather and the annual stock taking operations. In general, however, the trade feels quite confident about business for 1916, and there is a fairly general belief that orders will show considerable increase during February and March. Stocks in the local yards are reduced greatly and are likely to be replenished for spring business. A fair revival in building operations is also looked forward to. Shell box production has been reduced considerably of late as the output has been ahead of deliveries. The trade with the United States continues in fair quantity and spruce prices have improved to some extent.

The spruce market at Boston is stronger. Millmen are asking a base price of $27 for frames. The demand for random is a little quieter, but there is a fair volume of trade. Quotations on random are:—2x3, $21; 2x4, $22; 2x5, 2x6 and 2x7, $21 to $21.50; 2x8, $24.50 to $25; 2x10, $26 to $27; 2x12, $27.50. There is also a fair enquiry for boards and prices are quite firm. The spruce market at New York continues strong. Clear stock is very scare, and there is a good demand for low grade stock. Prices are all firm. The demand for hardwoods at Boston continues to improve and quotations are firm on all lines. The best grade of 1 in. plain oak has been bringing $64, and $61 is the lowest price that has lately been received. There is not much enquiry for quarteerd oak, although a little improvement is noted. One inch 1sts and 2nds are offered at $99 to $100. There is quite an active trade in maple and birch. The hemlock market at Boston shows improvement. Stocks of hemlock boards are rather heavy, but millmen have been marking up their prices and holding them firmly. A prominent wholesaler is holding clipped boards 10, 12, 14 and 16 ft. for $22. Shingles at Boston are quiet. Prices are about steady. Some of the best makes of white cedar extras are offered at $3.40 and fairly good extras are bringing $3.30. Clears are selling at $3 and second clears are $2.65 to $2.75. Lath continue to grow firmer in price. The lowest price asked for 1⅝ in. by the mill is $4.25 and some are asking more. Quotations for 1½ in. lath have been advanced by some mills to $3.90, but some can be bought at $3.60.

Great Britain

The consumption of wood on the spot market at London, continues in a steady manner. Weather conditions have been quite mild and as a result forward purchases have continued to some extent, in spite of the heavy charges of freight and exchange. Values continue to advance, more particularly for the lower qualities, and the prices of all kinds of box-maxing material are very high. Fresh arrivals have been on a very moderate scale. Indications are that all wood goods will gradually increase in value and that present stocks on hand are sufficient for requirements until next open water.

At Liverpool, the demand for spruce is still a very important feature, and prices appear to be going ahead steadily. Eager buyers are on hand for anything reported to be coming forward. A spot cargo of 7 in. and 8 in. and oddments was sold recently at a very substantial advance on former prices. Only a few odd parcels are expected to arrive in the near future. Freight room commitments have so far been very limited. An interesting event lately was the sale of timber used in the construction of the Liverpool exhibition. This was disposed of by auction at prices much above the original cost. The hardwood market at Liverpool is marking time. Prices are quite firm and sellers are not anxious to take many orders, believing that their present stocks are worth holding. Arrivals of hardwoods are moderate. Quebec birch shipments are at an end for this season, and stocks of particular thicknesses are less than they should be. This is particularly the case in 1-in. to 2-in. Prices are high, but are very likely to go higher, as the demand is quite strong.

At Manchester, the steady advance in the value of wood goods continues, and it is difficult to say what the maximum will be. Spruce at present is selling at £21 for 3 in. x 9 in.

The volume of business at Glasgow continues fairly large, and prices continue to advance. Spruce is still the chief feature of interest and prices are continually stiffening. Each succeeding sale seems to be at a higher price than the preceding one. There is already a very apparent shortage in most sizes and the position is likely to be aggravated considerably before spring. The scarcity and high price of spruce are creating an interest in the cheaper grades of yellow pine, numerous transactions being reported of late in 3rds and 4ths, particularly in the narrower specifications. But yellow pine prices have also been advancing quickly and stocks are now much reduced.

United States

Lumber trade conditions in the United States during the first two weeks in January were naturally inclined to be quiet on account of the inventory season being in full swing. In spite of this however, there has been a good volume of trade and market conditions continue on the same favorable basis as they have been for the past month or two. In Chicago, for instance, trade is quite active. The volume of building operations is large and is being rushed in most cases. The factory trade has been good and yards catering to this business have been making steady shipments. During the week ending December 31st the receipts of lumber at Chicago amounted to 54,230,000 feet as compared with 30,444,000 feet for the corresponding week a year previous. The total receipts for the year 1915 amounted to 2,379,729,000 feet, an increase of 164,033,000 feet as compared with 1914. Shipments for the week ending December 31 were 25,055,000 feet, an increase of 10,010,000 feet as compared with the corresponding week in 1914. The total shipments during 1915 were 1,133,417,000 feet, 124,351,000 feet more than during 1914.

The demand for northern pine fell off as was to be expected during the last week of 1915 at Chicago, but wholesalers are quite confident that the prospects for early spring trade are good. Prices on all grades continue firm and the best demand at present is for the lower grades. The volume of trade in northern pine at Minneapolis is comparatively large and prices are firm. There has been a strong demand from woodworking concerns. The low grades are scarce and in good demand at firm prices. At New York, the northern pine trade is active and enquiries are quite satisfactory. Prices continue strong and receipts are light. White pine has held up well in price at Buffalo, although the usual quiet at the New Year season was in evidence. Prices continue firm and wholesalers are not carrying heavy stocks. Everybody is expecting a better year than last, and the spring business outlook is good. Similar conditions prevail at

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

North Tonawanda and there are also indications of a good winter trade. Enquiries are more numerous and more definite.

The hardwood market at Chicago is in better shape than it has been for two years past and wholesalers are looking forward to one of the best years that they have ever experienced. Inventories have shown that the consuming manufacturers have small stocks. Prices continue very firm and manufacturers are not in a hurry to make contracts for next year at present levels. The hardwood markets at Minneapolis are rather quiet, but the situation is strong in all lines. Some lines of birch are low and clear maple is also scarce while oak is firm. At New York, the hardwood trade continues active. Enquiries have fallen off a little during the inventory period, but prices are firm. The demand for oak, birch and maple is good. There is a stronger demand for hardwoods at Buffalo than there has been for some time and dry stocks are in fair demand. Oak, maple and ash are selling well.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Montreal Trade Confident About 1916

Montreal, January 11th. (Special to the Canada Lumberman): Although business is slow just now owing to the winter conditions, and to stock taking, there is a general feeling of confidence as to the current year's trade, some lumbermen holding the opinion that February and March will witness an appreciable advance in orders. The local yards are very short of stock, having used up most of the large amount of lumber which was on hand at the beginning of 1915. Consequently they will be bound to order more freely for the spring; the building program may not be extensive, but it will probably be sufficiently important to cause a fair amount of trade for the wholesalers and retailers.

The continued shutting down of some of the factories making shell boxes has restricted the sales of birch and spruce. Production is ahead of the deliveries, and now that the rush for boxes is over, it is probable that the factories will work on shorter time than has been the case for some months.

Inquiries and orders for timber are improving. The latter are not as large as was usual in the days of the great industrial activity, but it is significant that they have lately picked up in an encouraging fashion.

There is still a fair amount of trade for United States account, and prices for spruce have in some instances improved.

The Montreal building permits for December totalled $2,044,425, an increase of $1,683,290, but this apparent large gain is explained by the fact that the total is made up almost entirely of buildings for the Harbour Commission for the year, which are not bound to be included under the law. Without these buildings, the permits would show a decline. For the year the permits were $8,511,221, or a decrease of $8,883,023.

While ground wood is dull, on account of the small requirements of United States buyers, sulphate pulp is a strong and advancing market. Prices are likely to go still higher, in view of the limited stocks coupled with restricted importations to the United States from Europe.

Ottawa Trade Handicapped by Embargo

Ottawa, January 9th, (Special to the Canada Lumberman):—Local lumbermen are not overtaxed with orders at the present time, but they have good foundation for complaint in view of the fact that the orders they have in hand for the United States cannot be shipped. The embargo recently placed on the New York Central lines on material of export is hampering and annoying the firms here, who have thus far been absolutely unsuccessful in getting even the small orders through to New York.

The soft weather, which lasted for a few days this week, if followed by a good cold spell, will result in a great deal of good and improve conditions for the woods operations. It will soften the thin sheet of ice on the river and with the return of the cold weather drawing will be carried on with greater activity. Local men also look to an improvement then in the roads, which will also result in allaying the difficulties of hauling now being experienced.

Stock-taking is occupying the attention of lumbermen in Ottawa and vicinity just now, and they do not look for any improvement in trade during the next few weeks. A few orders for birch and pine have been received lately but none of any proportion to speak of. There have been practically no changes in prices.

North Shore Cut Reduced Twenty Per Cent

Thessalon, January 6, (Special to the Canada Lumberman):—The weather during the month of December was ideal for lumbering along the North Shore, but during the fall months of October and November it was most unfavorable, with rain nearly every other day. It was almost impossible during October and November to get any work done; in fact some camps broke up for a month. Just at present the weather is soft and there is only about six inches of snow in the woods and no hauling can be done. If no snow falls within the next two weeks the situation will be serious. There will be a falling off of 20 per cent. in the output in this district during the present season as compared with a year ago. Some firms have very long hauls to the water this year. One firm has about 300,000 ties to haul over six miles. The finest stock of logs seen here for years is being cut on the reserve by the Estate of E. B. Foss, who are taking out about 20,000,000 feet this season.—Algoma.

London Markets for Canadian Wood Goods

Churchill & Sim, London, Eng., in their monthly wood circular dated December 3rd, say:—The month's deliveries from the docks are about equal to those of last year, but some 9,000 standards less have been delivered overside as compared with November, 1914, when the importation was exceptionally heavy and stock was immediately required for urgent work in connection with the war. The scarceness of all descriptions of red and white wood available for immediate use has intensified the firmness of the market, and prices were again stronger all round. Forward business with Swedish shippers was resumed at the higher figures quoted in October, and some considerable lines of stock changed hands. Freights were appreciably dearer, necessitating some very high quotations towards the end of the month, including a guaranteed rate of exchange, but the demand was strong enough to warrant merchants paying the prices, and the whole market has had a lift up in consequence.

Stocks of timber, deals, etc., at the public docks on December 1st included:—

Colonial	1915	1914	1913	1912
Pine deals and battens in pieces	365,000	478,000	589,000	512,000
Red pine ... ... in pieces	79,000	49,000	21,000	24,000
Spruce ditto ... .in pieces	1,310,000	694,000	849,000	538,000
Oak timber ... . in loads	.....	.....	.....	.....
Oak planks, etc. (American), ... in loads	2,789	5,332	3,415	1,207
Birch timber ... . in loads	1,259	310	319	226
Birch planks ... ... in loads	2,589	3,917	6,737	5,003
Elm timber ... . in loads	1,055	2,071	1,540	547
Ash ... ... in loads	14	45	.....	12
Yellow pine timber .. in loads	45	225	1,030	956

From the St. Lawrence there has been imported:—

Pine deals, 425,000 pieces, against 248,000 pieces in 1914.
Spruce deals, 1,894,000 pieces, against 763,000 pieces in 1914.
Birch planks, 322,000 pieces, against 174,000 pieces in 1914.

and from New Brunswick, etc.—

Pine deals, 69,000 pieces, against 28,000 pieces in 1914.
Spruce deals, 1,812,000 pieces, against 793,000 pieces in 1914.
Birch planks, 322,000 pieces, against 383,000 pieces in 1914.

Shipments both of pine and spruce have been lighter during November. There has been a sympathetic rise in the price of pine deals, especially of the lower qualities, in harmony with the firmness of the general softwood market. Spruce has been particularly susceptible to the altered conditions, and the upward tendency of values shows no signs of being checked.

There is no alteration in the market for Canadian hardwoods, but birch planks have shared in the general improvement.

C. S. Battle, Vancouver, B. C., has been successful in his suit against Frost & Company, Chicago, in the Supreme Court at Vancouver, to recover $145,000, representing principal and interest due on the sale of 15,250 acres of timber land in the Rupert district of Vancouver Island. The sale took place in 1910, when $50,000 was paid on a total price of $190,000, and the balance with interest was sought in the court action.

It's all over for 1915

The year started in with a slight feeling of uncertainty permeating the channels of trade, but as the months went by a feeling of confidence was forced to the front which reached its culmination when the big North-West grain crop was assured.

As far as our own particular business is concerned we struck out at a good gait from the drop of the hat, and for the first few months showed an advance in our sales over the previous year of forty per cent. We were not able to hold this all through the year—you will agree that it would have been most remarkable if we had—we did, however, pull out at the end of business with an advance of twenty-five per cent. over 1914.

To a force of salesmen working in thorough sympathy with the house, a staff of able assistants in the offices and warehouse, who are ever zealous to push our business to the highest notch of efficiency, and to a bunch of loyal customers who are thoroughly appreciative of our anxiety and desire to serve them in the most capable manner possible, we attribute the splendid results which we have accomplished during the year under review.

And Now For 1916

We've got our programme ready—our plans are laid, and we're going to keep on doing more business, because we're going to make ourselves so attractive by values which we will offer, and by service which we will render that you will be prompted to push more business to our shop, and when you do we'll promise to take good care of it, for we haven't reached our capacity yet in our new premises and equipment, and if, and when we do, why of course we'll make another expansion in our facilities, for be assured we want to continue to grow, and to enable us to do so we want a lot of live-wire buyers to come along with us.

If you're one of this kind hitch up with us for 1916—we're not bad company to travel with—ask anybody who knows us—ask him what kind of an average he gets from us. Our boys are now out hunting for orders and have a number of inviting propositions for you. If you don't happen to be in their path why just send us an enquiry for samples and prices.

We wish one and all A Happy and Prosperous New Year.

H. P. ECKARDT & COMPANY

WHOLESALE GROCERS

CHURCH ST. AND ESPLANADE TORONTO

Work Up Business during the Winter

A year has now ended, but which brought more or less of disappointment to business men, particularly those who began it with exaggerted expectations, which were not realized. I think this year, however, has been one of minimum disappointments as far as volume of business is concerned. The slowness of trade caused by the late spring, has been compensated for by the rush of business in the late fall and first month of the winter, and probably the retail lumbermen have never faced a new year with greater probabilities of having a good business during the coming season than they do at the present time. The agricultural tank of supply is full. The pressure of demand will be great in consequence and it will be up to lumbermen to obtain their share. To insure this for the retailers, it is not enough for them to let their stock offer itself for sale; but they must realize that the prosperity of the farmers will naturally tend to excite the desire in them for having more and better things for convenience and improvement in their business and for the enjoyment of life in general.

You know that most people when they have plenty of money in their pockets have an itching desire to spend some of it. In the lean years they have thought of what they would have when the time came that they were able to buy, and usually they do when that time does come. The average farmer now looks forward to the time when he will be able to buy an automobile. This is one of the principal things he is aiming for in the future. To many, no doubt, this time has already come, and they already have what they planned for, but there are others who will be influenced by seeing the machine their neighbors have got, and with sufficient means from this year's crop, they, too, will feel like buying one. Now, you know, there is many a farmer who needs a better house; more and better conveniences for the wife to do her work; more room for his growing family and a larger degree of attractiveness for them. He needs, too, a building for sheltering the machinery he has got. All these and other things he needs more than he does an automobile. But the question is, how is he to be convinced of this? Every lumberman will ask this question and scratch his head over the problem. He will see farmers buying machines whom he knows ought to have better living conveniences than they have. But the makers of automobiles and their agents have beat him to it and gotten in their work ahead of him. All the year round they have been bombarding him with their advertisements and plausibly worded literature setting forth the economy, pleasure and the advantages of owning a machine. All this has so worked on his thought and imagination that unconsciously it has created a desire to have one. During this period of desire incubation, the lumberman has been silent. He has allowed the mind of the farmer to be swayed by others who are after the money the farmer has to spend. This is the answer to one side of the question and shows why he has lost out.

What the Retailer Must Do

The other side is a plain indication of what he should and must do if he would reap the full benefit of this year's crops. He, too, must work upon and cultivate the mind of the farmer to the end that he may see and be convinced that he and his family need the things I have named more than the machine. He must be educated to see and understand that his wife and children are more to him than all his other possessions; that if he would have his wife contented he should provide her with the degree of room and conveniences for her work as he has for his own; that if he would have his boys and girls interested and satisfied with farm life and keep them from leaving home for the attractions and modern conveniences of living in a city he must provide them with the comforts of a modern dwelling and give them a chance to develop their social instincts as well. Moreover, make the farmer understand that the automobile is secondary to these considerations; that it is an auxiliary and a necessary part of the home attractions, but only a part, and not the whole thing, for the machine is but the connecting link between the attractive home and the social diversions of the town, and therefore, as I say, secondary in the living of a farm life.

There is no line of business but that is hot on the trail of the farmer's surplus. "As a man inclineth himself so is he," and these competitors of the lumbermen are all the while working on the inclinations of the farmer and directing them for their special benefit. The lumberman, therefore, must work upon and cultivate the farmer's mind and incline it in their interest as well. But some will ask, "How the dickens am I going to do all this together with my other work in the yard?" In times past this was reason enough to deter any dealer from attempting to do anything of the kind, but the real reason why most dealers don't attempt any educative advertising policy is because they lack both the will and the ability to do it effectively. Then again, they don't recognize the value and importance of it. Their principal idea is to sell lumber. An important feature of selling is creating in the mind of the party a desire for the particular thing you are trying to sell him. When this is done the sale is half made. Now apply this to what I have been talking about and you will understand that by stimulating the farmer to consider those things and creating in his mind the desire and determination to have them, the sale is already made in his mind and it is up to you to do the rest and make the contract between you and him and the contract also for the material. This is nothing new, for it is being done every day, and in some degree, by yourself. I am simply bringing out what a sale really is. Ordinarily, the making of a sale is selling to the customer what he has already made up his mind to buy. It is, of course, not to be expected that every dealer feels himself competent to create a desire for lumber before people themselves think they want it, but this is one of the essential features of modern merchandising. The idea can be carried out in a small town as well as in a large city, because all people are actuated by motives and desires of practically the same character.

It is not very comfortable riding around in the country calling on the farmers these winter days. You don't see as much of them as you do at other times in the year. Those bad roads and cold weather put an embargo on your social visiting. When they do come to town you see comparatively few of them. Both you and the farmers have more time in the winter for social intercourse, but you can't get at each other. You would like to talk with them about what they are thinking of building this coming year, but you have to wait till you see them. This was all very well years ago and was accepted as being in the natural order of town and country intercourse. But the old order of things has changed. The farmers are being "farmed" by your outside competition every month in the year. In fact, they choose the winter months for extra efforts to get in communication with them. They use this season as their seeding time for implanting the seeds of desire in the farmer's mind for what he would like to have. They have a salesman in every farm house in the country to stimulate this desire. Having nothing from their home dealers, the farmers allow this salesman to talk to them and it stands to reason they are influenced by it. You would be, too, if you were shut up in a farm house on a stormy winter day and had two or three catalogs and a lot of other attractive trade literature to read and pass the time. You can't help being influenced by what you read, and it is a curious thing that we form our opinions more by what we read than what we hear in other ways. This is an important fact for you and every other merchant to remember.

Use Your Local Papers

Now, to counteract the influence of this foreign salesman in the farmer's home this winter, you can use the same method if you will, and send out one of these paper salesmen every week, and let him be your agent for talking and telling the hundreds of farmers what you would say if you were talking personally with them. They know you, and they don't know the other fellow who lives at a distance of a day's travel on a limited train. The medium for doing this is right at your hand, never mind if you don't personally like the editor. His paper reaches and is read by hundreds of people you would like to visit and talk with. Let his paper act as a phonograph to tell folks what you want to say to them. Or, to use another figure of speech, let the paper act as a press drill to sow your business seed and informing knowledge of lumber and building matters. It would cost you time and money to travel around and call on these people you want to see. Why not pay for space in the paper and let the post office do the travelling to deliver your printer's ink salesman and agent?

If you feel unable to write yourself what you would like your paper saelsman to say, employ someone who knows how to do it, just as you hire a bookkeeper to do what you are deficient in. You always want an employe to be efficient in his work, why not, then, employ an expert that will get you up advertising matter and other information that will make people read it and thereby pay you for the investment? Most of you fellows are pretty fair salesmen or you wouldn't be holding your jobs. It's the way you have, and the way you talk, that makes you a aslesman. Now if you will transfer these selling qualities into written words, using practically the same language, you will have written a pretty good ad.

The great fault with most lumber dealers in the advertising is, they attempt to advertise their whole yard. This is a mistake, and an expensive one. Besides, it doesn't do what is wanted. The proper and most effective way to advertise is to confine it to one or two articles at a time and be sure they are seasonable, of course. Tell the public why you do it. Tell about where they come from, how they are made, how to use them, why they are best for the purpose. People will read an advertisement of this kind, because it tells them something in a personal way. If you want to advertise the whole yard, have a large photograph taken of it, and get several hundred copies printed, frame them and present them to your customers. Another good idea, too, when you sell a house bill get a picture of the house when completed, give a copy to the owner and retain one to hang up in your office, after a while you will have a good picture gallery of your prowess in bill selling. These little things cost a few dollars 'tis true, but thy help to keep you in the mind of the public,

"Everything in Canvas"

Contractors to the Army and Navy of the British Empire

DURING the past few years our manufacturing facilities have increased fourfold. The amalgamation of the Woods Company, with the Smart Bag Co. into which it is now known as Smart-Woods, Limited, offers for your approval the products of one of the strongest and most reliable manufacturing corporations in the whole of Canada.

AS a result of this amalgamation, not only have our manufacturing facilities been wonderfully increased, but we are now in a much better and greater position to offer you all lines previously stocked, as well as many others that come direct from our recently added factories.

In addition we may say, "Our foreign trade has increased by leaps and bounds—both European and American—and we are prepared to enter into competition in every civilized portion of the globe."

Smart-Woods' Special Surveyor's Tent. Write for Catalogue.

WE are now open for competition in every thing that is possible to be made out of canvas, as well as all lines of Lumbermen's and Contractor's Supplies, such as Blankets, Clothing, etc., etc., it being one of our greatest pleasures to quote prices at any time. Our wonderful large stocks of raw material and increased number of factories, (Ottawa, Toronto, Montreal, Winnipeg, Renfrew and Welland), enable the execution of largest orders on shortest possible notice.

Samples and quotations will be furnished at any time and every possible expediency rendered to hasten shipments as soon after ordering as possible.

Smart-Woods LIMITED

OTTAWA - MONTREAL
TORONTO - WINNIPEG

Jenckes Boilers

We make a Specialty of

Horizontal Tubular Boilers

for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

Sherbrooke Montreal Cobalt So. Porcupine St. Catharines Toronto Vancouver Nelson

and make you talked about, which is an important element in advertising.

If you can get people to come to you in consequence of this sort of advertising and sending out your paper salesman every week, as I have indicated in the foregoing, it will do much to eliminate the price competition you complain of, for you will be pretty sure to sell far more bills without it than you do by the old way of doing, and the extra profits obtained will more than reimburse you for the money cost of the methods I have suggested.

What Every Dealer Should Have

A valuable thing for every country dealer to have is a list of the names of every farmer in his territory, and as far outside of that as he may choose, designating whether resident owner or renter. For convenience of reference, I would advise using the index card system, and on each card you can note many valuable particulars such as, in whose name is the title of the farm, whether mortgaged or not, the number and kinds of buildings on the place, the credit character of owner or renter, the location of farm and sub-division of section, and any other particular that will be handy for referring to. It will also serve as a mailing list; which is something that is greatly needed in every lumber office. You can get some of this information from the public records at the county seat. It will take a little time to gather all this information and enter it on the cards, and the beginning of the year is a good time to start it. If you are too closely confined to the yard business, it will pay to hire someone who is not doing much this winter to canvass the territory for you. I had a list once of 2,500 names of farmers living in our county, and what do you think? I was fool enough to sell a copy of it to a dry goods concern in New York City. They offered me a good price and I fell for it. That was before we had heard anything about mail order houses and their ways of doing things. We have learned a whole lot since then, haven't we?

Finding the Year's Results

I presume this issue will reach most of you at a time when you will be too busy to read it, your whole atttention will be given up to the job of invoicing and figuring it out, and whether owner of the yard or manager, the great idea that will obsess your mind until it is finished is the amount of profits the results will show. The concrete interest of the owner is the amount it will add to his wealth. For the manager it means the degree of success that has attended his year's running of the yard. Doubtless he will also have a shade of expectation of getting a raise in salary if the results are good, but no matter whether he is justified in this or receives it he has the natural feeling of a good business man of wanting to know at least the fact of his having "made good" for the year. Even though a manager don't get a "raise" it is a satisfaction to know that he has done well for his employer. It acts as an encouragement also, and puts an edge on his determination to keep up his efforts and surpass them if he can for the coming year. The yard owner and his manager should be business associates with the same communion of interests for the promotion of the success of the business and, therefore, it is a part of wisdom for the owner to let his associate know that he has done well his share in the year's business. It should also be incumbent on the manager to show that he is worthy of this degree of confidence and refrain from taking advantage of it in any way. He who works for his salary only gets only his salary out of the business. But in working with his employer and taking the interest of a real business associate in the business he gets both pleasure and salary out of it. The reward for loyalty don't always come when we think it should. But sooner or later it surely comes.

C. H. KETRIDGE, in the Mississippi Valley Lumberman.

Always in Your Stable
Stops Bleeding

The wise horse owner will always have in his stable a supply of Douglas Egyptian Liniment. It is so easily and quickly applied and always proves a rapid cure for the many ailments of horses.

It is the only liniment on the market that **will stop bleeding at once.**

Free samples and literature mailed on request.

Douglas & Company
Napanee, Ont.

Liverpool Markets for Canadian Woods

Alfred Dobell & Company, Liverpool, Eng., in a report upon November trade in Canadian woods, say:—"Waney board and square pine—No change. Oak—There was only a limited consumption. Prices higher. Rock elm—Logs of large dimensions are in request, but small wood is neglected. Birch—Logs—The moderate arrivals, which were from St. John and Halifax, met a good demand at firm figures. Planks—The import was heavy. There was a good consumption at unchanged quotations. Pine deals and boards—An improved enquiry at higher figures. New Brunswick and Nova Scotia spruce deals—The import to the Mersey and Manchester was 670 standards more, while the consumption was 1690 standards less than for the corresponding period last year. The quantity going into consumption is governed by the restricted transport facilities. The combined stocks stand at 29,110 standards. Values are advancing.

Penobscot Operations Reduced

A despatch from Bangor, Me., says:—Indications are that the lumber cut on the east branch of the Penobscot River will be about one-third less than average this season, and will total close to 25,000,000 feet, and including a few small independent operations. Last year, the total drive from the Penobscot east branch was about 41,800,000 ft.

The Eastern Manufacturing Company, which formerly cut 20,000,000 feet or more on these waters, is cutting none this season. Last year, this concern cut only about 3,500,000 there.

On the upper waters around Chamberlain Lake, C. Murphy & Son, of Old Town, have an operation which will turn out about 3,000,000 feet, and at Grand Lake, Moses Wadleigh, of Old Town, is cutting between 3,000,000 and 4,000,000 feet. Lower down on the branch at Seboois stream, E. G. Bryson, of Houlton, has an operation of about 5,000,000 feet. Paul Gagnon is cutting about 2,000,000 feet in the same section. Between Seboois stream and Grindstone and on Seboois stream, about 12,000,000 feet are being taken out by the Jordan Lumber Company, of Old Town, and the Barker Lumber Company, of Milford.

Much pulpwood is being cut on the east branch waters by the Lincoln Pulpwood Company. This is in four-foot lengths and will come along after the drive in the spring.

Great Britain's November Imports

Great Britain's imports of wood goods from Canada during November 1915 and 1914 amounted to the following totals in quantity and value:—

	Quantity.		Value.	
	November 1915.	November 1914.	November 1915.	November 1914.
Wood (sawn or split fir) ..	79,650	79,459	380,614	267,930
Wood (hewn)	1,428	969	13,800	8,857
Wood (sawn or split, planed or dressed)	5,110	4,611	25,948	17,989

The Mountain Lumber Manufacturers' Association has transmitted to the Hon. W. R. Ross a copy of a resolution passed at the recent joint meeting held at Calgary between the lumber manufacturers of Western Canada and the Western Lumber Retailers' Association. With reference to the market extension work carried on by the department, the meeting resolved: "That the people of the West owe a debt of gratitude to the officials of the Forestry Department of British Columbia for their efforts in inaugurating more effective and modern methods of assisting the farmers of the West to give preference to Canadian products, and rendering more efficient the service between producers and consumers."

HIGH QUALITY FOOD

is essential to the working energy of your lumber jacks. It is our pride that all products leaving our mills are inspected to see that only the highest quality is shipped.

Tillson's Rolled Oats
Rainbow Flour—Top Patent Manitoba.
Goldie's Star—Famous Blended Flour.
Lily Flour—For Pies and Pastry.
Split Peas, Pot Barley and White Beans,
Bran, Shorts and Western Feed Oats.

GUARANTEED ABSOLUTELY PURE

Canadian Cereal and Flour Mills Co., Ltd.

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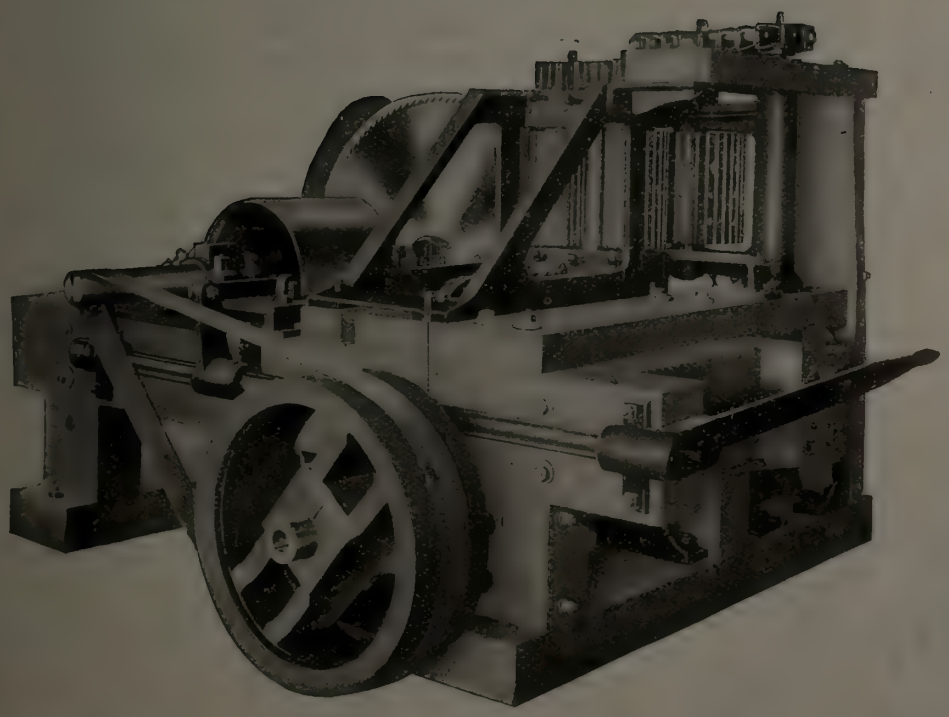
McLennan's Slab Re-Saw



Our slab re-saw has a capacity of 15 to 25 thousand in ten hours from slabs 1, 2 and 3 inches thick. It will take slabs 8½ inches thick. The driving pulley is 16 inches x 14 inches and the saw 36 or 38 inches, 10 gauge. The floor space required is 7 feet x 9 feet. Speed 1,200.

This machine is a money-maker for any saw mill.

We also make gang edgers, shingle machines, lath machines, bolters, sleeper machines and sleeper barkers. etc.

Write us for literature

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Campbellton, N. B.

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WHOLESALE LUMBER
SANS-DIEU-RIEN
MONTREAL - Canada
Head Office at Montreal.

SPRUCE rough or dressed

1" No. 2 and Better Birch, 1914 cut
also Basswood, Hemlock and Pine

Saw Mills at MONT LAURIER.
Dressing Mills at ST. JEROME.

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LUMBER and LATH

EXCELLENT PLANING MILL FACILITIES

Special Attention Given to Prompt Delivery

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Limited
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Pine, Spruce
Hemlock
Hardwoods, Lath

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Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
Eastern Townships Bank Building, MONTREAL, Quebec

EDGINGS

Ontario

Nathan Calder, Listowel, Ont., will erect a planing mill at a cost of $5,000.

The city of Ottawa will call for tenders about the end of January for the supply of plank and cedar for 1916. The mayor of Ottawa is N. D. Porter, and the city engineer is F. C. Askwith.

The Mettagami Pulp & Paper Company, which had intended to erect a large pulp and paper mill at Smooth Rock Falls, Ont., have decided to let the plan remain undeveloped until the money markets become more favorable.

The Canada Cement Company, Limited, have been granted supplementary letters patent by the Dominion Government to carry on, among other things, the business of manufacturing and dealing in logs, timber, lumber, pulpwood and the products of the forest generally.

The Upper Ottawa Improvement Company, Limited, has filed plans with the public works department at Ottawa for new works to be constructed during the coming season. Piers and booms will be placed in the river at Culbute, Culbute Chenail, Rocher Fendu and Reid Island, in Chichester, Waltham, Allumette, Calumet, and Clarendon townships in Quebec Province, and at Westmeath, Ross and Horton, Ont.

The Wood Products Company, Limited, have been granted a Dominion charter with capital stock of $100,000 and head office at Toronto. The company is given wide powers, including the destructive distillation of wood, the manufacture of charcoal, wood alcohol, etc., and to carry on business as timber and wood growers, to build and operate pulp and paper mills and to manufacture and sell pulp and paper. Toronto capitalists are behind this enterprise.

The Canadian Western Timber & Fuel Company, Limited, has secured an Ontario charter. The head office of the company is at Fort Frances, Ont., and the provisional directors are P. P. Elliott, and L. Delany, lumbermen, and A. D. George, promoter. The company is authorized, among other things, to carry on business as timber merchants and sawmill proprietors. It will probably take over the various contracts and timber operations of P. P. Elliott. The capital stock of the company is $40,000.

H. Richards, lumber manufacturer, Dacre, Ont., whose mill and yards were recently destroyed by fire reports that he lost 1,175,000 feet of lumber, 750,000 shingles and his sawmill, shingle mill, planing and lath mill. The loss amounted to about $40,000, and he carried no insurance. He has started to rebuild and expects to be operating by the first of May. The new mill will cost about $5,000. It is to be operated by water power. Dacre, Ont., is in Renfrew County, about six miles from Caldwell's Station on the G. T. R., and is served by rural mail delivery at Hyndford, Ont.

Eastern Canada

The General Lumber Company, Limited, has been incorporated with head office at Montreal, P. Q.

The Violette Lumber Company, Ste. Flavie, P. Q., has under construction a mill to manufacture lumber, lath and shingles.

The planing mill and woodworking plant at Riverside, N. B., formerly belonging to Capt. Edmond Kinnie, has been sold to Hall Lea, of Moncton, N. B. Mr. Lea is moving the plant to Moncton.

None of the tenders for the purchase of the estate of Richer & Freres, sash and door manufacturers, of Montreal, has been accepted, all being too low. Fresh tenders will be asked in about a month.

A co-partnership has been formed between F. C. Coburn and E. M. Coburn under the name of F. C. Coburn & Son, to carry on business as manufacturers of lumber. The head office of the company is at Ripples, N. B.

A co-partnership has been formed between Louis Malenfant and Alfred Malenfant under the name of L. & A. Malenfant, to carry on business as manufacturers and dealers in lumber. The head office of the company is at Arsenault Siding, N. B.

The St. Maurice Paper Company, Limited, has been incorporated with head office at Montreal, P. Q., and capital stock of $10,000,000, to carry on business as manufacturers of wood, pulp and paper, etc., in all its branches. Those interested are A. Chase-Casgrain, E. M. McDougall, and P. F. Casgrain, all of Montreal.

J. Lewis & Sons, Limited, Stewiacke, N. S., who were recently incorporated, are taking over the business formerly conducted under the name of J. Lewis & Sons. No changes are being made in the control or objects of the company. They are manufacturers of wood shanks and machine pegwood and have factories at Stewiacke, N. S., Lewiston, N. S., and Brownville, Maine.

The Chicoutimi Pulp Company are applying to the Quebec Legislature

for the right to erect sluices and dams for storing water in Lake Kenogami and the lakes and streams emptying therein, so as to regularize the course of the Chicoutimi and Aux Sables Rivers. They are also applying for the right to sell, under an approved tariff, to persons who will require the same, the water thus accumulated.

Western Canada

The B. C. Timber & Trading Company, Vancouver, has been registered as a partnership, the members being E. Aiekin and R. R. Mackie.

The Comox Logging & Railway Company are operating full crews in their camps and are considering the opening of a new camp at the beginning of February.

The Cantelon and Cameron Lumber Company has been registered as a partnership at Vancouver, B. C. The members are David Cantelon and James M. Cameron.

Murray Brothers, Limited, have been incorporated with head office at Vancouver, B. C., and capital stock of $10,000, to carry on business as general lumbermen, including the buying and selling and manufacturing of lumber.

The Western Canada Lime Company, Limited, has been incorporated with head office at New Westminster, B. C., and capital stock of $100,000, to carry on, among other things, the business of manufacturers of wood in all its branches and to operate sawmill, shingle mill, box factory and barrel factory.

The Thurston Flavelle Lumber Company, Port Moody, B. C., are overhauling their mill. Two new extra boilers, two new slab conveyors, a new "hog" for cutting fuel and a new eight resaw are being installed. Besides these additions 1,000 feet of new piping are being installed in each of the five kilns.

Negotiations are under way for reorganizing the Canadian Puget Sound Lumber Company, Limited, Victoria, B. C. It is hoped that these will lead finally to the reopening of the company's plant at Rock Bay, although such an event is not considered likely until lumber markets have improved considerably and the tonnage scarcity has been relieved.

The Brooks-McVickers' shingle mill located at the head of Bessel's spur near Rand, B. C., will close down permanently about the middle of February. The plant will then be moved to Rosedale above Chilliwack, B. C., and will be enlarged. A logging railroad will be built at Rosedale. The firm has two years cutting in sight. The company will also establish a mill at Newport on the P. G. E., where it holds six timber limits. Mr. Charboneau, one of the members of the firm, reports that the demand for shingles from the Prairie provinces is excellent.

The Iowa Lumber Company, Sapperton, B. C., have leased the plant of the Port Hammond Lumber Company at Hammond, B. C., and will operate it for two years in the manufacture of spruce and cedar lumber and shingles. It is possible that subsequently the lessees may decide to purchase the mill. It is expected that the production will be about 50,000 feet per day. From 40 to 50 men will be employed. The president of the Iowa Lumber Company is Mr. C. J. Leyland, London, England. Other officers are N. R. Whittall, manager; E. Lafontaine, secretary-treasurer, and Frank S. Greene, sales agent.

St. Louis Hoo-Hoo Hold Large Concatenation

An important gathering of Hoo-Hoo was held at St. Louis, Mo., on December 30th, when about ninety members of the Order attended a concatenation and dinner. The Snark of the Universe, Julius Seidel, acted as toast master. A number of presents were made to various members of Hoo-Hoo who attended the dinner, the first and most important being an ink well holding a gallon of ink, and a pen about two feet long, together with a book of records 18 in. x 24 in., which were presented to secretary-treasurer Mr. E. D. Tennant. The meaning of this gift was symbolical, indicating that a new era in Hoo-Hoo had arrived which was to be recorded upon the clean white sheets of the new book of records.

The veteran Ottawa lumberman, Mr. J. R. Booth, has caused the piling, ready for burning at a safe time, of inflammable debris on a narrow strip of his limits parallel to a portion of the Canadian Northern Ontario Railway, east of North Bay. This progressive action in connection with forest fire prevention will materially reduce the fire hazard to valuable timber lands in the vicinity. Similar action by other limit-holders would undoubtedly be a paying investment.

There has lately been a material improvement in lumber shipping facilities from Pacific Northwest ports. The firm of Charles R. McCormick & Co. has completed a vessel with a capacity of 2,000,000 feet to put in the trade between the Pacific coast and European ports. Another vessel of practically the same capacity had been ordered. The vessels will be four-mast and have semi-Deisel auxiliaries.

PINE and SPRUCE

Dressed as Required, Spruce and Pine—1914-15 cut

Merchantable 1 x 4 x 10/13
Merchantable 1 x 5 x 10/13
Merchantable 1 x 6 x 10/13
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all can be P. 1 or 2 S. and matched.

V Joint or Novelty Siding. Approximately 60 to 75 per cent. 12/13 ft.

Roofing P 2 S & Matched—1915 cut.

1 in. x 4 in. up x 8/13. Approximately 60% 12 and 13 ft.

First Quality and Clear Spruce

1 x 4 in. up x 6/13—'15 cut.

Cull Spruce—1915 cut

3 in. x 4 in. up x 10/13 3 in. x 9 in. x 10/13

2,000,000 pcs. Mill Run Spruce Lath 4 ft. x 1⅜ x ⅜—'15 cut.

Write to-day!

Blair & Rolland, Limited

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SHELL BOX STOCK

White and Red Pine, Spruce

Hemlock, Birch, Maple

Railway Ties, Fence Posts, Etc.

Prompt shipment. Satisfactory stock. Good service. Write for Prices

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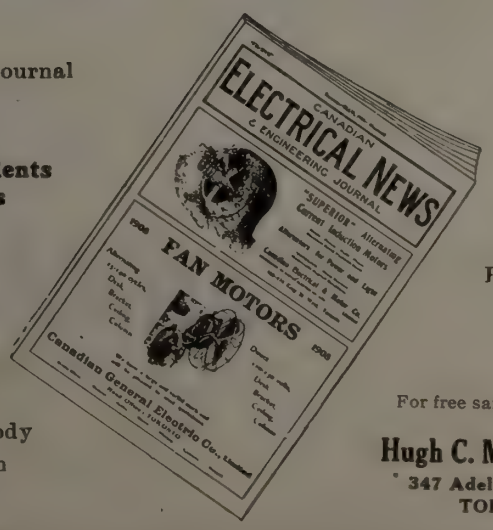

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Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

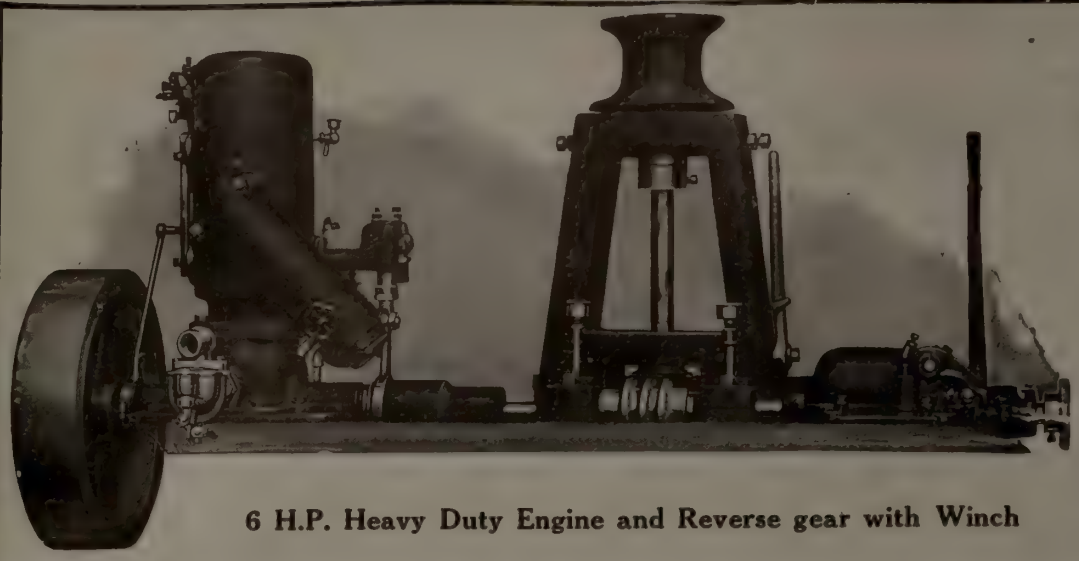
Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Deputy Minister.

Department of the Interior, Ottawa,
December 20th, 1912.



6 H.P. Heavy Duty Engine and Reverse gear with Winch

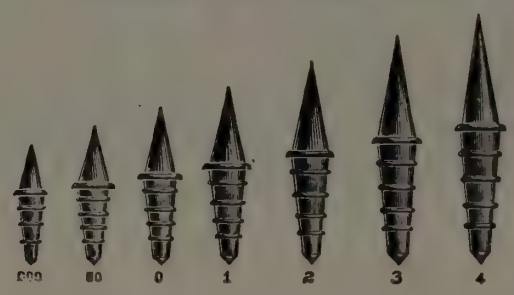
River Driving Costs

will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

Adams Launch & Engine Co.
Penetang, Ont.

Boot Calks

Made in Canada



Made from Best Refined Tool Steel, Forged and Oil Tempered.

Quality Absolutely Guaranteed.

Thirty in Ball and Five in Heel are the Numbers usually required.

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Montreal

Camp Horses Thrive on Caldwell's Molasses Meal

Get a bag of Caldwell's Molasses Meal, follow the directions for feeding which are attached—and watch your horses improve. You will see them improve in appearance, health and strength.

Camp Horses thrive on Caldwell's Molasses Meal because they obtain the full nutritive value of all the food they are fed.

Caldwell's Molasses Meal is not expensive. It sells at a low price and replaces costly veterinary stimulants and remedies. Write for prices.

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We manufacture all kinds of lumber tools. Light and Durable.

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Type "F" Range from 26" to 54". Price—from $110 to $170

National Oats

Clean Western Oats, in bulk or in strong, well sewn bags; especially suited for Camp Use.

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Morgan Machine Company

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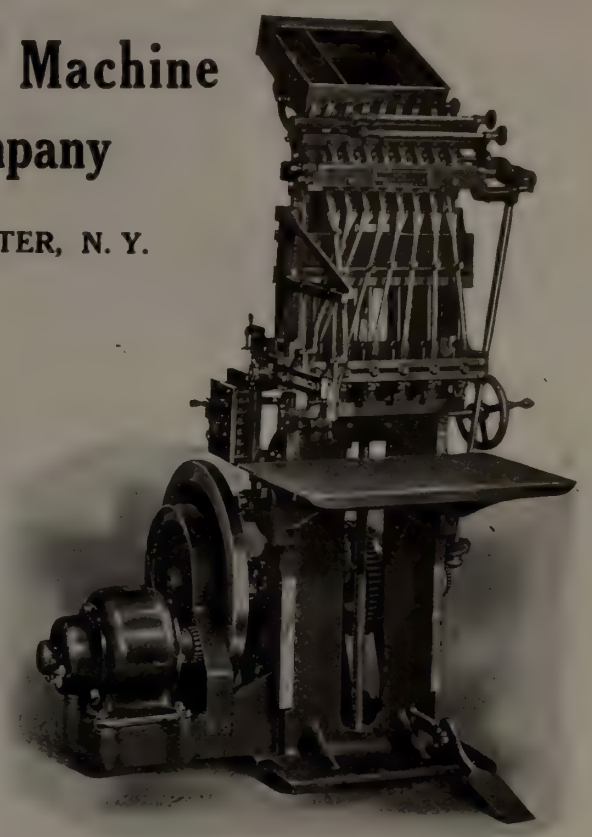

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Lock Corner Box Machinery,

Box Board Matchers,

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Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the Morgan Machine Company for latest developments in machinery for the Box Industry.

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128,350 Laths

In Ten Hours

Our Lath-Mill and Bolter have made a test cut in ten hours of 128,350 four foot laths, 1½ in. by ⅜ in., counted, tied and piled.

We also make a full line of Lath-Mill and Picket-Mill Machinery, for mills, both large and small.

A Few of the "400" who use Payette's Lath-Machinery:

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Victoria Harbor Lumber Co., Victoria Harbor, Ont.
Georgian Bay Lumber Co., Waubaushene, Ont.
Colonial Lumber Co., Pembroke, Ont.
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Wm. Milne & Sons, North Bay, Ont.
C. Beck Mfg. Co., Penetanguishene, Ont.
Manley Chew, Esq., Midland, Ont.
Chew Bros., Midland, Ont.
James Playfair Co., Midland, Ont.

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Engineers and Machinists *PENETANGUISHENE, ONT.*

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"Wilson Bros." Flooring and Trim

"Wilson Bros." stamped on every piece of this flooring stands for Quality. Look for the name. Hardwood and Pine. **Interior Finish of All Kinds.** Also Hardwood Veneer Doors to detail. We are equipped to fill large or small orders on short notice. Write us for prices.

Wilson Bros., Limited - Collingwood, Ont.

When You Overhaul Your Mill

THERE are wet places in every saw and pulp mill where nothing but the highest class belting can "make good". It is for these wet places that we recommend what most mill-men swear by—our

"ACME WATERPROOF" BELT

This belt is especially made for a rough and trying service. It has less stretch than any other belt by 15 to 25 per cent.

When you are overhauling try a Goodhue "Acme Waterproof" belt. Other Goodhue belts are "Extra" and "Standard."

Prices and Particulars on Request.

J. L. Goodhue & Company, Limited

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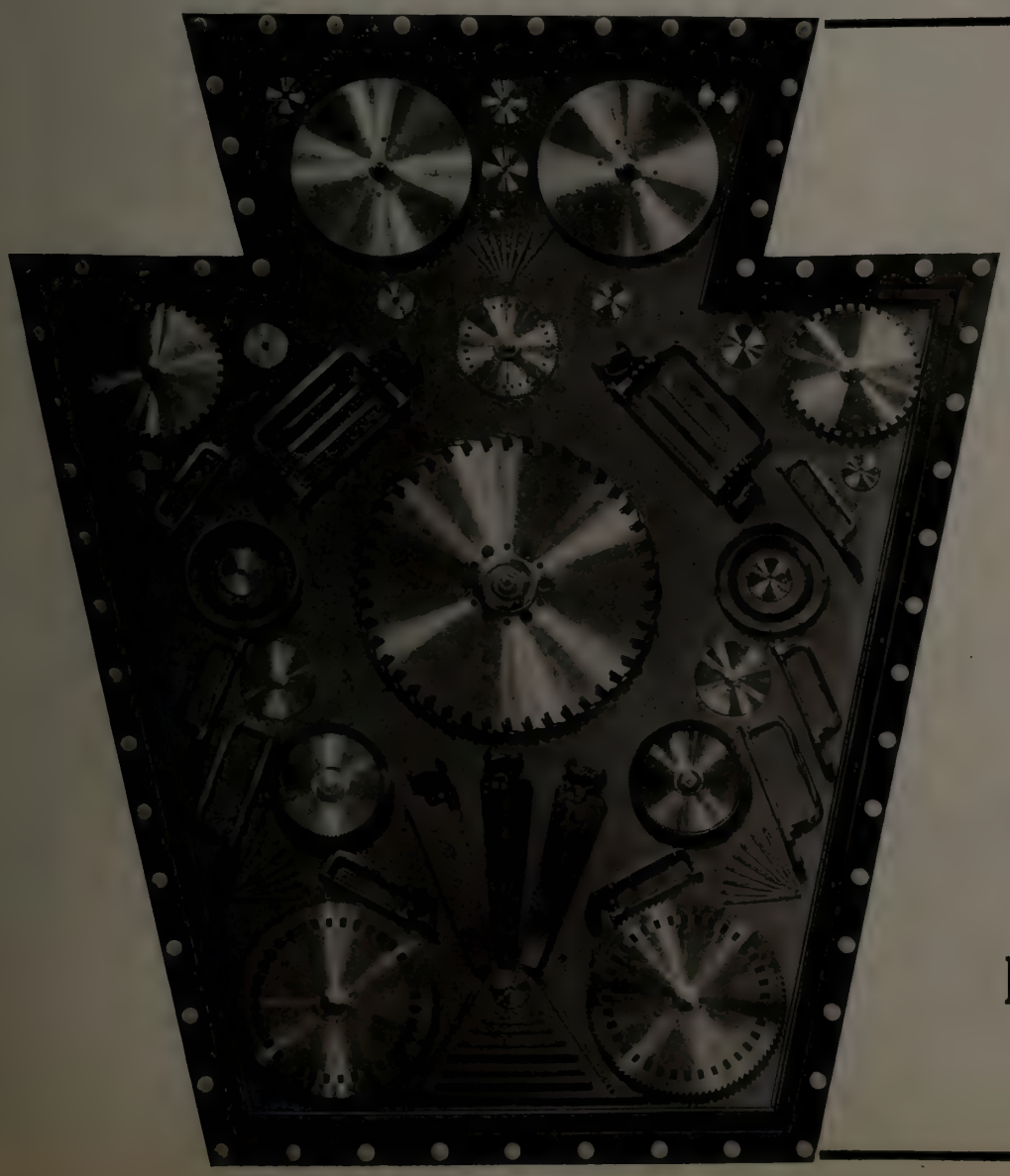
Winnipeg Agents: Bisset & Webb, Limited, 151 Notre Dame Ave. East
Vancouver Agents: Fleck Bros., Limited, 1142 Homer St., Vancouver, B. C.



Keystone No. 7

DISSTON Exhibit

Panama Pacific International Exposition

Highest Award

Saws, Tools, Files

Henry Disston & Sons, Limited
2 Fraser Ave.
Toronto, Ont., Can.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing ..	27 00	29 00
1 x 8 common and dressing ..	27 00	29 00
1 x 10 common and dressing..	31 00	32 00
1 x 12 common and dressing..	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common.	25 00	26 00
1 x 12 inch box and common..		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and c. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ...		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8-in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft. ...		16 00
2 x 4 to 12, 10 and 16 ft.		19 00
2 x 4 to 12-in., 12 and 14 ft. ...		19 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		31 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16, 16x18, 18x18, 20x20, up to 32 ft.		32 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.		32 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x20 up to 32 ft.		33 00
10x20, up to 32 ft.		33 50
6x18, 8x18, up to 32 ft.		34 00
6x20, 8x20, up to 32 ft.		35 00

Timber in lengths over 32 feet take the following additions: 33 to 35 ft., 50c; 36 to 40 ft., $1; 41 to 45 ft., $3; 46 to 50 ft., $5; 51 to 55 ft., $7; 56 to 60 ft., $9; 61 to 65 ft., $12.50; 66 to 70 ft., $15; 71 to 75 ft., $18; 76 to 80 ft., $22.

Fir flooring, edge grain		35 00
No. 1 and 2 cedar 1-in. Fir rough		38 00
No. 1 and 2 clear 1¼, 1½ and 2-in. Fir rough		40 00
1½-in. No. 1 4-ft. pine lath..		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 25
XXX 6 butts to 2-in.		2 90
XXXX 6 to 23-16-in.		3 10
XXXXX		3 35

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1sts and 2nds, 4/4	39 00
Birch, No. 1 com. and bet., 4/4	30 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00
Birch, 1sts and 2nds, 10/4 and 12/4..	45 00
Birch, 1sts and 2nds, 16/4	50 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4..	30 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet...	28 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	28 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1sts and 2nds, 4/4	37 00
Hard maple, common and better, 4/ .	28 00
Hard maple, 12/4 & 16/4, 1sts and 2nds.	46 00
Red oak, plain 1sts and 2nds, 4/4..	59 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	65 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain, 1sts and 2nds, 4/4.	59 00
White oak, plain, 1sts and 2nds, 1½ and 2-in.	65 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	75 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	85 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	88 00
White oak, ¼ cut No. 1 common	55 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up $52 00		54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No.. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ..	29 00	30 00
Pine, No. 1 dressing shorts ..	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ..	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips ..	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips ..	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips ..	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	25 00	26 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in..	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	17 50	18 00
1"x3" to 6", 12'-16'	19 00	20 00
Pine mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine mill culls stock 1 x 12 ...	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	15 00	17 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1¼-in.	19 00	21 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
Mill culls, white pine, 1"x7" and up	20 00	21 00
Mill run Spruce:		
1"x4" and up, 6'-11'	17 00	18 00
1"x4" and up, 12'-16'	18 00	20 00
1"x9"-10" and up, 12'-16' ..	22 00	24 00
1½"x7" 8-9" and up, 12'-16'	22 00	24 00
1¼"x10" and up, 12'-16'	22 00	24 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1¼-in. x 4-ft.	4 25	4 50
No. 2 White Pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
White Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	70	75
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Quebec Spruce Deals		
12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	17 00	18 00
Boards, 1 and 2 in.	16 00	18 00
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in. $54 00	
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00
Cuts and Better	
4/4 x 8 and up No. 1 and better	55 00
6/4 x 8 and up No. 1 and better	65 00
8/4 x 8 and up No. 1 and better	65 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00
No. 1 Cuts	
1 in., 8 in. and up wide	42 00
1¼ in., 8-in. and up wide	55 00
1½ in., 8-in. and up wide	57 00
2 in., 8-in. and up wide	60 00
2½ and 3 and 8-in. and up wide	75 00
4 in., 8-in. and up wide	85 00
No. 2 Cuts	
1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	47 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00
No. 3 Cuts	
1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00
Common and Dressing Mill Run	
1-in. x 4-in.	25 00
1 in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00
No. 1 Barn	
1 inch	31 00 45 00
1¼, 1½ and 2-in.	36 00 45 00
2½ and 3-in.	45 00
4 inch	50 00
No. 2 Barn	
1 inch	28 00 36 00
1¼, 1½ and 2-in.	30 00 36 00
2½ and 3-in.	38 00
No. 3 Barn	
1 inch	21 00 28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00 25 00
Box	
No. 1, 1, 1¼, 1½, 2-in.	22 00 25 00
No. 2, 1¼, 1½, 2-in.	19 00 23 00
Mill Culls	
Mill run culls, 1-in.	19 00
1, 1¼, 1½ and 2-in.	20 00
No. 2	17 00 18 00
Lath	
No. 1, 32-in. pine	1 75
No. 2, 48-in. pine	4 25
No. 1, 48-in. pine	4 75
No. 3, 48-in. pine	3 75

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1 E. 6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8	14 00	17 00	20 50	18 50
2 x 10	18 00	18 50	21 50	19 00
2 x 12	18 00	19 00	23 50	20 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	18 50
2 x 4-10-18-20	20 50
2 x 6, 8 to 16	18 50
2 x 8, 8 to 16	18 50
2x4-6 and 8-in.; 24,26,28, 30, 32 ft...	26 50
2 x 10 and 2 x 12; 8-16 ft.	23 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	25 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	27 50
No. 1 Common Boards	
4 inch	19 00
6 inch	21 50
8, 10, 12 inch	23 50
Mixed widths	22 50
Flooring	
4 or 6 inch No. 1	33 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00
Shiplap—Finished	
8 inch	20 00
8, 10 and 12 inch	21 00
Siding	
8 inch No. 1	33 00
6 inch No. 2	31 00
6 inch No. 3	21 50
Lath	
No. 1 Cedar, pine, spruce (not mixed)	4 00
No. 1 Cedar, pine, spruce (mixed) ...	3 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	25 10
3 x 8 in.; 8 to 16 ft.	22 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	25 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	27 00

BRITISH COLUMBIA COAST FIR

Dimension S 1 S, and E.

2 x 4 in.; 6 and 8 ft.	17 50
2 x 4 in.; 12 x 14 ft.	18 50
2 x 4 in.; 10 x 16 ft.	19 50
2 x 4 in.; 18 x 20 ft.	20 50
2 x 4 in.; 22 x 24 ft.	21 50
2 x 4 in.; 26 x 32 ft.	23 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	20 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	22 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	23 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	25 00
2 x 14 in.; 10 to 16 ft.	25 00
2 x 14 in.; 18 and 20 ft.	27 00
2 x 14 in.; 22 and 24 ft.	28 00
2 x 14 in.; 26 to 32 ft.	30 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	21 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	22 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	23 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	24 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	26 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft. ...	24 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ...	24 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ...	25 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ...	25 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	32 00
Nos. 1 and 2, 1 x 4 in., E. G.	31 00
Nos. 1 and 2, 1 x 6 in., E. G.	29 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	23 00
No. 3, 1 x 4 in. or 6 in.	20 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	19 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ...	20 00
No. 2 Shiplap, 6 in.	19 00
No. 2 Shiplap, 8, 10 and 12 in.	20 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	19 00
Common Boards, 8 to 12 in.	20 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 75

LATH

Fir lath, 3/8 x 1 3/8 in. x 4 ft., bundled in 50's	4 00
Cedar lath 3/8 x 1 3/8 in. x 4 ft.	4 50

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4 ....$94 00	
Uppers 5/4 to 8/4	92 00
Uppers 10/4 to 12/4	97 00
Selects 4/4	84 00
Selects 5/4 to 8/4	82 00
Selects 10/4 to 12/4	92 00
Fine common 4/4	61 00
Fine Common 5/4	65 00
Fine common 6/4	65 00
Fine common 8/4	67 00
No. 1 Cuts 4/4	51 00
No. 1 Cuts 5/4	57 00
No. 1 Cuts 6/4	59 00
No. 1 Cuts 8/4	61 00
No. 2 Cuts 4/4	32 00
No. 2 Cuts 5/4	43 00
No. 2 Cuts 6/4	45 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	33 00
No. 3 Cuts 6/4	34 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	46 00
Dressing 5/4 x 10	51 00
Dressing 5/4 x 12	52 00
No. 1 Moulding 5/4	58 00
No. 1 Moulding 6/4	58 00

(Continued on page 59)

National Trucks

The production of Motor Trucks by the National Steel Car Co., Limited, is a logical development of the resources of the Company.

More than a year ago the National Steel Car Co., Limited, commenced to use its resources and facilities in the designing and manufacturing of Motor Trucks, its progressive steps being directed by careful study and analysis under laboratory conditions, supplemented by service tests of exceptional severity.

In announcing the National Motor Truck we confidently state that it will give a service that will be one of utmost satisfaction.

WRITE FOR CATALOGUE

It is a matter of the greatest importance to the purchaser that he should know that he can depend upon the guarantee of the manufacturer as well as upon the future service he will receive from the Truck Maker, no matter where the truck may be in use.

Details of the specifications and the service which goes with every National Truck gladly sent upon request. Address enquiries to Hamilton Office.

National Steel Car Co., Limited

Operating Offices and Works: HAMILTON, CANADA

MONTREAL OFFICES: Shaughnessy Bldg. Foreign Offices: London, Eng., Paris, France

CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	58 00
No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	29 - 31	19 - 21	13 - 15
5/4 to 8/4	32 - 34	21 - 23	13 - 14
10/4 to 16/4	36 - 38	26 - 28	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	34 - 36	22 - 24	16 - 18
5/4 and up	36 - 38	24 - 26	16 - 18

SOFT ELM

4/4	34 - 36	23 - 25	14 - 16
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	32 - 34	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	44 - 46	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	60 - 62	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in.	92 00	98 00
Selects, 1 to 2 inch	80 00	88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	70 00	72 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	36 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 00	34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	28 00	29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		23 50
Spruce, 8 in. and under dimen.		26 00
10 and 12 in. random lengths, 10 ft. and up	25 00	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	22 50
All other random lengths, 7-in. and under, 10 ft. and up	21 00	23 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	20 00	21 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	21 00	22
1½-in. spruce laths	4 10	4 20
1½-in. spruce laths	3 55	3 75

New Brunswick Cedar Shingles

Extras	3 30	3 40
Clears	2 75	2 90
Second clears	2 40	2 60
Clear whites	2 25	2 30
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.	3 45	3 50
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfection, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in. extra red clear		3 30

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are operating successfully in lumber mills and wood-working establishments all over the world.

Their universal adoption is due to mechanical superiorities which enable them to operate without trouble or shut-down and with practically no attention.

The bearings are large and generous—with oil ring lubrication. The reservoir needs filling only once every few weeks. Individual nozzle control makes it possible to turn off any desired number of nozzles when operating at light loads. This gives good economy. These sets have no ball-bearings to rust or crack.

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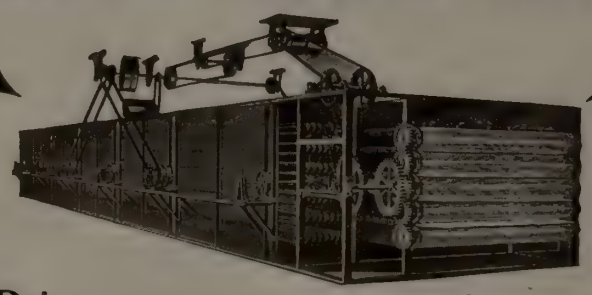

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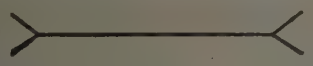
This Trademark  *on every link.*

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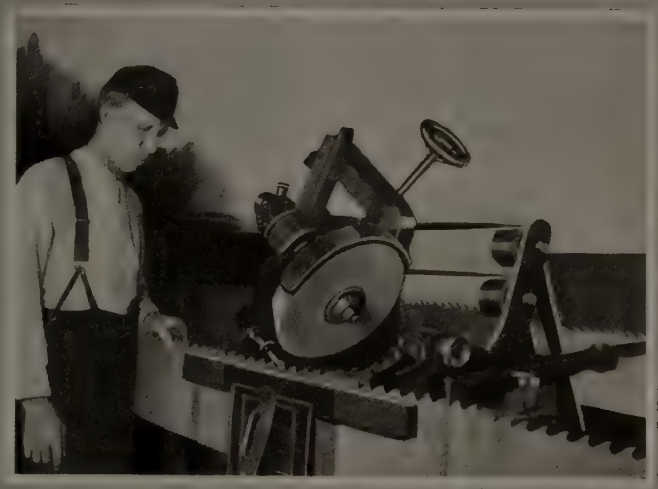

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(Continued on page 64)

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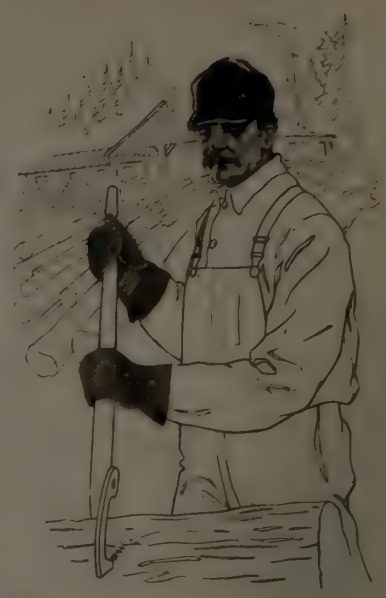

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Fraser Limited
Fraser-Bryson Lumber Company
Gillies Bros.
Grant & Campbell
Mackarell & Company, Thos.
Mason, Gordon & Company
New Ontario Colonization Company
Quebec & St. Maurice Industrial Co.
Rideau Lumber Company
Spencer, C. A.
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Smart-Turner Machine Co.

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Lacey & Company, Jas. D.
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Sewall, James W.

TIMBER CRUISERS
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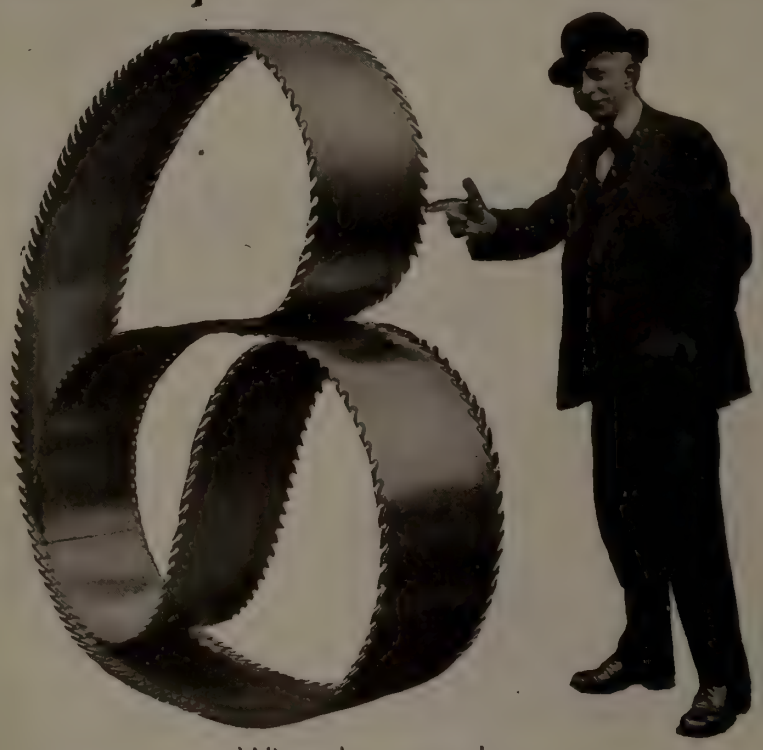
That's why they are called



The Saw with a Smile

One of our big mills reported a cut, on Dec. 6th, of over one million feet in twenty-two hours. ***They smiled.*** So will ***you***—when you use them.

You have probably promised yourself to try ATKINS SAWS sometime. Well—***now*** is the time.

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When he sees his ATKINS STERLING STEEL SAW

MADE IN CANADA

E. C. ATKINS & COMPANY

Makers of Sterling Saws

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NOW

Clothing

Shoes

Silk Hose and

Breakfast-food

are among the commercial by-products of wood. About one-fourth of the tree goes into lumber. The values in the remaining three-fourths are not known.

Ten Years from Now

Lumber may be the by-product of our forests. The economic changes in utilization developed by the meat packing industry will be paralleled with wood.

SCIENCE is discovering new values,
ECONOMICS is eliminating waste,
GOOD BUSINESS is solving the problem of utilization.

Stumpage, bought with discrimination, continues safe, stable, profitable. The present offers investment opportunities that may never be repeated.

James D. Lacey & Co.

Timberland Factors Since 1880

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Bull Wheel

s adaptable to various conditions. In-
for different styles of chain.

hauled in by chain or cable and being returned by gravity. This rig can be made in any desired proportions or combination of parts. We have several sizes.

In No. 1 the drum shaft is 2-7/16 in. diameter with iron friction 42 in. x 8 in. and drum 5 in. in diameter, 42 in. between flanges. The driving shaft is 1-15/16 in. diameter with paper friction 8 in. diameter by 8½ in. face. There is an eccentric or rocker bearing provided with this shaft, and a standard pillow or post box for the opposite end where the drive pulley is located.

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Vancouver:—
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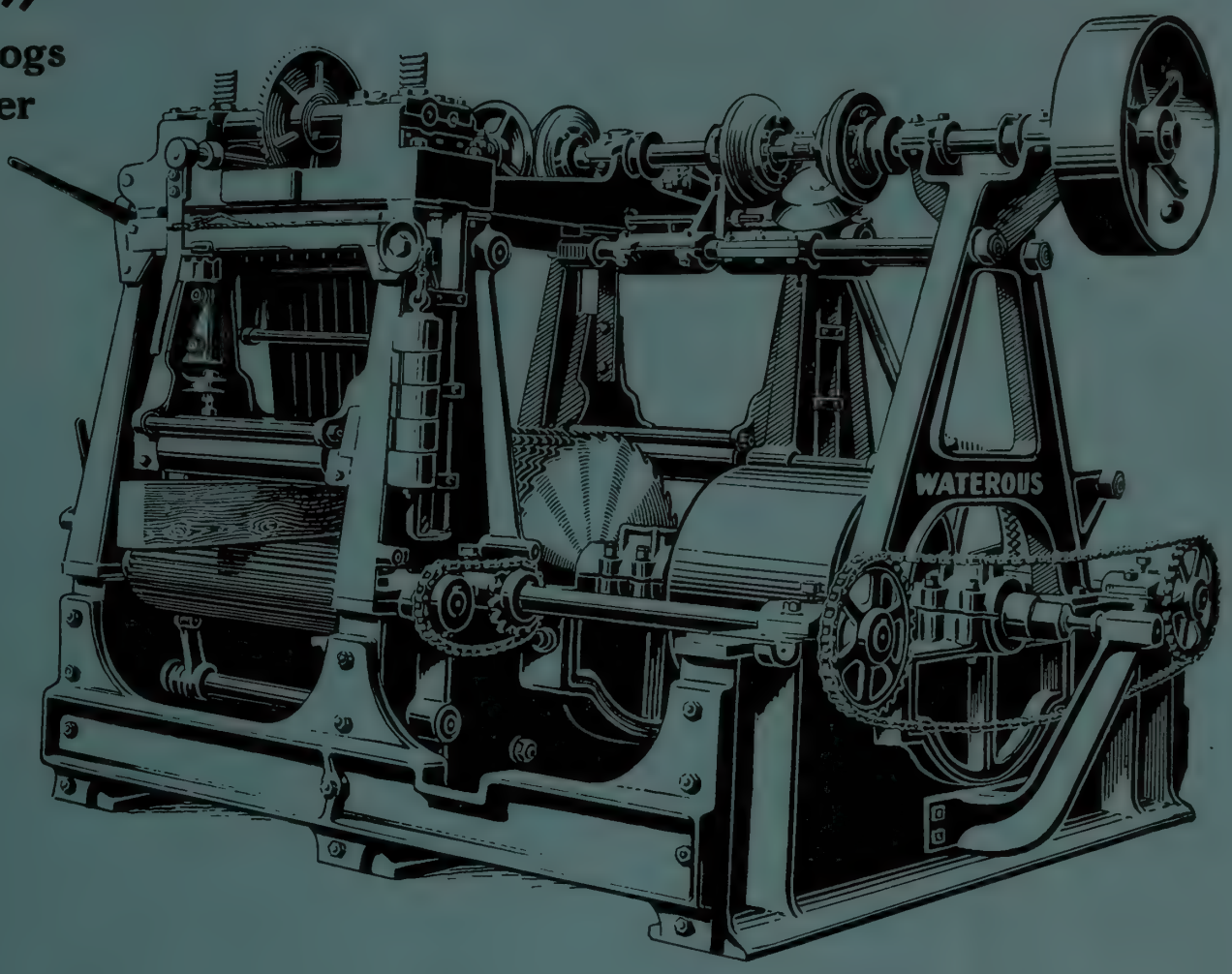
Cut Those Small Logs Into Perfect Lumber Economically—



With The "1916 Model" Kendall Circular Gang

The Kendall Circular Gang meets the demand for a machine to turn small logs into merchantable lumber economically—*profitably*.

Having an enormous capacity as compared to the Band Saw or Circular, this machine, by reducing the time of handling small logs, keeps up mill production and keeps down costs.

The Kendall Circular Gang takes cants from 4 in. to 12 in. thick, and at the rate of 2500 to 3000 a day turns them into lumber, perfect in finish and cut evenly from end to end.

Other Gangs will cut lumber fast, but none of them can equal the Kendall on *quality* of lumber sawn.

The "1916 Model" machine is the latest development in the Kendall patents. New features that mean increase in capacity, increase in cutting quality, greater safety and convenience, have been added.

Let us show you why it will reduce lumber sawing costs for you.

A Letter

"We have sawn as many as 2,500 logs in 10 hours, and if we could keep the Gang running without any stops or delays we could run 3,000 through it in 10 hours. But taking into account delays, changing saws, etc., we can easily saw over 2,000 cants per day. We run five logs per minute, which is about 65 to 75 feet feed per minute. It does not make any difference what sized cant we run, the feed is the same. We run 11-in. cants when our saws are full size and only 10-in. after the saws are worn down too much to take 11-in. cants.

We have been well satisfied with our Circular Gang and would certainly advise any person requiring a machine which puts out a lot of lumber, to install one. This Gang does not only cut up a lot of lumber, but it cuts it even from end to end without any variation in thickness, which no Band Saw will do, neither any Circular Saw."

(Name on request)

The Waterous Engine Works Co., Limited

Brantford, Canada

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Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

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We don't want to merely tell you it's the best chain made—we want you to prove it to yourself.

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Highest quality

Boving Hydraulic & Engineering Co.
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We also specialize
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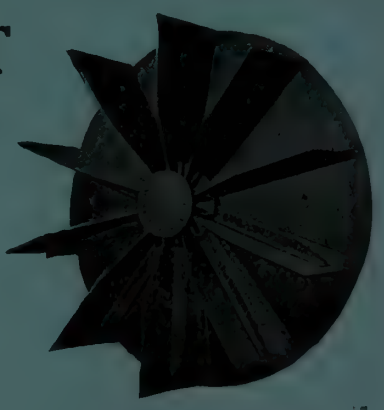

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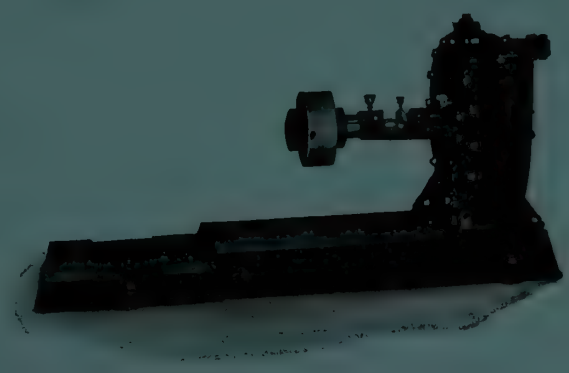

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against expensive delays caused by breakdowns.

A Reliable Pump

as built by

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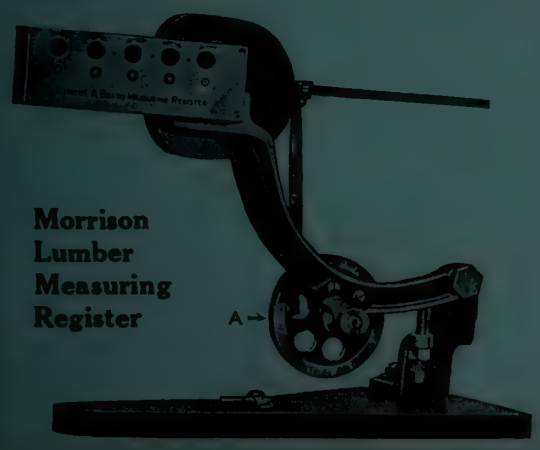

Morrison Lumber Measuring Register

Measure Every Stick in the Order

Too much lumber in a definite order will hurt your profits while too little may damage your reputation. Equip your machines with Morrison Lumber Measuring Registers and have an accurate count, either in board or lineal feet, of every stick of lumber in every order you turn out.

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Reducing Pressure Valves
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Then why harness them with belting which cannot begin to do them justice?

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Dressing done on short notice. ***Send us your inquiries.***

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

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1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited,

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We offer especially at this time

200,000′ 4 x 4″ 10/16 Choice Mill Run White Pine $24.00
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The above combined would make good 4 x 5 blocks at a reasonable cost

200,000′	4 x 5″ 10/16	Mill Run	Spruce	45,000′	5 4 x 7″ 10/16	Mill Run Spruce
40,000′	4 x 5″ 10/16	"	White Pine (small logs)	50,000′	2 x 5″ 10/16	" "
30,000′	5/4 x 4″ 10/16	"	Spruce	35,000′	2 x 6″ 10/16	" "
75,000′	5/4 x 5″ 10/16	"	"	15,000′	2 x 7″ 10/16	" "
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Our guarantee of faultless workmanship and choice materials goes with every door.

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50,000 2 x 8 Red and Jack Pine
25,000 2 x 10 Red and Jack Pine

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50,000 1 x 4 and up No. 1 Spruce
40,000 2 x 4 and up No. 1 Spruce
45,000 2 x 6 and up No. 1 Spruce
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60,000 1 x 4 and up No. 1 Mill Culls

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HOCKEN'S HEMLOCK

You will have no difficulty in securing your share of trade if you sell such excellent stock as Hocken's Hemlock.

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As All Other Concerns Combined

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Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

Our salaried salesmen receive credit for mail orders. Try us.

LOUISIANA RED CYPRESS COMPANY

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Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

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In Powder Form

Klim is pure—cheaper than fresh liquid milk. One-third the cost of condensed milk. No freights on useless water—keeps in any temperature—no waste.
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We are at all times in the market for dry White Pine all grades and sizes, also will Contract for your this Season's Cut.

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Large Stocks on Hand

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White Pine, Norway, Yellow Pine, Hemlock
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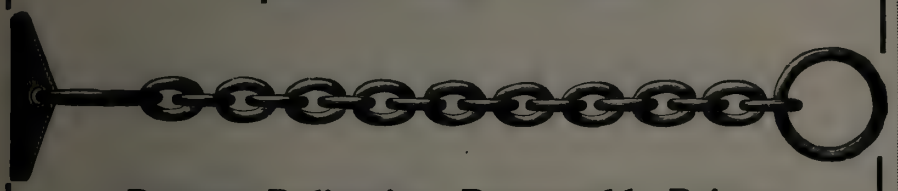

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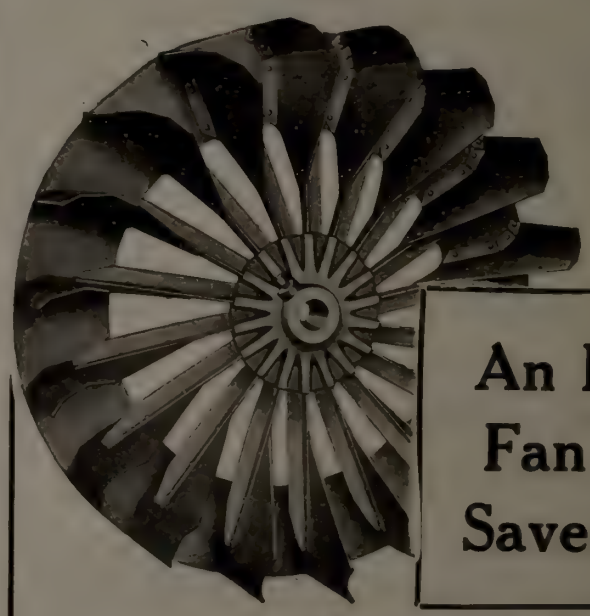

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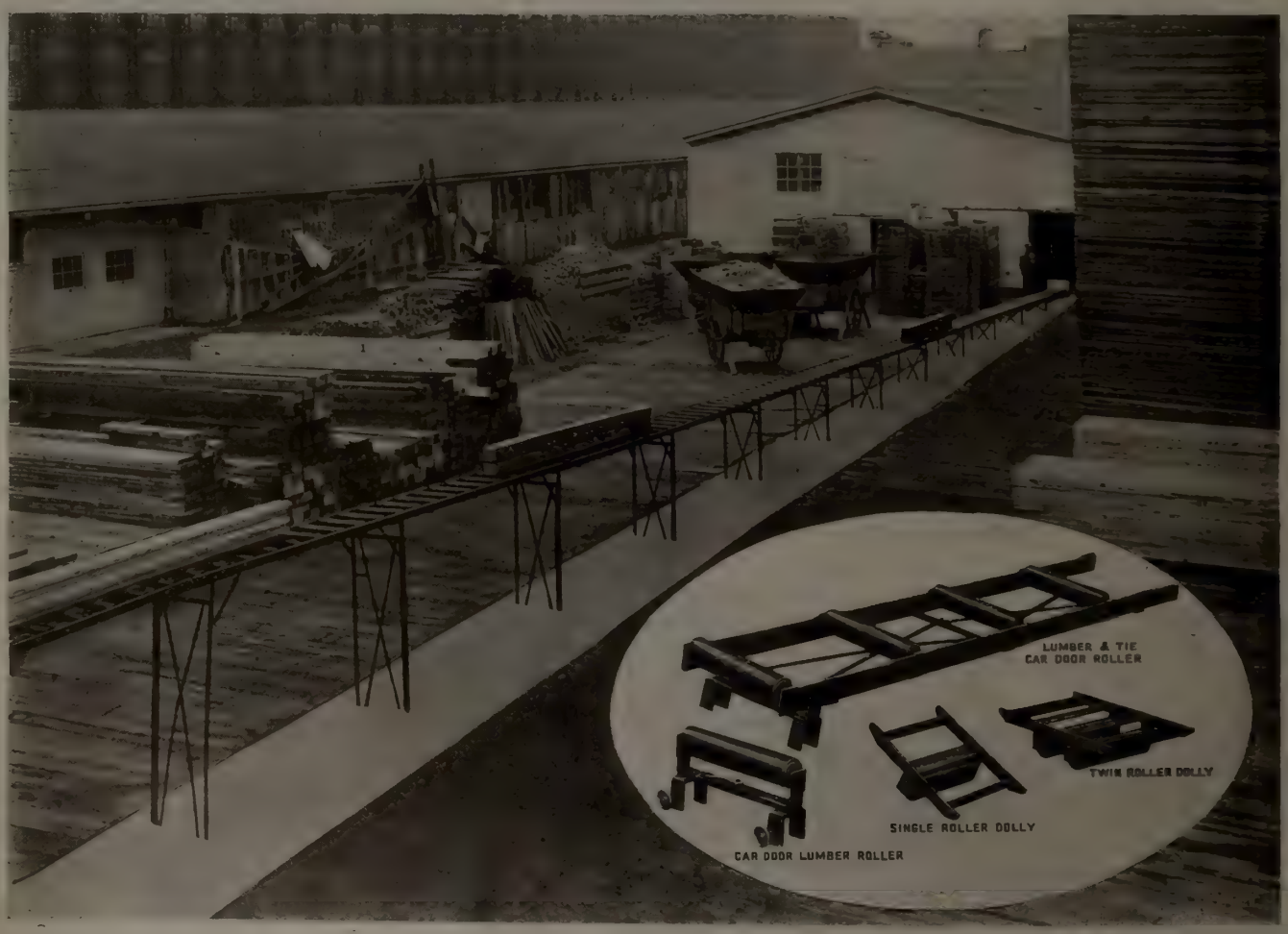

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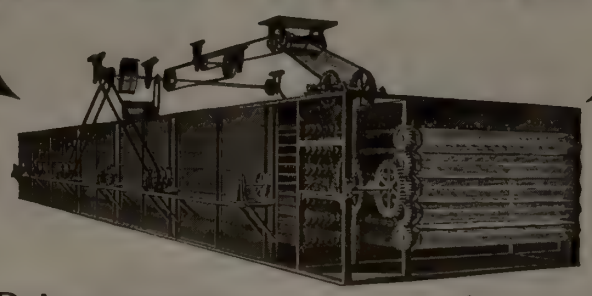

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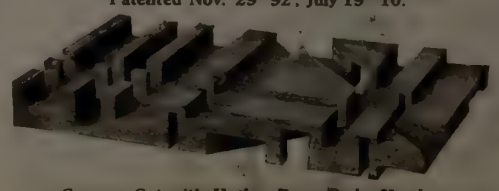

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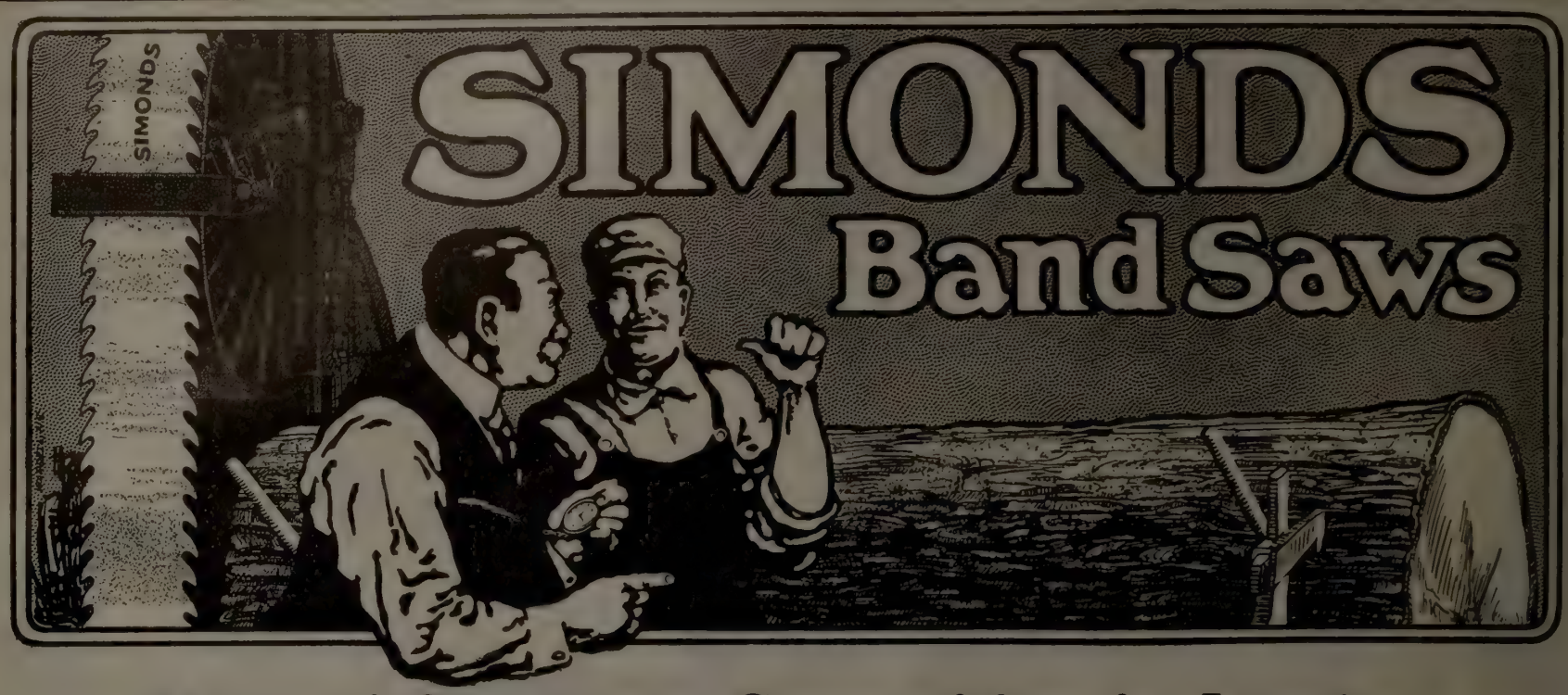

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Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster General for Canada, for transmission as second class matter.

Entered as second class matter July 18th, 1914, at the Postoffice at Buffalo, N.Y., under the Act of Congress of March 3, 1879.

Vol. 36 Toronto, February 1, 1916 No. 3

Has Sir Robert Borden Missed His Chance of Being a Great Man?

Do we understand from Sir Robert Borden's attitude in the House that he refuses to hold an investigation into the charges that have been made in connection with the letting of Canadian munition contracts?

If he knows that the charges are false, would one not expect he would jump at the chance of clearing the reputation of his friends? What is the inference if he refuses?

If he persists in sidestepping the issue we believe Sir Robert has missed the chance of a lifetime to show himself a really big man. Will he prove to be what men are saying of him to-day, or will he measure up to the standard of his opportunities?

The Attorney General seeks to draw a herring across the trail in placing responsibility on the British Government. That's not the issue. The Canadian people want to know whether the men holding executive positions have conducted themselves as becomes appointees of a party holding a great public trust, in accord with the honor of citizens of our great Empire and in the best interests of the efficient conduct of our war.

The original Shell Committee undoubtedly deserves credit for the despatch with which they placed orders among manufacturers, who were naturally shy of accepting the responsibilities of big and uncertain capital expenditures. But what conceivable excuse is there for refusing these same manufacturers further orders—even to the extent of turning down an offer to furnish **at cost?**

Before the public press became aware of the existing conditions, rumors of what was transpiring reached this paper, and we felt it was our duty to bring certain matters to the attention of our readers. Under the caption "In the Public Eye" we have touched upon, possibly, no more than ten per cent. of the information that has reached us, much of which at the present time is unprintable. It has been our endeavor to cover only such points as would further the common cause, and interfere as little as possible with our national military operations.

As we expected, even in this we have found the path of the pioneer proverbially unpaved. We have the satisfaction, however, of having started a protest that is now being taken up by the independent press even of the Conservative party, and that is ringing from coast to coast among our citizens of influence and power who love honor and efficiency more than money or party. We have the satisfaction of hundreds of friendly assurances that our course has been right, and believe we are backed by thousands more who have read and silently approve our stand. The final results will prove that our course has been absolutely justified.

And now, let us get along with our share in this big war. We have placed ourselves on record, and for the present will let matters rest there. No matter how badly we are led, Canada is in it to our last man, our last dollar, and to our last shirt.

Government Refuses Shell Committee Investigation

The people of Canada have been given a nasty dose to swallow by the Dominion Government in connection with the course to be followed by the Government regarding the operations of the defunct Shell Committee, which was in fact the Department of Militia and the Minister of Militia. We take it for granted that most of our readers are acquainted with the events that occurred at Ottawa during the debate upon the speech from the Throne. Some people may not have followed the situation closely and we will briefly outline it. So serious were the charges made in regard to irregularities in the work of the Shell Committee which were discussed throughout the whole of Canada before Parliament opened, that the Hon. Wm. Pugsley, of St. John, N. B., discussed them at some length during the debate upon the speech from the Throne and concluded by asking the Government to have the situation investigated by the Canadian Parliament. The Government's attitude in regard to the situation was announced by the Solicitor General, Hon. Arthur Meighen, who sought to reduce the matter to the level of party politics, declaring that the Hon. Dr. Pugsley had made "the most bitterly partisan speech since the war began," and that there was "less foundation in fact for it than for any speech ever made in Parliament." The Solicitor General announced that the Government would not hold an investigation. The reasons he gave were that the Shell Committee was answerable only to the Imperial authorities, that contracts were given to Liberals and Conservatives alike, and that the Liberal Government which was in power at the time of the South African war had then refused an investigation of purchases in Canada for the Imperial Government.

The people of Canada will not support a Government in this stand. If the Government persists in its course it can at best only postpone the day of reckoning. We feel satisfied that Liberal and Conservative members of Parliament alike—if they are animated by the same spirit that animates those other Canadians who have gone to the front—could face this matter out, during an investigation, with a determination to rout out the evils and make the future work of the Government in furnishing munitions a much simpler and quicker business. The present is a time for confidence in one another and co-operation towards the one supreme purpose of winning the war. It is no time for accusing one another of partisanship.

Our own leanings have been strongly towards the party which is at present in power, but we are firmly convinced that they have made a false step in refusing an investigation. It is no use saying that an investigation may be held later on under "proper conditions and at a proper time." The chief object of an investigation is to clear the tracks and make better work possible. By delaying the investigation until the war is over no good will be done in this direction. The only benefit to be secured by the present Government would be the doubtful one of transforming the matter into a purely political one. The honest, fearless, straightforward and reasonable course to adopt is to face the situation boldly to-day, hold the investigation, make it absolutely thorough, and then have done with it. Nothing else will persuade those who have enquired privately into some of the features of the situation, that there has not been much grafting and favoritism.

Nothing else will clear the Government of the suspicion that it is taking shelter under a paltry subterfuge and is waiting purposely until time has mellowed the harshness of some of the charges and has made it possible for them to handle the whole affair on a political basis.

Of the reasons given by the Solicitor General for refusing an investigation, all but one are of a political nature. This one alone concerns the Canada Lumberman and its readers, namely, the assertion that for the speech made by Hon. Dr. Pugsley, there was "less foundation in fact than for any speech ever made in Parliament." If this is the case let the Government cause an investigation to be held. The less foundation there is for the charges the quicker the air will be cleared by an investigation. But there is foundation, and plenty of it, and if the present Government will not order an investigation, it must know, from its acquaintance with Canadian history, that an investigation will be forced upon it and that the consequences will be more disastrous to them the longer it is delayed. We believe that the present Government, by taking a straightforward course, would come out of this ugly situation better than in any other way, and that the whole matter could be cleared up, greatly to the improvement of our ability to assist Great Britain and the allies.

The shell box feature of the situation, though to some extent a minor one, seems to us to demand an investigation on its own face. As the Government wishes the people to believe that less foundation for demanding an investigation exists in this matter than in connection with any investigation ever asked for in the Canadian Parliament, we think it well to repeat the essential points in connection with the cases which we have reported in previous issues of the Canada Lumberman, all of which have to do only with shell box contracts granted by the late Shell Committee.

In our first reference to this subject we complained of firms such as the Deakin Construction Company and the Cedars Construction Company of Montreal securing contracts for the production of shell boxes. Such firms and many others who have received contracts were not equipped for the production of boxes and had either to buy or secure control of woodworking plants. At the same time we received letters from all parts of the country sent us by woodworking firms with modern and extensive idle equipment, who were unable to obtain contracts. Many of these firms told us that in reply to their applications for contracts they could only receive short letters, or none at all, from the Shell Committee, advising them that all contracts had been let. At the same time contracts were being continually given to the favored ones.

A case which we reported in our issue of December 1st was a typical one. A man who was in the specialty business in a western Ontario town, got a contract for 25,000 boxes. He had no plant, he had the shooks manufactured for him by another party. He nailed the shooks together, delivered them to the Shell Committee and claims to have made a profit of $5,000. In the first place this man had wanted a contract for manufacturing a part of the shell. He was turned down at first, but subsequently was given a contract for shell boxes.

In our issue of December 15th we referred to a case at Niagara Falls, Ont. A shipping clerk in the Dominion Suspender and Necktie Company at that place, who had no experience in the woodworking business, secured a contract for the production of shell boxes. He had no plant, but erected a small one, bought some machinery and made the boxes. Subsequently he received another contract for a large quantity of boxes, although other firms in the same town and elsewhere throughout Ontario were being told that, for the time being, there were no new contracts to be given.

In our issue of January 15th we reported a case at Fenelon Falls, Ont., located in the constituency represented by the Minister of Militia. In this case we were informed that C. W. Burgoyne secured a contract for 5,000 shell boxes. Burgoyne is in partnership with his father in a general store business. He made over the contract to Alfred Tiers, of Fenelon Falls, who conducts a planing mill business there. Subsequently a partnership was formed between C. W. Burgoyne and Tiers under the name of C. W. Burgoyne and Company, and this firm secured another contract for 25,000 boxes.

We have not sought to dig up these stories. They have come to us unasked, from lumbermen and woodworkers in many parts of the country. We have not had the time to search for the evidence in more than a few cases, but each case that we have enquired into has been a clear one of a contract being improperly let. There have been no blind trails so far. We have heard of many other cases which we have not followed up, because our time is occupied too fully in other directions. We have little doubt, however, that other cases we have heard of would be shown, by an investigation, to be equally improper.

None of these stories have been contradicted. The Government must know that contradiction is impossible. In the face of this and of many worse charges which have been made regarding the letting of contracts for shells, the Government tells us that there is less foundation for a demand for an investigation than there ever was in connection with any similar demand made in Parliament.

We think we have gone quite far enough in our disclosures regarding shell box contracts to show that **there is ample ground for a thorough investigation.** The Government wants the public to think otherwise, and has made up its mind to stave off the investigation if possible. Our disclosures have been so thorough and definite that it would be futile to try to reinforce them with others. We mean to leave the matter alone for the time being, but so soon as the Government becomes aware of its bounden duty in regard to this matter we will be ready to go into the matter as much further as necessary.

Canadian Firms Likely to Get Portable House Trade

The Canadian Timber Products Association recently received, through the Department of Trade and Commerce, a communication from Mr. Philippe Roy, General Commissioner for Canada, Paris, France, stating that the French Government has authorized him to make enquiries into the possibility of obtaining a large number of shelter houses in Canada, to be used in the devastated portions of France which have been recovered from the enemy. The communication states that if the houses can be turned out at a suitable price the French Government will place an initial order for a very large quantity and that further orders are likely to follow.

Working upon this enquiry the Canadian Timber Products Association has appointed a committee to consult with architects, and already have, in conjunction with Mr. John M. Lyle, who represents the French National Relief Society at Toronto, made very definite progress towards the preparation of plans for a couple of houses of different design. Each of these houses is to contain three rooms, two being bed rooms and one a kitchen and dining room. Mr. Lyle is now completing the plans and as soon as they are in shape, one of the members of the Canadian Timber Products Association will have one sample of each house built. The Canadian Government has promised, through Sir Geo. E. Foster, Minister of Trade and Commerce, that in connection with this business it will guarantee that transportation facilities will be available.

The other propositions previously taken up by the Canadian Timber Products Association, relating to the donation of a number of houses by Canadian lumbermen, woodworkers, and the Government, is for the time being in abeyance. The Ontario woodworking firms represented in the Canadian Timber Products Association have given definite undertakings to do their share in this work and when the other provinces have been heard from the matter is likely to be brought to completion.

French Government Makes Large Enquiry

Montreal, January 24th; (Special to the Canada Lumberman):—The Hudson Bay Company, Montreal, purchasing agents in Canada of the French Government, have sent out enquiries for the following lumber, totalling 71,459,000 feet, together with windows and doors:

2,800,000 ft. B.M. 2 x 6 x 12/16 spruce, Nos. 2 and 3.
4,950,000 ft. B.M. 4 x 4 x 12/16 spruce, Nos. 2 and 3, D4S.
1,320,000 ft. B.M. 4 x 6 x 12/16 spruce, Nos. 2 and 3, D4S.
5,449,000 ft. B.M. 1 x 8 x 10/16 Shiplap.
12,650,000 ft. B.M. 1 x 6 Clapboards.
10,620,000 ft. B.M. 1 x 5 Clapboards.
560,000 ft. B.M. 1 x 8 x 14 D4S.
3,740,000 ft. B.M. 2 x 8 x 14 D2S and 1 Edge.
3,100,000 ft. B.M. 2 x 8 x 12/16 D2S and 1 Edge.
7,550,000 ft. B.M. 2 x 5 to 8 in. D1S T. and G.
6,480,000 ft. B.M. Furrins 1 x 1 x 12 D4S.
12,240,000 ft. B.M. 1/4 Round 7/8 x 7/8.
40,000 Windows, 3 ft. x 4 ft. 9 in. Sash frame and casing complete, 6 lights.
20,000 Doors, 3 ft. 9 in. x 7 ft. all complete, frame and casing.

The lumber is to be spruce, hemlock or red pine.

Lumber Trade Conditions During 1915

A Year Dominated By the War—Sluggish at the Outset—Lively at the End —Tonnage Problem Unsolved

The history of the year 1915 so far as the lumber trade of Canada is concerned was dominated and controlled almost entirely by the war situation. At the beginning of the year, trade was very slow. The country had scarcely been able to get its bearings, from a commercial and industrial point of view, during the five months which had elapsed since the opening of the war. Lumber producers were in a quandry regarding their woods operations. Banks had discouraged extensive cutting of timber and numbers of the smaller operators were thus kept out of the ranks of the producers. Firms that were in a position to finance their own operations, however, in many cases foresaw that before many months the war would create an abnormal demand for all kinds of timber and for a great many products of wood. They therefore, in many cases, went into the woods on a fairly extensive scale. They were of course justified by events later in the year.

Confidence Revived

For the first few months of the year lumber trade conditions were unquestionably slow. Shortly after the opening of spring, however, there appeared to be a revival of confidence which spread throughout Canada. The improvement was due almost entirely to the great quantity of money coming into Canada in payment for munitions of war and military supplies required by the Allied Governments. This condition continued until the fall and by that time the amount of money put into circulation throughout Canada had created a much better industrial situation. With the arrival of fall there was added to the improvement caused by war orders a greatly increased feeling of confidence resulting from the abnormal crops which were then assured to Canada.

In the beginning of the year, prices of lumber and timber were very low and they continued so for some months. The improvement which commenced in the spring was gradual and slight until the middle of the fall. Then there came a great wave of optimism flowing out of the conditions above referred to and prices commenced to rise rapidly. Those lines of lumber which were in special demand for military purposes, and especially the lines used for the production of shell boxes led in the advance. Chief among these were spruce and hardwoods, particularly birch. These lines became so scarce on account of the shell box consumption that substitution of other lines became necessary and the price improvement then became more general.

Throughout the year the market for pine has been quiet. Today there is a feeling that pine prices will improve. This is expected as a result of the removal of the competition of yellow pine. Yellow pine at the beginning of the year, was, like every other line of lumber experiencing a very quiet market. On account of the large producing capacity of the south and the comparatively short ocean voyage between the southern shipping ports and Great Britain and France the allies turned first of all to that source of supply and flooded it in the late summer and early fall with such abnormal orders that the price of yellow pine commenced to soar. Prices, however, were not being considered by the allies. What they wanted was material and when they found the production of the south was not sufficient for their imperative wants they went to the markets of the Pacific Coast. They are today purchasing enormous quantities on that coast, and trade in the United States has therefore felt the stimulus of the war demand from east to west.

Spruce Benefiting from Export Demand

In Eastern Canada, following upon the rise in the price of yellow pine, it is expected that white pine may soon be in fair demand. So far as eastern Canada is concerned, however, the export business during the past year has been to a very great extent confined to spruce and birch. Spruce, being a cheaper wood than pine and nearer the ports of shipment has been purchased in great quantities. The difficulty in securing supplies of timber and lumber from the customary sources in Europe has also been a strong factor in directing the demand towards spruce from Eastern Canada. In connection with the export situation one of the most important features during the past year has been the great scarcity of tonnage. If it had been possible to secure sufficient tonnage there is no doubt that every stick of suitable spruce in Eastern Canada would have been shipped to Great Britain and Europe during 1915. As it is, by one means or another the shipments have been heavy, showing a considerable increase over 1914.

An interesting factor in this situation has been the reappearance of sailing vessels in the Trans-Atlantic trade. Many years ago these vessels were forced out of the trans-Atlantic business by steam vessels and they had been confined to the coasting trade. When so many steam vessels were commandeered by the Government for military transport purposes, the sailing vessels again took a hand in the trans-Atlantic trade and they have been the means of relieving the situation to a very great extent. At present, the outlook in connection with ocean tonnage is absolutely dark. The probabilities are that we shall have to struggle along throughout 1916 as we have durng 1915 and that relief can only be expected with the end of the war. A few indications of an encouraging nature have appeared such as a report that the British Government has given the ship building companies permission to take on work in the construction of merchant vessels. To how great an extent this will be done, however, and how soon it can bring about any relief are matters of very great uncertainty.

In connection with the British Columbia export trade a very encouraging feature has recently been developed with the assistance of the British Columbia government. A plan is now being worked out for the construction of a considerable number of four-masted schooners with auxiliary Deisel engine equipment, having a capacity of from two to three million feet of lumber each. We understand that the initial intention is to construct about 30 of these vessels, and more at a later date as conditions warrant. These would assist British Columbia greatly in the marketing of her export stocks, and would enable the coast mills to devote their attention almost exclusively to the export trade, thus removing their competition from the prairie province trade and leaving it more completely in the hands of the mountain mills.

Effect of Panama Canal Blockade

In this connection it is important to note the situation regarding the Panama canal. This important connection between the Pacific and the Atlantic has been blocked for some months by land slides and up to date we have no definite assurance as to how soon it will again be opened for traffic. This has been a great blow to the B. C. lumber export trade. Large orders for export to Great Britain were received and others were expected. These have been delayed and it is questionable whether they can now be carried out. Only with the final opening of the canal will B. C. be able to compete successfully in the markets of Great Britain and Europe, and also in the markets of the Eastern States. During the short time the Panama Canal was open to traffic British Columbia had made remarkable advance in establishing its products in the markets of the Eastern States. It is certain that the renewal of traffic by this route will make British Columbia lumber and timber one of the most important factors in the eastern markets.

In the local markets throughout Canada, the year 1915 was a quiet one, with a fair amount of improvement during the last few months in the eastern parts of Canada and greater improvement in the west. The local trade situation in Eastern Canada, however, is not encouraging. Building operations almost ceased during 1915, particularly in the large cities. In the country districts a fair amount of building followed the harvesting of the large crops. The beneficial effect of the big crops was felt to the greatest extent in the prairies and British Columbia. Prairie farmers had been struggling along for several years without improving their buildings or adding to their equipment for the production of stock and implements. 1915 crops were so great that the farmers found themselves obliged to do a large amount of building. The railroad companies were not able to remove more than a small percentage of the crop before weather conditions made it necessary to give the balance protection. This situation was foreseen at an early date. Many granaries were constructed and barns and implement sheds were put up, all being constructed almost entirely of lumber. Moreover, the farmers, as soon as they commenced to receive returns for their grain began to improve their dwellings or to build new ones. The prairie farmers have lived, to a great extent, during the past in a class of buildings notable more for giving shelter and sleeping accomodation than for comforts or luxuries. They are now, in many cases, putting up buildings of quite an expensive class and the indications are that during 1916 the demand from the prairies will continue good. Throughout Western Canada, in fact, the result of 1915 trade is most encouraging and the people of western Canada are all optimistic regarding the outlook for 1916.

Ontario Production Decreased in 1915

A Drop of Over 74,000,000 Feet as Compared with 1914—Lath Output Slightly Greater—Shingle Production Smaller

The production of lumber in the Georgian Bay and Northern Ontario districts during 1915 showed a decrease of 74,885,663 feet b. m. as compared with the production during 1914. The total production for 1915, as shown by reports to the Canada Lumberman, amounted to 725,526,840 feet. The 1914 production shown by the same reports amounted to 800,412,503 feet b. m. This decrease was due in a large measure to the fact that when operators were going into the woods in the fall of 1914 the war situation was such that nearly everyone was in the dark regarding the trade outlook for 1915. Moreover the banks were discouraging operations and those who operated on a large scale were ones who were able to finance their undertakings extensively by themselves.

The production of lath in Ontario according to the same reports amounted during 1915 to 252,154,530 pieces as compared with 246,877,250 pieces during 1914. The shingle production was 41,233,750 pieces during 1915 as compared with 43,993,570 pieces duirng 1914.

Georgian Bay and Northern Ontario Lumber Production

	1915 Ft.	1914 Ft.
Barry's Bay	150,000	320,000
Berkeley	1,500,000	1,500,000
Biscotasing	3,000,000	5,000,000
Bigwood	3,000,000	.....
Blind River	19,000,000	18,283,641
Boakview	2,192,000	3,769,000
Bracebridge	2,960,000	8,520,000
Burks Falls	5,443,000	7,400,000
Bear Lake	.....	2,000,000
Byng Inlet	40,375,000	37,500,000
Bala	1,400,000	3,036,213
Chapleau	11,200,000	10,000,000
Cache Bay	16,670,000	32,268,000
Callander	19,550,111	10,094,000
Chatham	1,250,000	642,000
Charlton	9,000,000	8,000,000
Canonto	510,655	1,124,097
Coehill	2,600,000	2,900,000
Field	2,225,000	1,000,000
Fesserton	.....	5,000,000
Fenelon Falls	3,500,000	3,500,000
Fort Frances	63,024,000	81,273,004
Gravenhurst	8,000,000	12,000,000
Haliburton	3,021,950	4,143,104
Hanover	.....	4,000,000
Hepworth	200,000	1,100,000
Huntsville	8,250,000	11,050,000
Holland Centre	500,000	1,500,000
Haileybury	1,250,000	.....
John's Island	14,000,000	14,000,000
Jarlsboro	2,500,000	.....
Kearney	7,000,000	10,750,000
Kenora	21,541,486	9,418,634
Kinmount	3,000,000	2,500,000
Lion's Head	200,000	4,000,000
Lindsay	8,000,000	8,000,000
L'Orignal	5,000,000	3,000,000
Little Current	25,000,000	30,000,000
Longford	5,000,000	5,500,000
Magnetewan	2,420,000	2,450,000
Marmora	650,000	3,400,000
Midland	40,441,077	43,994,180
Marksville	1,070,000	3,000,000
New Liskeard	7,900,000	8,312,000
Nesterville	23,782,050	28,653,050
North Bay	25,905,618	15,240,800
Otter Lake Station	4,000,000	6,000,000
Owen Sound	9,000,000	20,500,000
Parry Sound	9,600,000	15,062,585
Penetanguishene	22,288,135	29,267,215
Peterboro	11,500,000	9,750,000
Port Arthur	16,400,000	20,084,000
Powasson	5,000,000	6,226,900
South River	1,000,000	2,420,000
Sarnia	23,000,000	25,000,000
Shawanaga	700,000	1,250,000
Sprucedale	1,500,000	5,000,000
Severn	6,000,000	10,500,000
Sucker Lake	1,272,000	1,500,000
Spragge	23,500,000	22,250,000
Spanish Mills	56,000,000	42,000,000
Sudbury	1,800,000	1,600,000
Thunder Bay	.....	3,700,000
Thessalon	12,300,000	.....
Trout Creek	3,000,000	.....
Waubaushene	20,000,000	18,000,000
Other places	74,484,758	91,160,080
Total	725,526,840	800,412,503

Georgian Bay and Northern Ontario Lath Production

	Pieces	Pieces
Biscotasing	1,700,000	2,925,000
Blind River	8,000,000	7,806,950
Bracebridge	1,450,000	3,400,000
Burks Falls	730,000	1,300,000
Byng Inlet	12,435,000	9,500,000
Chapleau	7,800,000	5,500,000
Cache Bay	10,422,000	15,363,000
Callander	8,271,000	4,801,000
Chesley	.....	10,000
Charlton	300,000	.....
Canonto	86,850	246,000
Field	2,000,000	.....
Fesserton	.....	1,000,000
Fenelon Falls	1,800,000	1,700,000
Fort Frances	15,497,600	17,848,000
Gravenhurst	2,500,000	3,500,000
Huntsville	1,788,000	1,423,000
Havelock	.....	25,000
John's Island	6,000,000	6,000,000
Kearney	2,000,000	3,000,000
Kenora	7,119,830	2,950,000
Kinmount	500,000	600,000
Lion's Head	.....	200,000
Lindsay	4,000,000	.....
Little Current	10,000,000	12,000,000
Longford	650,000	700,000
Marmora	30,000	260,000
Midland	19,419,400	23,344,200
North Bay	15,240,800	9,626,250
Nesterville	5,599,350	6,747,050
Parry Sound	5,500,000	6,000,000
Penetanguishene	16,419,750	16,116,450
Peterboro	5,921,000	5,223,000
Port Arthur	5,000,000	6,320,000
Sarnia	14,000,000	15,000,000
Severn	1,600,000	3,000,000
Spragge	10,500,000	7,250,000
Spanish Mills	20,000,000	15,000,000
Thessalon	5,125,000	.....
Waubaushene	6,000,000	5,000,000
Whitney	.....	3,000,000
Other Places	18,748,950	23,192,350
Total	252,154,530	246,877,250

Georgian Bay and Northern Ontario Shingle Production

	1915 Pieces	1914 Pieces
Barry's Bay	700,000	.....
Boakview	1,757,000	777,000
Bracebridge	2,390,000	1,400,000
Burk's Falls	1,650,000	1,500,000
Canonto	625,500	216,500
Caldwell's Mills	.....	200,000
Fenelon Falls	750,000	1,000,000
Golden Lake	96,000	125,000
Hepworth	30,000	.....
Haliburton	1,472,000	1,792,000
Huntsville	450,000	300,000
Havelock	80,000	75,000
Kearney	500,000	.....
Kinmount	1,300,000	2,000,000
Leeburn	.....	85,000
Lindsay	3,000,000	6,000,000
Lanark	200,000	.....
Marmora	1,300,000	650,000
Mindemoya	200,000	100,000
New Liskeard	2,300,000	1,900,000
North Bay	2,376,000	3,430,820
Owen Sound	1,000,000	2,000,000
Penetanguishene	1,300,750	1,092,250
Peterboro	6,956,500	6,420,000
Port Arthur	1,240,000	2,040,000
Severn	1,000,000	2,000,000
Utterson	.....	500,000
Other Places	8,560,000	8,390,000
Total	41,233,750	43,993,570

Further Improvement Expected

Editor Canada Lumberman:— Owen Sound, Ont., January 7th.

Trade generally is in better condition than twelve months ago and we look for still further improvement during 1916, increased shipments of lumber to the United States being one of the main features.—John Harrison & Sons Co., Limited.

Ottawa Valley Lumber Production

Output of Lumber, Lath and Shingles all Show Increases—1915 Trade Better than 1914 — Outlook Good

Ottawa, January 22nd, (Special to the Canada Lumberman):—Notwithstanding conditions which, throughout the year, have not been any too favorable, the lumber cut in the Ottawa Valley in 1915 exceeded by more than seventeen million feet the total cut for 1914. Although several firms have not operated their mills, the majority have done remarkably well. The total output in the Ottawa Valley for 1915 was 476,230,108 feet, as compared with 455,615,783 feet in 1914. The lath and shingle production has also been surprisingly large in comparison with last year and the season before. The lath output in 1915 was 81,490,300 pieces; in 1914, 73,833,400; and in 1913, 70,597,075, whilst in 1915 the shingle production amounted to 43,618,000 pieces, against 34,550,000 pieces in 1914.

Lumbermen generally are quite satisfied with their cut. At the beginning of last year the prospects for a large production were, to say the least, very poor. The season opened up with an exceedingly poor market, both in the domestic and export trade. Dull business continued for at least the first six months of the year, after which time the outlook commenced to appear brighter. Orders began to come in, keeping the trade much busier, and there was a marked improvement, until December last, at which time a falling off in trade is always expected until the middle of the first month in the new year.

In comparing the trade of 1914 with that of 1915, lumbermen here have no hesitation in declaring that on the whole the last year has been much better. Prices throughout the year remained very steady, the dealers preferring to retain their stock rather than dispose of it at reductions, so often asked for. There was a strong movement in spruce and birch, to a great extent due to the demands of the government for shell boxes, and many large orders for these lines were filled for points in the United States. There has been a great decrease in business with England, and exporting to other parts of Europe, owing to the scarcity of tonnage, and possibly, but only incidently to the heavy insurance rates prevailing.

There is no optimism lacking in the expressed opinions of the leading lumbermen in the Ottawa Valley, over the trade outlook for the coming year. They are quite confident that business will be better than even last year, or since the commencement of the war. Should the war terminate by any chance in 1916, it is predicted there would be an abnormal business for lumber trade with Great Britain and her allies. However, if this is not to be the case, it would seem that nothing can be done towards improving the shipping facilities, and foreign exports will continue to be carried on on a small scale. Even larger orders, however, than have been received here during the last year, will be placed in Canada during 1916 from the United States.

As is indicated by the list attached, the lumbermen in the vicinity of Ottawa have done remarkably well. Although only 37,000,000 feet of lumber was cut in 1914 by the J. R. Booth plant, the same firm during 1915 produced 80,000,000 feet. McLachlin Brothers, Arnprior, did not do so well as in 1914, and the only other firms who did not cut as much as a year ago, were those of Gilmour and Hughson, Hull; Gillies Brothers, of Braeside, and the Dennis Canadian Company, Whitney, Ont. The other firms at least reached their last year's output, or exceeded it. The log output will be greater this winter by forty per cent., declare some manufacturers, and possibly greater, providing the weather is good for drawing.

Ottawa Valley Lumber Production

	1915 Feet	1914 Feet
J. R. Booth, Ottawa	80,000,000	37,000,000
W. C. Edwards, Ottawa	21,000,000	20,000,000
W. C. Edwards, Rockland	55,000,000	55,000,000
McLachlin Brothers, Arnprior	41,000,000	50,000,000
Hawkesbury Lumber Co., Ottawa	40,000,000	38,000,000
Shepard and Morse	16,000,000	13,000,000
Gilmour and Hughson, Hull, P.Q.	22,500,000	23,000,000
Fraser and Co., Ottawa	(did not operate)	11,000,000
J. Lumsden, Lumsden's Mills	15,000,000	15,000,000
Riordon Pulp and Paper Co. (Hawkesbury)	15,000,000	11,000,000
Petewawa Lumber Co.	9,500,000	5,000,000
Fassett Lumber Co., Fassett, P.Q.	19,300,000	18,525,000
Rideau Lumber Co., Ottawa	3,000,000	2,500,000
Pembroke Lumber Co., Pembroke	19,000,000	16,000,000
Colonial Lumber Co., Pembroke	25,000,000	14,000,000
Gillies Brothers, Braeside	25,826,623	30,908,528
J. J. McFadden and Co. (East Templeton).	5,503,485	5,182,255
R. and T. Ritchie, Aylmer	5,000,000	3,000,000
Estate James Davidson, Fort Coulonge	(no cut)	15,000,000
James McLaren, Buckingham	25,000,000	20,000,000
Dennis Canadian Co., Whitney	7,000,000	13,000,000
St. Lawrence Lumber and Box Co., South Lancaster	(none)	3,000,000
Papineauville Lumber Co., Papineauville.	5,000,000	5,000,000
Smith Bros., Campbell's Bay	1,600,000	1,500,000
Other places	20,000,000	30,000,000
Total	476,230,108	455,615,783

Ottawa Valley Lath Production

	1915 Pieces	1914 Pieces
J. R. Booth, Ottawa	3,000,000	3,000,000
W. C. Edwards, Ottawa	.....	3,000,000
W. C. Edwards, Rockland	19,000,000	10,000,000
Estate James Davidson	(no cut)	3,500,000
James McLaren Co.	4,000,000	3,500,000
Colonial Lumber Co.	6,000,000	4,000,000
Dennis Canadian Co.	2,000,000	3,000,000
Fraser and Co.	(no cut)	4,750,000
Gillies Bros. Ltd.	1,906,750	2,597,400
Gilmour and Hughson	5,000,000	5,000,000
McLachlin Brothers	5,000,000	6,000,000
Papineauville Lumber Co.	3,000,000	3,000,000
Pembroke Lumber Co.	8,000,000	6,800,000
Petewawa Lumber Co.	4,000,000	2,500,000
Rideau Lumber Co., Ltd.	700,000	700,000
R. and T. Ritchie	4,000,000	2,500,000
Shepard and Morse	9,998,000	6,586,000
J. J. McFadden Co.	2,385,550	.....
Smith Bros.	500,000	400,000
Other places	3,000,000	3,000,000
Total	81,490,300	73,833,400

Ottawa Valley Shingle Production

	1915 Pieces	1914 Pieces
J. R. Booth	500,000	500,000
W. C. Edwards	6,000,000	4,000,000
James McLaren Co.	6,000,000	550,000
Dennis Canadian Co.	3,500,000	6,000,000
Rideau Lumber Co.	1,500,000	1,500,000
Riordon Pulp and Paper Co.	9,118,000	8,000,000
R. and T. Ritchie	2,000,000	.....
Other places	15,000,000	14,000,000
Total	43,618,000	34,550,000

Ontario Timber Production on Crown Lands During 1915 and 1914

Statistics of timber production on Crown Lands in Ontario, and of the revenue, etc., during 1915 and 1914 are as follows:—

Pine sawlogs, square timber, etc

	1915	1914	—Decrease +Increase
Pine sawlogs, sq. timber, etc.	407,874,044 ft. b.m.	382,582,027 ft. b.m.	+ 25,292,017 ft. b.m.
Sawlogs, etc.. other than pine	59,308,403 ft. b.m.	77.451,857 ft. b.m.	— 18,143,454 ft. b.m.
Pulpwood	301,061 cords	104,544 cords	+ 196,517 cords
Ties	729,164	5,439,845	— 4.710,681
Area under license	15,712 sq. mls.	17,333 sq. mls.	— 1,621 sq.mls
Revenue	$1,629,640.60	$2,009,122.43	— $379,481.83

Ottawa Exports to the United States

The following table shows the quantity and value of lumber exported from Ottawa to the United States during 1915, with comparisons for the calendar year 1914, as furnished by the United States Consul General's office:

	1915		1914	
	Quantity	Value	Quantity	Value
Rough lumber	73,463,359	$1,824,718	77,062,595	$1,650,544
Dressed	9,734,874	224,113	5,402,527	137,371
Dressed (T and G)	42,303	858	759,202	19,054
Lath	35,780¼	125,073	21,041¼	79,727
Pickets	6,349½	34,907	3,902½	29,184
Shingles	7,393	24,688	8,344	30,348
		$2,234,357		$1,946,228

Ontario Review in Tabloid Form

Trade Conditions as seen by a Toronto Wholesaler

When comparison is made with the conditions prevailing a year ago there is good reason for hopefulness regarding the future.

A year ago manufacturers and wholesalers were carrying all of the 1914 purchases and part of their 1913 stock also.

Few dealers, if any, were doing enough business to cover expenses and it is safe to say that the majority were losing money both through loss of business and loss of profit.

The building trade in the cities has been almost dormant during 1915.

The statement of permits issued by the Toronto City architect's office shows a tremendous falling off, when compared with previous years, and it must be remembered also that many permits are taken out for proposed erections that may be held over for months, or may not be proceeded with at all. In the towns and villages there was some building in the spring of 1915, but the fall trade was, speaking generally, a disappointment.

The demand for special sizes and kinds of lumber for shell boxes gave a stimulus to business during the autumn months, and some lines of white pine and spruce have been pretty well taken out of the market.

The box factories have been fairly busy and were able to stock up for their requirements at comparatively low prices.

The contractors for shell boxes have now completed their orders and some complaints are being made that deliveries are being held up because shell contractors are behind with their work.

No new contracts have been allotted as yet, although tenders were called for and have been in the hands of the Imperial Muntions Board for some time.

Stocks of hemlock and spruce are lighter than usual in spite of the limited demand, and any approximation to normal trade conditions would no doubt bring an advance in price. But at present the trade is inactive, and all that can be said is that sellers are not disposed to make concessions for the sake of forcing business.

The yellow pine manufacturers have advanced prices on all grades, and this has shut off the importation of this lumber into Ontario.

U. S. hemlock manufacturers have also advanced prices and no hemlock is now being imported.

The war tax of 7½ per cent. has also tended to restrict the importation of hemlock and yellow pine.

The supply of eastern spruce, which used to reach Ontario, has been largely cut off by the export trade with the United Kingdom.

White pine stocks are not heavy and some large sales have been made from Georgian Bay and North Shore points to the United States.

It is reported that the stocks being taken out in Ontario east of Lake Superior will be lighter than usual.

As to the future there does not seem to be much warrant for expecting any marked activity in Ontario trade, but the prospects for improvement in the Eastern States are good, and it is to this market we must look for business during the coming year.

There is a decided improvement in the way of inquiries, from the U. S. and as the yards and factories have been going short of stock, it is reasonable to expect larger demand and better prices during the coming year.

* * *

Expect Continued Activity During 1916

Editor Canada Lumberman:— Pembroke, Ont., January 8th.

We are pleased to report a vigorous trade enlivenment during the past fall with a plentiful supply of shipping orders on hand at the present time. As compared with previous years, conditions prevailing now are abnormal on account of the demand for suitable lumber for carriers for munitions of every description. We think the present situation will continue during the coming season, and anticipate an increase in the price of all grades of lumber with the possible exception of "good."

The demand for lumber for box making from the United States is unprecedented.—The Pembroke Lumber Co.

* * *

North Shore Stocks Bringing Higher Prices

Editor Canada Lumberman:— Bay City. Mich., Jan. 7th.

Stocks to be cut next season in the upper Georgian Bay district are pretty well sold up already at a strong advance over 1915 prices. No. 1 and No. 2 mill culls and Norway are especially strong and inquiries for the same are numerous. The bulk of the stock sold for cargo shipments, is to the United States wholesale yard dealers and box manufacturers.

As to the trade conditions in the Saginaw Valley, there is a much better outlook for business this year than there has been for some time. All lines of lumber are stronger and in a great many grades and sizes the demand exceeds the supply of dry stock. We expect a big demand in all grades of pattern lumber and in narrow widths of common. Maple flooring has had a strong advance and hemlock is also in good demand and much stronger in prices.

With the present outlook we think there will be a shortage in most kinds of lumber this coming season. This is especially true for the first six months of 1916 or until such times as the new cut of 1916 is available for shipment.—Estate of E. B. Foss.

* * *

Looking for Improvement

Editor The Canada Lumberman:— Marmora, Ont., January 20th.

Stocks in this vicinity are much smaller than they were a year ago. So far as we know, logging operations hereabouts will be very small. As the general lumber trade during last year could not be much worse, we are hoping for an improvement, due to the record crops of 1915, and the very marked decline in logging operations and manufacture of lumber. The reported improvement in lumber circles in the U. S. will doubtless tend to help the lumber trade in this country, and in the opinion of the writer the timber supply of this country is very much smaller than is generally believed. When the public realizes this, stumpage should be considerably enhanced. For this reason it has been our policy for years past to conserve our limits as far as possible. The great trouble is to prevent fire losses. Prevention methods are still far from adequate, especially in the protection of abandoned licenses, which should be much more carefully looked after by the Ontario Forests Department. It is well-nigh useless trying to protect our own limits when contiguous territory is unprotected by the Government.

We have read your various articles regarding the shell box business, and it appears to us that there has been considerable grounds for complaint.—The Pearce Co'y Ltd.

* * *

Gradual Improvement Expected

Editor Canada Lumberman:— Ottawa, January 11th.

At the present time there is very little domestic demand and stocks are generally heavy. The prices of spruce and low grades of Norway and white pine are fairly firm. We look for a gradual improvement from now on until the end of the war.

In regard to the shipping situation, we find the railroads well able to take care of any business that we can supply them.

The export situation from a tonnage standpoint could not possibly be worse. We have been in the market for space, for whole and part cargoes, for some months offering enormous figures for the space, even under present conditions, and have not yet had a counter offer during this period. We look for the export situation to get worse and ocean rates to advance gradually and steadily beyond even what they are today. At the present time one might say that there is no market in connection with tonnage as compared with ordinary times. Recently $45 per thousand on lumber has been paid from the Gulf, $37.50 to the Plate and even 200 shillings on sailers to the U. K. and Atlantic French ports.—Bartram Brothers Limited.

* * *

Ontario Situation Greatly Improved

Editor Canada Lumberman:— Toronto, January 12th.

The year 1916, in respect to the manufacturing and merchandizing of Ontario timber products, starts off in a very encouraging fashion.

The process of liquidation and adjustments, which has been a feature of 1915, has had its effect in a marked depletion of stocks in the hands of consumers and retailers, so that normal uses are bringing forth an increased amount of inquiry and purchase.

The marked improvement in business in the United States is bringing purchasers from that side who have not been in this market for several years, and stocks that for the last few years have been consumed largely in our domestic trade, are now being taken across the border.

At mill points stocks are not large, and very little remains of 1915 product still in the hands of the producers. Practically everything is now in second or third hands.

We look for a large volume of trade for this year, at firm and advancing prices.—Ontario Manufacturer.

Mr. Arthur Graham, manager of the Lower Ottawa Forest Protective Association reports that during 1915 there was a reduction of 38 per cent. in the amount of green timber damaged by fire in his jurisdiction which is a strip of territory 200 miles long by 75 miles wide at its widest part and embracing 8,500,000 acres. The cost of fire fighting during the year showed a reduction of 33 per cent. There are 58 forest rangers in the territory under four inspectors. Lookout towers have been established at important points which are connected by telephone with the inspectors' offices and with Mr. Graham's office in Ottawa.

During the season of 1915 shipments of lumber through the American and Canadian canals at Sault Ste Marie amounted to 456,451,000 feet, an increase of 4,303,000 feet as compared with the season of 1914.

Montreal Trade Improved Materially

Exports Increased Over 35,000,000 Feet—Shell Box Business Created Good Demand for Stocks—Outlook Promising—Ocean Tonnage Still Scarce

Montreal, Jan. 25.—(Special to The Canada Lumberman):—The position of the Montreal lumber trade during the past year may be summed up in a few sentences: Poor local business, except for shell box lumber, a famine in dry descriptions of the latter, a fairly good demand from the United States, and a substantial increase in shipments to the United Kingdom. Taking the situation as a whole, there was a distinct improvement on 1914. The opening months were by no means satisfactory, but towards the end of the year there was a partial revival. As in the previous year, the country districts were not affected in the same degree as the city, as there was a fair amount of building, chiefly, however, of churches and schools.

The heavy demand for lumber for shell boxes was the redeeming feature of the year. The stringency of the Government requirements involved the consumption of large quantities of 9 in. and 10 in. dry stock, and this became so scarce that the Shell Committee were forced to amend the specifications, allowing the sides and tops to be made in two or three pieces. Even with this alteration, it became exceedingly difficult to secure the requisite dry stock, particularly of birch. Inquiries for lumber came from all parts of Ontario and Quebec, and representatives of United States firms making shell boxes for allied Governments visited Montreal with the object of buying box lumber. Some of this came from New Brunswick. The natural result of this demand was a strong advance in prices of such lumber as was suitable. Montreal has several factories, including some hitherto devoted chiefly to furniture and pianos, turning out shell boxes, and many woodworking firms, such as those making sash and doors and boxes, complained that it was impossible to get orders from the Shell Committee while others with no connection with the lumber or woodworking industries were able to secure very substantial contracts. For a time there was great pressure to produce boxes as fast as possible, involving night and day shifts, but lately production was ahead of deliveries, and some of the factories were closed for a short period.

Business with the United States was satisfactory, and one large manufacturer substantially increased the quota of spruce sent to New York. The advance in the price of southern pine helped the spruce market, as it not only prevented the dumping of low grades in Canada, but tended to promote buying, by United States firms, of Canadian spruce in preference to southern pine. The closing of the Panama Canal by heavy earth slides was another cause of the advance in values, by restricting the shipments of comparatively low priced Pacific Coast fir to the eastern markets.

There was only a small business in hard woods, the poor building trade affecting this branch of the lumber industry.

How Local Trade Was Affected

In the absence of important building schemes and with only a limited number of new houses and apartments, local business was quiet, with a slight improvement at the end of the year. The building permits tell the tale of the slump in the contracting field—$8,511,221 as against $17,394,244 in the preceding twelve months, and $27,037,297 in 1913. Fortunately the shell box orders counterbalanced this condition to a certain extent. Wholesalers state that retail yards are practically bare of stock, owing to the fact that merchants drew principally on the stocks which were in hand at the commencement of the year. In consequence buying was, almost throughout 1915, of a hand to mouth character, retailers naturally selling the lumber in stock before ordering further supplies. It looks therefore as if retailers will soon have to order on a fairly good scale, although it is not to be expeeted that building will be any better than in the past year—unless war conditions undergo a radical change.

There were two or three rather important failures during 1915, but collections were better than in 1914.

Woodworking Industries Dull

If exception be made of those with shell box orders, firms engaged in the manufacture of sash and doors, boxes, piano and furniture were not over-burdened with orders. The first class named is mainly dependent upon construction, and as 1915 was a lean year in this regard, it suffered accordingly. A few orders came in from the Province of Quebec, where building was comparatively active, owing to the results obtained from good harvests and remunerative prices, while some contracts left over from 1914 enabled two or three firms to keep their employees busy during the early part of the year. With general trade picking up towards the end of 1915 box makers' business slightly revived, and this is also true of the piano trade. Furniture makers, who specialise in high-class, production, found orders very difficult to secure, as people restricted their expenditures, as a rule, to cheaper articles. It will be noted that there was, in woodworking industries, a distinct tendency to improvement in the fall, and from the early indications of the present year, it looks as if 1916 will prove more satisfactory than the period which has just closed.

Brighter Outlook for Timber

During the greater part of the year the timber department was slow. Important works, like harbors, dams, and railroad construction were comparatively few, owing to the disinclination of the Governments, various companies, and financiers to expend large sums of money under the conditions prevailing. Towards the end of the year, however, there was an improvement, and some fairly good orders were placed. A more confident feeling then commenced to prevail. Mr. P. D. Gordon, of Messrs. Mason, Gordon and Company, Montreal, is of opinion that the worst phase of the slump is over and that we can look forward to a much better period during the current year. The large amount of money which is being poured into the country in payment for war contracts must have a beneficial effect upon Canadian industry, in which nearly all sections will participate, and indeed the effects of this outlay are already being felt. While the orders for timber are not so extensive, in the matter of amount, as they formerly were, it is satisfactory to know that they are increasing in volume. In the west, the position has brightened considerably; the demand for lumber has expanded, and prices have advanced from the very low level which followed the collapse on the coast. The orders for car stock constitute an important factor in this improvement. It is probable that the local demand for lumber for building will not be very good, but it will be more than compensated for by the business which will undoubtedly be placed for industrial and railway purposes.

Exports to United Kingdom Increase

Two features characterized the export section—an enormous rise in freight rates and a large increase in the lumber shipped. The year 1914 was a difficult one for shippers, but 1915 was an even more trying period, owing to the high freights, uncertainty of cargo space and general delays. The following gives the details of the shipments:—

	1915 Ft. B.M.	1914 Ft. B.M.	1913 Ft. B.M.
Watson & Todd Ltd.	23,445,439	26,165,790	34,596,642
E. M. Nicholson	15,239,280	5,284,731	7,695,305
Bennett Lumber Co.	11,000,000	.....	.....
W. & J. Sharples	9,847,219	6,196,006	13,571,128
R. Cox & Co.	8,852,632	11,336,151	18,326,191
J. Burstall & Co.	7,762,353	6,708,937	8,905,256
E. H. Lemay	7,000,000	3,339,582	3,522,941
Cox Long & Co.	5,130,576	474,818	1,878,741
Dobell, Beckett & Co.	4,446,160	2,677,768	3,527,783
Railway, Steamship Lines and small shippers	13,791,365	9,117,618	13,795,180
Total	106,515,024	71,401,401	105,819,167
	71,401,401		
Increase over 1914	35,113,623		

The season commenced in very slow fashion, and it looked as if there would be a decline from the poor total of 1914. Space was limited, and in addition there was at first a certain amount of perplexity as to the course of British markets. As the available tonnage became greater owing to the Government releasing transports for war work, thus relieving the liners, shipments of lumber gradually increased, and in July and August very large quantities of lumber were sent to the United Kingdom. In the fall, there was a rush to export food stuffs and commodities required by the Government, and in consequence there was little or no room for lumber on the regular liners, which, in normal times, carry the great bulk of lumber. The season therefore closed at an unusually early date. Throughout the year exporters were never sure as to the space available, for the Government had the first claim on the vessels, and a firm would sometimes find that, at the last moment, the space arranged for was commandeered by the Government. This meant expense for demurrage and also additional trouble. The utilization of a number of lake boats and the chartering of a few tramp steamers helped the situation, but it is certain that the total exports would have considerably increased had more vessels used the St. Lawrence route.

The freight situation was an unpleasant surprise to a number of

the old established firms. They had no idea that prices would take such an abnormal rise, going from about 100s. standard at the beginning of the season to 200s. in the fall, the highest known at the port for many years. There was a slight check to the advance when grain shipments fell off, but this was not for long. The Bennett Lumber Company, a new comer in this branch of the trade, was fortunate enough to book a large amount of space at the smaller rates ruling in the first part of the season, and of course reaped the benefit of their policy.

The advance of 35,113,623 feet brings the total up to just over the 1913 level. It is shared in by all the firms with two exceptions, and is due to the increased demand for spruce and birch, much of this for Government account, and for shell box making. The call for spruce was especially good, while the gain in birch may be judged by the fact that Mr. E. M. Nicholson, who specializes in this wood, has increased his exports nearly three fold, and now takes rank as the second largest shipper of lumber from the port. The whole of the firm's increase was not in birch, spruce forming a factor in the larger shipments. The demand for hardwoods, other than birch, was very satisfactory. The pine market was the disappointing feature, the exports of Messrs. Watson & Todd, Limited, the chief exporters of this class of lumber and the largest shippers of the port, falling off by nearly two and three quarter million feet. The amount of lumber, especially spruce, cut for the British market last season was unusually large, some manufacturers laying themselves out for this branch and reducing their production for domestic and United States requirements.

The outlook for next session is the merest guesswork. The duration of the war is the great factor, it will determine the extent of the demand and also the course of freight rates. Should the conflict continue one must not look for lower rates, and the probability is that the demand for spruce and birch will be as great as ever.

Pulp and Paper Business Below Normal

The past year was below normal so far as the pulp and paper business were concerned. Some of the mills did exceptionally well, but others did not come up to expectations. The closing months generally showed an improvement over the earlier period, and the current year promises to be excellent, notwithstanding that the prices of most raw materials have risen considerably; this is notably so in the case of sulphur, bleaching powder, alum, caustic soda, china clay, fillers and coloring matters.

Ground wood was a slow market. Canadian mills are dependent for the sale of a large amount of their product upon United States customers, and if the mills over the border have sufficient high water to grind their own wood the demand for Canadian ground wood is naturally affected. The United States mills grind a surplus during periods of high water to provide against low water periods. Years in which the water is below normal involve a scarcity of pulp, with the necessity of buying largely in Canada. Years in which the water is normal involve a diminution of purchases on this side. Last year the conditions were favorable in the United States. Stocks there, however, are being gradually depleted, and it is likely that the market here will advance until the spring. Canadian stocks on hand showed a considerable diminution during the last two months of the year.

For the first eight months sulphite was very dull, owing to the fact that Canadian and United States book and writing paper mills were running only 70 per cent. of full capacity. An exception was the newsprint mills, which generally ran fully all the year round. The small production of paper naturally restricted the orders for sulphite. In the fall there was a pronounced revival in the demand, owing to the better conditions in the paper trade, and also to the lessened importations of European sulphite to the United States. The latter resulted in a more active requirement from the United States, prices advancing very considerably. One cause of the shortage in European pulp was, it is said, that Germany used sulphite fibre for ammunition purposes in place of cotton, the supplies of which have been cut off. Germany has purchased enormous quantities of sulphite from Sweden, and has entered into contracts for a very large amount to be delivered during the current year, paying very stiff prices for the pulp fibre. The diversion of the product to Germany is a most important factor in the situation, and until the war ends there is no likelihood of the position being altered. Germany is now an importer instead of an exporter. The costs of lumber, coal, labor, sulphur, etc., have also gone up in Norway and Sweden, and this, together with the scarcity of pulp and the difficulty in getting ships, has resulted in the advanced prices. As an illustration of the higher values, it may be noted that bleached sulphite in England is worth about £21, as against £10 three years ago. A considerable quantity of Canadian unbleached sulphite which would have gone to the United States in normal times found a market in Great Britain and France during the past year. Ordinarily, the United States is the best market for our pulp.

Canada seems to have nearly reached the limit, for the present, in the matter of new pulp and paper mills. We have been adding to our plants at a pretty good rate, and it would appear as if there is not likely to be any important additions for some time to come. Some of the enterprises have proved excellent propositions, but in others the introduction of an abundance of watered capital has proved a great handicap to the companies. In 1915 the St. Lawrence Pulp and Lumber Corporation, Chandler, P. Q., commenced to manufacture unbleached sulphite, the capacity being 100 tons per day; while the Bathurst Lumber Company, Bathurst, N. B., came on the market with 50 tons per day of the same class of pulp. During the month of February this company will bleach its sulphite. The Riordon Pulp and Paper Company intend, at their Merriton, Ont., plant, to instal machinery for an electrolytic bleaching system in order to convert their unbleached sulphite into bleached sulphite. The plant will, it is expected, be ready on June 1st next. The Union Bag and Paper Company announce that sulphite, kraft, and newsprint mills will be erected at Cap Madeleine, P. Q., by the St. Maurice Paper Company, a concern controlled by the Union Bag Company, which has already a ground wood mill in the same district. It is reported that the International Paper Company intend to erect a newsprint mill in Canada. The Belgo-Canadian Company, Shawinigan Falls, P. Q., has lately installed one of the largest newsprint machines in the world, having earlier started a sulphite plant with 25 tons per day capacity. The Abitibi Power and Paper Company put in operation during the summer a 200 ton newsprint mill, and it is reported that the Donnacona Paper Company, Donnacona, P. Q., will instal a second newsprint machine during the year.

The Canadian Pulp and Paper Association, Montreal, has continued its operations, one of its most useful features being the technical meetings at which questions affecting the manufacture of pulp and paper are discussed.

Quebec's Annual Report Upon Forests

The annual report of the Hon. Jules Allard, Minister of Lands and Forests for the Province of Quebec, was laid on the table of the Legislature on January 18th. Mr. W. C. J. Hall, superintendent of the forest protection department, in his report states that he has made a study of aeroplanes from the point of view of his department, and has come to the conclusion that they would be of great benefit to locate fires, and enable them to be localized. However, he found that the cost at present would be prohibitive, but later when the cost of the machines dropped they could be used serviceably by the Government for forest protection. Mr. Hall also refers to the importance of protecting the birds which destroy moths and other insects that attack the forests of the country. He incidentally mentions that in the United States the annual loss caused to the woods by the different kinds of insects represents nearly one billion dollars.

On June 30 last there were 7,156,207 acres of public lands divided in the province. This shows an increase of 286,621 acres over the figures for the previous year. Of the total, no less than 214,443 acres have been sold for agricultural and industrial purposes, and the receipts for these sales have risen to $72,222.93.

The woods and forests provided a revenue of $1,736,605.62, made up as follows: Ground rents, $359,834; rights for cutting timber on limits, $1,288,708.83; penalties for infraction of regulations, $16,436.09; accrued interest $27,280.85; premiums on transfer, $10,002; premium on cutting of wood rentals, $34,343.85.

The receipts of the department have risen to $1,840,346.45, and Mr. Allard states that for many years the receipts have been growing, and he is happy to remark that the figures this year are higher than at any time since confederation. He considers the figures satisfactory, showing as they do the progress that is being made in colonization in the province.

Quebec Trade Conditions During 1914

The Montreal manager of the Canadian Bank of Commerce in his annual review of business conditions, has the following to say regarding the lumber business: "Lumber operations were carried on during the winter of 1914-15 on a reduced scale, the outlook being unsatisfactory owing to the general depression in the building trade and the large stock of sawn lumber carried over. The market has been exceedingly dull throughout the year and prices have been low. Sales in Canada have been at a minimum, and there has been a marked falling off in the volume of shipments to the United States. Shipments of deals to the United Kingdom, however, have been larger than usual, and the demand seems likely to continue, though the trade is hampered by the continuous advance in ocean freight rates and the difficulty of obtaining vessel space. The export of pit props for use in the English coal mines is a new industry in which a moderate business has been done during the year. Shipments of soft-wood lumber have been made in about the usual volume to the South Ameri-

can market. Lumber manufacturers generally are carrrying over into next season a large stock of sawn lumber.

"Pulpwood has been more or less of a drug in the market, the demand from the United States being considerably below the average. This is due apparently to lessened requirements for paper and to the fact that the American mills have not only been cutting and using wood from their own properties, but have been using a larger percentage of their reserve wood. As a great deal of the pulpwood cut in the winter of 1914-15 is still unsold, it is expected that the quantity taken out of the woods this winter will be comparatively small. At the time of writing the demand from the United States shows signs of improvement."

Quebec Exports to U. S. Show Gain

Manufactured Paper Products Increase—Raw Material Exports Reduced — Lumber Exports Greater

The exports to the United States from the Quebec Consular district for the year 1915, show a marked increase over those of 1914. Their total value in 1915 was $11,233,409 against $10,185,308 in 1914, an increase of $1,048,101.

Wood and manufactures of wood constituted by far the greater share of such exports in both years, as shown by the following table:

Wood and Mfrs. of—	Unit of Quantity	1914 Quantities	1914 Values	1915 Quantities	1915 Values		Increase or Decrease
Paper: Printing	lbs.	113,848,772	$2,360,702	170,963,066	$3,291,185	+	$ 930,483
Sheathing	"	.....	.....	537,356	10,257	+	10,257
Wrapping	"	3,449,299	103,631	9,365,083	285,805	+	182,174
Pulpboard	"	553,840	11,038	101,899	2,054	—	8,984
Other		.....	3,560	.....	2,510	—	1,050
Total	lbs.	117,851,911	$2,478,931	180,967,404	$3,591,811	+	$1,112,880
Pulpwood: Rough	cds.	74,325	$ 461,880	97,482	$ 560,456	+	$ 98,576
Peeled	"	164,267	1,203,520	114,963	797,976	—	405,544
Rossed	"	54,314	510,002	49,012	410,701	—	99,301
Total	cds.	292,906	$2,175,402	261,457	$1,769,133	—	$ 406,269
Lumber n.e.s.	m.ft	43,978	$1,034,364	59,016	$1,112,585	+	$ 78,221
Lath	"	21,304	62,500	32,429	90,254	+	27,754
Woodpulp: Mec'y Gr'd	lbs.	134,736,336	$1,163,744	124,589,835	$ 951,897	—	$ 211,847
Chem. Unbleached	"	78,253,571	1,535,833	113,238,177	2,041,085	+	505,252
Sulphite	"	.....	.....	3,251,168	48,927	+	48,927
Total		.....	$8,450,774	.....	$9,605,692	+	$1,154,918

From the above it will be seen also, that it was wood and wood products that account for the increase in the exports from this district, such increase for 1915 amounting to $1,154,918. The chief decrease of all other exports being chargeable to that of Aluminum, a decline due undoubtedly to the war, which has curtailed the exportation to Europe.

Among the manufacturers from the products of the forests it is again the remarkable increase in the production of newsprint, and other papers, that has helped to swell the volume of exports in 1915 from this district, such increase aggregating $1,112,880. The manufacture of this article of export to the United States has made a more rapid advance than any other export article—in fact it has advanced by leaps and bounds, the value being $173,561 in 1910, $211,616 in 1911, $270,181 in 1912, $1,059,597 in 1913, $2,360,702 in 1914 and $3,296,185 in 1915. Lumber exports have made no such record, but have nevertheless held more than their own—these aggregating $1,034,369 in 1914 against $1,112,585 in 1915, an increase of $78,221.

This is not a bad showing especially in view of the conditions of the lumber trade in the United States during the past year, which as a whole, according to the Lumber World Review has had the most unsatisfactory and peculiar business in its history.

"Lumber," it says, "more than any other article of commerce lacks uniformity of measure, both as to qualities and quantities. No two acres of ground and no two trees on the same acre of ground produce an exactly similar quantity or quality of product, hence lumber is never quotable as to values, actual or comparative,—hence the utter impossibility of making a conventional report of so-called market conditions as compared with other products of the soil."

"Lumber is not controlled as to price by the known volume of stocks on hand, as the production is so diversified among the 45,000 sawmills of the country, that the amount of stocks on hand can never be stated. Even the number of sawmills, cutting lumber, may increase or diminish a number of thousands in the course of a month, influenced alone by the demand for lumber."

The exports of pulpwood from this district, for the first time for some years, show a decrease, amounting to $406,269, for 1915. This decrease is chargeable to the peeled and rossed wood exports, the latter declining by about $100,000 and the peeled by $405,544, a decline in both, which was only partly counterbalanced by the increase in the rough pulpwood exports, which show an increase of nearly a hundred thousand dollars.

It is too early to assign a reason for this decline in wood exports, all of which have always gone to the United States, but it may be assumed, that the great increase in paper manufacturing in this district may account for the decreased exportation of the raw wood material.

The most gratifying conclusion to be drawn from the above figures to the people of this district and the Province of Quebec as a whole, must be, that this section of the Dominion is fast becoming one of the great paper manufacturing districts of the world. In 1910, only five years ago, this class of exports represented a value of only $173,561,, while in the past year they aggregate $3,591,811. The exports of paper from this district thus constituted nearly one-third of the total exports, while those comprising all of the products of the forest exceeded 85 per cent. of the total exports from this district in 1915.

Such development of the industries of this province based on its forest resources, should bring home to its people the great need of forest protection, and re-forestation, where possible, to ensure the continued prosperity of its most important industry.

Quebec Cullers' Report for 1915

The following shows the quantity of square and waney timber measured through the office of the Supervisor of Cullers at Quebec, P. Q., during the year ended 31st December, 1915, and the previous year:—

Description of Timber—	1915 Pieces	1915 Cubic Ft.
Waney White Pine	7,345	401,680
Square Oak	2,661	144,520
Square Elm	1,094	48,960
Waney Ash	48	840
Waney Birch	2,355	48,880
Waney Maple	34	1,240
Waney Walnut	528	9,400
Square Hickory	65	3,040
Round Aspen Logs	3,317	12,680
Total	17,447	671,240

Banking on Continued Improvement

Editor Canada Lumberman:— East Angus, P. Q., January 20th.

We are of the opinion that the lumber business is in a much more prosperous and healthy condition than it has been for some time. Our entire cut for last year has been sold and is now being shipped out as fast as we can secure the cars, and we are also of the opinion that the lumber trade will continue to improve over the coming year. As we do not make any sales ahead, taking chances with the market, we anticipate a very substantial increase in prices in the near future.—Brompton Pulp and Paper Company.

Outlook in Eastern Canada Improved

Editor Canada Lumberman:— Montreal, January 10th.

The outlook is better than it was at this time last year. No doubt the trade with Great Britain will be equal to that of the past year, and the markets of the United States are improving every week.—A. MacLaurin.

New Brunswick Trade During 1915

Remarkable Price Fluctuations and Uncertainties in Demand Handicapped Manufacturers

St. John, N. B., Jan. 21st—(Special to The Canada Lumberman)—The year just gone by has been the strongest year in the lumber trade for many years. Conditions unprecedented, caused by the war, were arising not only month by month, but day by day. In the first part of the year, English buyers were out to pay any price asked by manufacturers, and sales of English deals were made on a basis of about $19 to $19.50 per M. on wharves at St. John. In fact even higher prices were paid to some manufacturers on the North Shore of New Brunswick, one concern having, it is said, received $21 per M. right through for their cut of deals for 1915, the highest price ever paid for deals. Stocks on the yards were light, both at shipping and at receiving centres. Consumption in England was beyond normal as the admiralty were taking anything they could get. All through the winter these conditions prevailed, but when spring came the whole bottom seemed to drop out of buying and deals were a drug on the market. The trouble was not because of no sale for stocks but for want of bottoms to carry cargoes. Freight through the winter had advanced from 100 shillings to 175 shillings by spring, with no tonnage even at that offer. The British and other foreign governments allied themselves, and, when they wanted cargoes, sent out their own requisitioned vessels, but outsiders stood a pretty small chance of getting anything at any price. Hence, buyers became frightened and quit buying along in May and no sales were made from St. John of deals until December. Any persons who went to sell deals were told they were not wanted, or if they were in financial difficulties and had to sell, a price was offered which would not bring the cost of the log, let alone the cost of manufacturing added. These conditions pertained through the season, and when fall came, no one had the heart to go into the woods to cut logs, as no inducement was offered to them in the way of a chance to sell. Of course concerns who were well able to do their own financing and had plants to take care of have gone to the woods, but on a reduced scale.

During the whole season with the exception of the two last months the American market was in a stagnant condition. Prices were away off and sales were very hard to make, the base price at Boston being from $21.50 to $22.50 all season, and parties who had put on high priced logs would not get a new dollar for an old one.

Many mills did not turn a wheel, and those which did would have been better idle. Along towards fall a sudden revival took place, first in spruce boards, which all summer one could not give away. These advanced, following a sale of large quantities of North Carolina roofers to the allies. This, coupled with the demand for shell boxes, gave an impetus to spruce boards, running prices from nothing up to $18 per M. today at the mills. Following this came an advance in spruce dimensions from $22.50, until today it stands at $27.50 to $28, Boston base price. How long this will continue is hard to say, but if ever any business needed revival it is the lumber business, as, during the last few years it has been extremely hard for mills doing an American business to show a profit.

Locally, conditions have been bad. Very little building has been carried on and if any sales were made they had to be put through at cut throat prices. All kinds of refuse and low grade stocks were sold from $3 to $4 per M. less than a year ago. In fact it was almost impossible to give refuse away at any price. Boards were piling up all around with no chance to clear them off, as sheathing and floorings of all kinds were selling, when one could make the sale, at $4 to $5 per M. less than for a year previous.

British Columbia Fir was being sold at St. John for less than one could afford to sell spruce. Today, while building conditions have changed to no extent, stocks of boards and refuse are fast disappearing, being purchased for foreign markets and by spring very little of these stocks will be for sale, and unless something unforseen arises, better prices should be had in the local market. B. C. Fir has advanced $3 per M. during the last month and if it only continues to advance it should help our eastern pine and spruce.

Laths have held about the same all through the season, with the exception of a slight drop during the summer months, being worth today about $2.75 on wharves here.

Shingles remain in the same weak condition of a year ago, and no outlook of a change, although in this section stocks are not heavy, and very little cedar is being cut this winter.

As to the outlook for 1916; never was it so hard to forecast as it is today. While at the present moment the market shows a better tone, it may not continue for any length of time. A much less cut of logs and lumber is being made in this section than a year ago, but that will have very little to do with the position as a whole. Should the war end it is hard to say just what effect it would have upon the lumber business, there are many economic conditions to be thought and worked out and the person who can forecast correctly, will be hard to find, but it is to be hoped that 1916 may show a year such as lumbermen all over the country are looking for.

Expects Normal Cut on New Brunswick North Shore

A number of recent reports from lumbermen on the North Shore of New Brunswick have indicated that the output of logs in that district during the present winter will not be more than 60 per cent. of the normal output. One prominent lumberman, however, who has had a long experience in this part of New Brunswick expresses the opinion that the cut this winter will be normal, and will reach 100 million feet. He also states that he expects 1916 to be a very profitable year for the lumbermen of the North Shore. The European market he said, is good, but some shipments of lumber are still being carried on in the Baltic in spite of the war. The chief difficulty at the present time is to secure tonnage, and, as a result of the shortage of vessels during the past year, more lumber is being carried over this winter than there was a year ago. "Lumber prices today," he said, "are good. The weather conditions will not cut much of a figure, and there is nothing to prevent the season of 1916 being well up to the average."

St. John Exports to the United States

The U. S. Consul at St. John, N. B., reports that exports from his district to the United States during 1915 were valued as follows:

Lumber	$115,977.86
Wood pulp	144,163.57
Pulp wood	11,625.00
Laths	88,938.63
Shingles	9,620.00
Pine boards	5,693.59
Ships' knees	152.50

N. B. Firm Expecting Continuance of High Prices

Editor Canada Lumberman:—

The stocks that are being held in the northern part of New Brunswick are larger than for some years, owing to the fact that tonnage was most difficult to procure and also owing to the extremely high ocean freight rates. Most of the stock in the northern part of New Brunswick was sold by the millmen to the usual English buyers, and as far as the mills were concerned, they have been paid for the stock, as the contracts provided that any lumber unshipped was to be paid for on the first day of December. There is only one exception to this, so far as we know, a company which did not sell its stock and has a quantity variously estimated at forty to forty-five millions on their yards. It is unfortunate that the shippers had not enough foresight to have taken vessels as, even with the high rates asked today, 200 shillings and in some cases more, the lumber could be sent forward to these markets and sold at a profit. It is estimated that there is forty-five millions of sawn lumber on the Miramichi, thirty-five to forty in Campbellton and Dalhousie and from forty to forty-five million elsewhere.

There will be some curtailment in the cut this present season, partly brought about by the uncertainty as to whether the buyers would come forward as usual, and the fact that smaller operators were discouraged by their banks. The winter, however, has been favorable and there is no doubt that the larger mill men will cut as much as last season. The English buyers, who, by this time last year had closed for the new cut, have not done so this year and are still holding off. Thus, with the uncertainty of procuring tonnage and with the liability of having a larger stock to hold and pay for next year, buyers are very cautious and they can hardly be blamed for this atttitude. Our own opinion is that they will come on a little later and that prices will be equal to last year, which were the best that the millmen in this section have received in the history of the trade.—N. B. Manufacturer.

Everything Depending Upon Ocean Tonnage

Editor Canada Lumberman: South Nelson, N.B., Jan. 14th.

The lumber business of the northern part of New Brunswick is almost entirely in the manufacture of stock for the European market, principally that of Great Britain and Ireland, for which the class of logs we now have seem to be better suited, a very small proportion of our long lumber finding its way to the American markets. Consequently we are not affected by the U. S. markets except indirectly, as when prices are good in the American markets stock from the upper provinces and even from Maine which otherwise might come into competition with ours in Great Britain finds its way to the United States.

Therefore in dealing with our lumber situation it must be considered entirely in its relation to the markets of Great Britain.

After the outbreak of the war in August, 1914, the closing of the Baltic ports, and the development of a heavy demand for lumber for war purposes, prices in the English markets began to advance but as most of our manufacturers had disposed of their season's cut the advantage was with the middle

man. The season closed with prices strong and demand good and for the cut of 1915 manufacturers received the highest prices (so far as we know) ever paid for spruce in New Brunswick. These deals were all sold f. o. b., buyers providing tonnage. This proved to be no easy task, as, owing to the number of vessels being taken over for war purposes, freights advanced very rapidly, for instance from 40 shillings to 42s. 6d. in normal times to 130 shillings and even, we understand, as high as 175 shillings per standard for deals from Miramichi to English ports. Even at this excessive rate the required vessels could not be procured. The result being that the buyers were unable to remove their purchases and a large stock is being held over.

It is rather early to predict what will happen in 1916, owing to the difficulties in securing vessels, the large stock held in England or on this side, and the general business uncertainties. Operators have been rather reluctant about cutting stock during the present winter and it is generally conceded that the stock available for manufacture in the spring of 1916 will be less than usual.

So far, we have had a favorable winter, and this may have the effect of increasing the output somewhat. As to probable prices we are still confronted with the freight problem, but if the lumber is required and the Baltic ports still remain closed, we are the principal, if not the only, source for a class of lumber which is very largely used and while perhaps we cannot look for much advance we certainly feel prices should not fall below those of last season, especially as the recent advance in prices in the United States will no doubt, as already intimated, have its effect indirectly.

Nova Scotia Deal Shipments Increased

Shipping Situation Governed the Trade—Small Schooners Did a Fine Trans-Atlantic Trade—Woods Output Reduced

Written Specially for the Canada Lumberman by Elihu Woodworth

It was to be expected that great changes in business conditions throughout the world would be effected by the great war in Europe. Such expectations have been fully realized, but in many cases the results are very different from those that were anticipated. Some commodities, such as cotton, have been declared contraband, and their export has been prohibited under pain of forfeiture; some goods which were the exclusive products of one of the warring nations, are not to be had at any price. Flour at one time showed a disposition to reach an altitude very uncomfortable for the consumer, but bountiful grain crops have brought prices down to something like a normal condition. Prices of nearly all the necessaries of life have advanced to a greater or lesser degree, and any goods which have not felt the upward tendency of prices are those for which there is no pressing demand. Taken altogether the conditions are not so bad as might be expected in war time; and while some manufacturers have been forced to shut down, the loss has been much more than made up by the activity prevailing in the new business of manufacturing munitions.

The lumber season of 1915 opened with exceptional promise for the lumbermen of Nova Scotia. The practical closing of the Black and Baltic Seas cut off a large portion of the usual lumber supply of the British market, while the enormous increase in freight and insurance rates from other ports in northern Europe rendered shipments from them almost prohibitory. In these conditions the British lumber buyers naturally turned to this side of the Atlantic, and in Nova Scotia and the other maritime provinces the prospects of a highly prosperous season appeared to be excellent. The winter's cut had been large, the demand was strong and prices ruled high. Apparently there was nothing to do but take advantage of the golden opportunity. But just here a new and unexpected condition confronted the lumber shippers. To reap the benefit of the great advance in prices it was desirable to get their deals to market as speedily as possible. To do this successfully it became absolutely necessary to secure the required number of carriers but, unfortunately, the needed carriers were not to be had except in ridiculously inadequate numbers. A dozen years or so before this, steamers had begun to crowd sailing ships out of the lumber trade and drive them off the seas, and it seemed that they had almost completely accomplished their purpose and that the day of the "wind-jammer" was done. Owners of staunch Nova Scotian ships, finding they could no longer compete successfully against steam, sold their vessels for whatever they could get for them, and saw them converted into barges for carrying coal or gypsum. Some of the older vessels, not strong enough for barges, were sold to the Norwegians, who, through buying the ships for almost nothing and by running them at the least possible expense, were able to maintain a desultory contest with steam. During the first year of the war the Norwegians largely reinforced their fleet by the purchase at very low prices of a number of English sailing ships and a few old steamers, but when the British government found it necessary to commandeer British merchant steamers for war purposes, the fleets of neutral nations were found to be entirely inadequate to meet the requirements of the world's traffic.

Enter The Small Schooner

About the time when sailing ships ceased to be profitable the shipbuilders and ship owners of Nova Scotia commenced building a fleet of staunch little three masted schooners of from three hundred to five hundred tons register. These vessels found employment in carrying our lumber to the United States and to the West Indies, with an occasional cargo to South America. In the early winter they carried cargoes of potatoes to Cuba, and there they usually got charters for further south, which kept them employed until the next lumber season opened. This business was usually fairly profitable, and some of the tern schooners acquired a reputation as money makers. When the shipping season of 1915 opened and the scarcity of bottoms became an undoubted fact, it was suggested that schooners be used to supply the deficiency in carriers. The suggestion received little favor at first, for it was contended by some who claimed to know all about the matter that only square rigged vessels were fitted to cross the Atlantic. Meanwhile the American market was dull, and very few coasting charters were offered, so some of the schooner owners who were also interested in lumber decided to find out what the schooners could do as ocean carriers. Accordingly a few cargoes were shipped early in the season to test the matter, and, as the schooners made good time and returned safely, the remaining vessels of the same class were soon in commission as deal carriers. One Parrsboro tern schooner, the Exilda, of 350 tons register, has made something of a record since engaging in the new business. Since sailing from Parrsboro on March 18th, 1915, she has discharged three deal cargoes in England, and on the 11th of January she arrived at Havre with her fourth cargo. All the schooners have done well, with the exception of the L. C. Tower. This fine Parrsboro vessel, of over five hundred tons register was torpedoed near the English coast before completing her first voyage. Her place will be filled next spring by a vessel of about the same tonnage, built in the same yard and having the same owners. It is not expected that sailing ships will be able under normal conditions to compete with steam, but last season proved that they are still useful in emergencies, and Nova Scotian schooners hitherto regarded as practically a negligible quantity in ocean traffic, have been able with the aid of Norwegian, Swedish and Danish barks and a few small steamers of the same nationalities to carry from this province to the United Kingdom more deals than were ever shipped in one season before.

Shipments Show an Increase

The total lumber shipments from Nova Scotia last year are estimated at five hundred million superficial feet. The word "estimated" is used advisedly, for it is practically impossible to obtain the exact figures, and the most definite statement must be, to some extent, a matter of estimation. The measurements of deals, boards and battens, may be obtained with sufficient accuracy, but in the case of some other products classed under the general head of lumber, the cost of ascertaining the exact dimensions would be much greater than any advantage that could be derived from it. When the exports from one country include, in addition to regular lines of lumber, such items as piling, of varying lengths and sizes; maple logs, barrel shooks, boat masts, flag poles, clothes line props, and pit timber it is evident that it would be difficult to reduce the output to superficial feet. When one mill turns out annually from three to four million dowels of various widths and varying from twelve inches to forty-eight inches in length it is reasonable to assume that the only way in which the quantity of lumber in the lot will be reached will be by estimation. The estimates of last season's shipments were probably inaccurate and may have been wide of the mark, but it is pretty certain that the deal shipments to Great Britain were larger than in any other season, and would have been still larger but for the scarcity of vessels.

The enormous increase in freight rates was another condition arising from the war which, of course, had a marked effect upon the lumber trade, and which could scarcely have been fully anticipated. The freight on deals to England, which had been as low as twenty-eight shillings per standard, but which had gradually increased before the war, naturally made a rapid advance when hostilities commenced.

The rate had advanced to about seventy shillings per standard when the season of 1915 opened, and it immediately began to soar. The rate mounted with marvellous rapidity, and even the slump in prices in the British market did not arrest its upward course. At the end of the year it had risen to the almost unbelievable height of two hundred shillings and, apparently, the end is not yet in sight, for it is reported that a vessel has been chartered to load at Halifax at two hundred and twenty shillings. Small wonder if shippers hesitate to charter in advance at such rates, for it may well be doubted whether next season's prices in the British market will justify paying such exorbitant figures. The prevailing freight rates and their very pronounced upward tendency are having the effect, as might be expected, of reducing this winter's lumber cut.

Another condition created by the war, and one that affected the lumber trade very materially, was the marked reduction in the rate of sterling exchange. The value of the pound sterling was at one time down to $4.50, and the average reduction in rates during the season would probably amount to one dollar per thousand feet in the price of lumber. This, in some cases, would mean to the shipper the difference between a fairly profitable transaction and actual loss, and, combined with the increased cost of insurance and very heavy war risks, caused a marked reduction in the net receipts. Exchange with the West Indies was also extremely high, and, while it did not prevent large lumber shipments to West Indian ports, will undoubtedly have an injurious effect upon next season's business unless some guarantee can be had of more reasonable rates.

Outlook for 1916 Uncertain

The outlook for next season's lumber trade is by no means clear. The business has been so completely revolutionized by the new conditions which have arisen that it is extremely difficult to make satisfactory forecasts. The difficulty is increased and intensified by the fact that some of the disturbing conditions are constantly changing and new and important conditions are liable at any moment to arise. Some operators will cut as much lumber this winter as in former years, but others are as dissatisfied with the prospect that they will largely reduce their output. Some well informed lumbermen estimate that this winter's cut will not be more than two-thirds of the annual output of recent years. Assuming this estimate to be approximately correct it is yet possible that under favorable conditions a big business may be done next season, for, in many parts of the province, large stocks are being carried over.

The largest shippers in the Maritime provinces are George McKean Company, Ltd., Malcolm McKay Company Ltd., and John E. Moore Company Ltd. All three firms have their headquarters at St. John, N. B., and all have agents in Nova Scotia. The George McKean Company, shipping from Quebec as well as from the Maritime provinces, handled last season approximately two hundred million feet of spruce, pine, hemlock and hardwood, nearly all of it going to the British market. The John E. Moore Company did a much larger business in Nova Scotia last year than ever before, and a large part of the one hundred and twenty-five million feet, or more, shipped from Halifax was handled by that firm.

Making pit props has long been a flourishing industry in the vicinity of our coal mines, but it remained for the great war to develop an export trade from Nova Scotia by causing a shortage in the supply from the ports of northern Europe. A number of these humble but important pieces of timber found a place in last season's shipments, and it is said that there will be a largely increased output this winter. It would seem, however, that only an abnormal demand and the consequent increase in price can make the British market for pit props a profitable one for our lumbermen. With ante bellum prices and a reasonable rate of freight we should be unable to compete successfully with Newfoundland, which has cheaper labor and an unlimited supply of suitable timber within easy reach of shipping.

One feature of the situation which perhaps deserves passing notice is that nearly all the late shipments from this province went to France instead of the United Kingdom. This is a new departure in the Nova Scotia lumber trade, and if this new demand should continue, it may be assumed that it will be possible to repeat or continue the unprecedented business of last season, even in the face of a continued scarcity of ships and excessive freight rates.

Editor Canada Lumberman: Wilkins Siding, Queens County. Jan. 8th.

The outlook for 1916 depends very largely upon securing a sufficient number of vessels to move the stock needed in European markets. This applies to the United States as well as to the Maritime Provinces, as car competition from the Southern states dominates the New York and New England markets when they are unable to ship across the water owing to scarcity of vessels, and facing a shutdown, or selling at a "dumping" price in car lots.

The "dumping" price always gets the decision. Then the retail yards are able to stock up at prices the near-by manufacturer cannot afford to meet. Then Nova Scotia and New Brunswick commence shipping boards and randoms into Boston and New York, manufactured with but little attention to the requirements of those markets, and this of course adds to the demoralization and consequent unsatisfactory returns.

If the lumber manufacturers on both sides of the boundary would put in less time in fighting about the tariff and more in studying market conditions and transportation necessities, we would have less "dumping" and demoralization. It would be an "eye opener" if Canada and the United States could know how much in actual cash, shipping conditions have cost them during the past fifteen months.

It seems strange to me that we lumbermen who have squeezed each department of our manufacturing cost down to the last possible cent, continue to advocate shipping laws and conditions that are bleeding us to the tune of dollars in our marketing cost, with no possible way to recoup ourselves from the final purchaser.

It is true that the United States manufacturer is worse off than the Canadian, by reason of foolish coastwise shipping laws, but that does not help Canada to market in Europe. Think it over and watch that British Columbia government ownership scheme.—Rufus S. Webb.

Nova Scotia Situation Uncertain

Editor Canada Lumberman:— New Glasgow, N.S., January 6th.

The lumber cut for export in the central and eastern portions of Nova Scotia, nearly all finds a market in Europe, especially in Great Britain. As a result of the hitherto unheard of high ocean freights prevailing, and the general industrial conditions in Britain, consequent upon the war, the prospects for the export lumber market at present are not at all favorable. It may be that the very high prices for lumber prevailing this time last year have somewhat spoiled operators on this side. It is certain, however, that the present difficulty of obtaining tonnage, the long detention at ports on the other side, owing to the congestion there, and the fact that there is small demand for wood products in Britain, except for Government purposes, all tend to make lumbermen exceedingly cautious in regard to present operations. Stocks in this part of the country are very low, and as far as the writer can estimate, the cut in this district will be not more than one-half of last season. This reduced output, if general throughout Canada, should tend to stiffen prices later in the season. If ocean freights continue at their present high level, prices must certainly stiffen if the stock is to go forward. It would seem, however, that all things considered, this was a time for operators to go slow.—R. M. MacGregor.

New England Conditions Promising

Editor Canada Lumberman:— Boston, Mass., January 3.

We have about the usual mid-winter conditions here, although we think trade is possibly a little better than the average winter trade. We have had snow lately and a good deal of bad weather, which has not improved business. The lumber business in New England we think could be considered good for this time of year, with prospects quite good, barring some accidents in the political line, that is, if this country keeps out of foreign entanglements we seem to have every reason to expect good trade this year. There has been a rather limited supply of dimension spruce, which has kept the price pretty fairly high, spruce frames selling as high as $26 to $27 per M. We would say that the average price today is about $26.50. Random has not advanced so much, but has advanced $1 or $2 per M. Southern pine and N. C. pine in the lower grades, which are largely used in matched boards called roofers, have advanced all the way from $3 to $5 per M., nearer $5 than $3. Other grades of Southern pine have advanced $2 or $3 per M., possibly more. Prices are very irregular.

We understand that there is a pretty strong demand in the interior of the United States all through the Mississippi Valley section. On the other hand, the scarcity of tonnage is seriously handicapping the exportation of lumber, and in fact is hampering the coast-wise trade, and may have an immediate bearing on the price at the mills.

So far the English trade seem to have been afraid to take hold of their usual cuts of deals, as they do not know how they are going to get it across the ocean or what they will have to pay for tonnage. It would look for the time-being as though the spruce market here was stationary, with a little tendency to sag. This is usual during the winter months. There is usually some falling off in price during January and February. We hardly think this year will be an exception.—New England Wholesaler.

Nothing But Sunshine Ahead

Editor Sanada Lumberman:— Boston, January 20th.

The lumber manufacturers have certainly been having a very severe depression. First came many large cargoes of Douglas Fir from Pacific Coast via Panama Canal, which were sold irrespective of, and way below cost of production, and dumped onto an already dull market. Then came declaration of war and everyone began to pull in and no new buildings were planned, yards stopped buying.

In addition to above causes, and antedating them, was the hostile attitude of the Inter-State Commerce Commission, which hammered the railroads so hard that now quite a goodly percent are in hands of receivers. This in-

sane work of the Commission put the roads out of action as consumers and it is a well known fact that they are, (if given a chance), the largest consumers in the country. Things looked very black indeed, and our country, under present government, was dropping astern very fast in exports, in fact had dropped from an excess of some six hundred millions exports over imports to nearly that amount excess imports.

Then the war countries came to the rescue and orders by the hundred million dollars poured in, changing again the excess exports and literally throwing vast quantities of money here, for goods sold at fabulous profits. The easy money and orders have at last had effect and general business has improved and late in 1915 lumber began to advance very sharply and we have placed on our books for United States market large orders for winter and summer sawing at better than $28 base for frames, which frames were $22.50 to $23 in the summer of 1915. Mr. George VanDyke for some years before his death predicted $30 frames. If he had lived to the spring of 1916 I am beginning to think he would have seen his prophecy come true.

The war started us on the up swing and we are now a very large creditor nation and it has given such an impulse that nothing can stop it this year, as we have not only munition business to care for but the regular staple lines are extremely busy and many new mills and additions are being built and planned.

A friend just back from abroad says: **"Pay no attention to the sales end at present. Get a good big stock of logs, as the foreign demand must have it all."** When one considers the immense foreign demand not only for regular lines but for consumption for soldiers' huts and for use in the trenches at the front, his ideas are perefctly sound.

There is one change we may see as regards values and that is that 9 in. may and will go the same value as 10 in. and the difference between wide or 9 in. and up and the 8 in. and under is to be more marked.

Even though the war should cease, and I see not the faintest chance of that happening at present, business in lumber it seems to me is bound to be good for some time as so much of the destruction must be rebuilt as fast as possible. The year 1916 certainly has nothing but sunshine ahead.—F. B. Cutler.

New England Trade Suffering Because of Embargo

Editor Canada Lumberman: Boston, Mass., January 21st.

There is no active business at the present time and nothing can be shipped into New England now from Canada anyway on account of the embargo. This includes nearly all points in New England. Nothing can be shipped from west of the Hudson River or north of the Canadian border to B. & M. or New York, New Haven & Hartford points, which includes practically the whole of New England. As to how long this will last nobody seems to know The railroads of the United States seem to have broken down. They do not seem to be able to take care of the business offered them and the munition business has taken up so much of their capacity that other business seems to suffer. We are in hopes that the railroads will gradually improve their facilities and that with spring weather things will go better. At present it is very seriously handicapping business. We are inclined to think even after the present embargo is declared off there will be so much stock rushed in that the railroads will have to declare another one, so we look for intermittent shipment of lumber and other things for some time to come. There will probably be a short time when stock can be shipped and a time of embargo again, but we are not given particular hopes that this embargo will be off for two or three weeks. However, information is practically impossible to get in that line.—Shepard & Morse Lumber Company.

A Banker's Review of the Lumber Trade

Mr. Edson L. Pease, general manager of the Royal Bank of Canada in his annual review of the bank's activities during 1915, dwelt extensively with industrial and trade conditions throughout Canada. In the course of his remarks he made frequent reference to conditions in connection with the lumber trade and industry.

In British Columbia, he said, lumber conditions were unsatisfactory during 1915 and prices were low until late in the year. The last two months however, had seen a distinct improvement in demand and price, particularly from the United States. Important orders had been obtained from the British Admiralty. Exports of lumber for the nine months ended September 30th had amounted to 50,408,000 feet as compared with only 29,516,000 feet during the corresponding period in 1915. Only the lack of adequate shipping facilities had prevented the further offsetting of the decline in the home demand for lumber.

In Ontario, lumbering operations had been less extensive than for some years past and operators had not yet sufficient courage to take out large stocks of logs. A shortage of men had brought wages from the low level of the previous year quite up to the average. Building permits issued during 1915 in twelve of the principal centres in Ontario showed a total of about one-third of those issued during 1914.

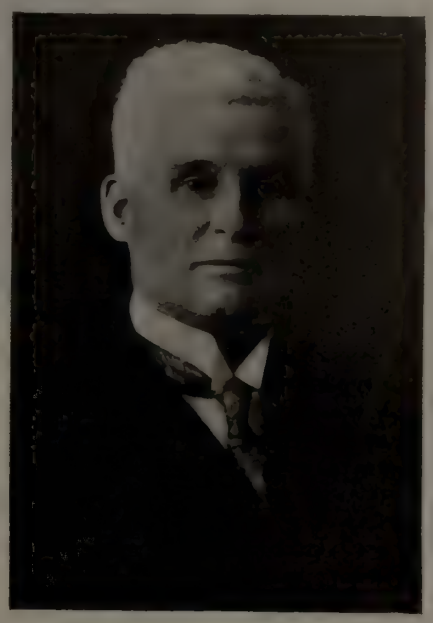
In Quebec, the lumber interests experienced poor results similar to those in the west, owing to the light demand from local markets and from the United States, and to the scarcity of shipping facilities for export. The value of new buildings erected in Montreal during the year showed a decrease of nearly 50 per cent

In the Maritime provinces, lumber operations had been conducted on a larger scale than usual. Manufactured lumber shipped to the British markets had been disposed of at maximum prices, and the high freight rates had been borne by the importers, so that the results were not seriously effected by the low prices prevailing until recently in the American market.

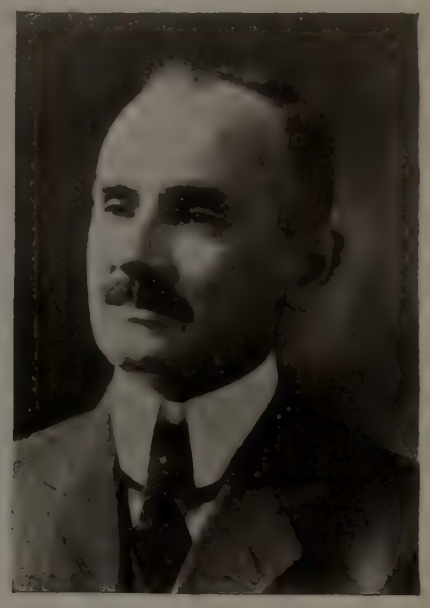
In Newfoundland, more timber had been cut during 1915 than in several preceding years, the demand being good and prices high. The pit-prop industry had developed considerably and there was every prospect of further profitable expansion.

Shingle Men Report Better Trade

Canadian White Cedar Shingle Association Annual Meeting—Outlook Good—Officers Elected



Angus McLean, Bathurst, N. B.



W. F. Napier, Campbellton, N. B.

The annual meeting of the Canadian White Cedar Shingle Association was held at Bathurst, N. B., on January 5th. There was a large and representative gathering from all the mills interested and the annual sales, etc., for the past three years were gone over in detail. This association succeeded the North Shore Shingle Association when Price Bros. & Company, Limited, and Fraser Limited joined. Practically all the large interests in the white cedar shingle manufacture are now members.

The same directorate was re-elected and for the fourth year Angus McLean, of Bathurst, N. B., was unanimously elected president.

A "sales and advertising board" was appointed as follows: A. C. Morrison, of Price Bros. & Co., Ltd., Quebec; W. F. Napier, of the Shives Lumber Co., Campbellton, N. B.; S. B. Bond, of the Bathurst Lumber Co., Bathurst, N. B.; W. Matheson, of Fraser Limited, Fredericton; F. G. Wheaton, Canadian Sales Agent, Amherst, N. S.

It was also decided to maintain a representative for Ontario and Quebec and the appointment was made of Mr. Alf. H. Gilham, 78 Pearson Ave., Toronto, who in future will call on the trade in this territory.

The discussion of trade conditions brought out the following facts:

The United States market has been improving steadily on "extras" and "clears." Of "extras" there is but a limited stock at any of the mills, while the "clears" are practically all sold.

In the lower grades from "2nd clears" down, all of which are marketed largely in the Canadian market, there are dry stocks available of the 1915 cut for immediate and early spring shipment.

The sales in eastern Canada for the past three years have shown but little difference. Ontario, on the other hand, fell off in 1915, but present enquiries from that province show a better feeling and with a representative on the ground there is no doubt there will be a substantial increase in the sale of white cedar shingles in that market.

As the merit of white cedar shingles is impressed on buyers the demand is bound to grow. In the lower grades, that is, "2nd clears," "clear walls," "specials" and "extra No. 1s," no such value can be obtained in any patent roofing or wall covering. The life of white cedar shingles is from twenty to thirty years, even in the lower grades, and no complaint is ever made by the users in regard to leakage. The outlook for 1916 in the United States market is excellent for white cedar "extras" and "clears."

The United States market for white cedar shingles improved both in demand and price throughout last fall. The association is looking for a heavy demand and high prices in that market next spring.

British Columbia Trade During 1915

Co-operation between government and industry promotes trade expansion—Export trade reviving—Prairie trade improving

Written specially for The Canada Lumberman by Hon. W. R. Ross, Minister of Lands for B. C.

Review of 1915:—No previous period in the history of the Province has so clearly demonstrated the underlying strength of the lumbering industry of British Columbia as the year which has just closed. After six months of war following upon one of the severest world-wide financial depressions of recent times, the prospects of the industry at the beginning of the year could hardly have been worse. Large stocks of lumber were on hand; the mills had been unable to collect on rail shipments made the previous years, and financial pressure was forcing further sales below cost of production. The lack of shipping had reduced export from the Coast to an insignificant proportion of the annual cut. With the further continuance of the war the prospects for 1915 were most discouraging. Many mills were shut down and others were preparing to do so.

Hon. W. R. Ross. Minister of Lands, Victoria, B. C.

It is a matter for congratulation that in the upshot the year proved better than had been expected. Before the summer was over the export trade showed some revival and kept a number of mills and camps in operation which otherwise would have had to shut down. In nine months, over fifty million feet of lumber were exported as compared with 38 million for the whole of the previous year. The total for 1915 may be expected to double that for 1914. This result was largely due to Government co-operation with the industry in securing British Government business. By August, as a result of the large crop then assured a decided change for the better in the prairie lumber market took place. The prairie crop proved even larger than was expected and later in the year further improvement took place in the lumber business and better prices prevailed. The demand for lumber for farm buildings which had been unduly curtailed by the force of circumstances in previous years revived. To assist this movement to the full, pamphlets covering every form of building for the prairie farm have been prepared by the Department of Lands and are being widely advertised and distributed in the three prairie provinces.

A commercial service has been established on behalf of the lumbering industry in three of the most important markets for British Columbia products with experienced lumber commissioners at London, England; Toronto and Regina. The investigations now being carried on by Special Trade Commissioner H. R. MacMillan in other overseas markets are yielding most valuable results. Exhibits have been placed at important trade centres throughout the world, publications dealing with our forest products have been issued and distributed to buyers, and recognition of the qualities and uses of British Columbia woods is being obtained in every accessible market.

The outlook for 1916 is far different to that of a year ago. Lumber prices are increasing in the export market, demand is stronger and only the lack of tonnage prevents our mills from taking full advantage of the situation. The attention now being devoted to the shipping question by all interests concerned, will undoubtedly result in relieving the present export situation. A prosperous business in the prairie market is assured, while in Eastern Canada there is an excellent prospect of developing an important market.

Administrative work:—Owing to the conditions which existed throughout 1915, and the reduction of the forest service through enlistment, the amount of field work during the past season was less than in previous years.

Scaling:—The total cut from Provincial lands for the calendar year, as shown by the official scale returns, amounted to about 40,000,000 feet B.M. more than for 1914. The total was made up of 826 million of saw logs, 3,700,000 lineal feet of piling, 296,000 cords of shingle bolts, fuel, pulp wood, posts, mining timbers, etc., and 515,000 hewn railway ties.

The cut of sawlogs and shingle bolts was much larger while the cut of piling and ties was decidedly smaller than during the previous year.

Timber Sales:—The sale of small tracts of Crown timber adjoining active logging operations, and of tracts to supply local demands, by public tender for immediate logging, was very active, considering the condition of the industry, the number of sales and the quantity sold exceeding the figures for 1914.

In all, 98 tracts covering 13,000 acres and bearing nearly 100,000,000 feet of timber were sold, the average stumpage price in addition to royalty received being 80c per M. The amount of cedar and hemlock purchased greatly exceeded the figures of the previous year.

Examinations:—The expired licenses, leases, applications to purchase, pre-emptions and surveyed Crown lands examined in order to determine their legal classification, amounted in the aggregate to 193,000 acres, bearing a stand of 879,000,000 feet B.M. Of the total area 53,000 was found to be timber-land, and was recommended for reserve. while 81,000 was classified as agricultural land.

Inspection of Logging Operations:—During the year the field force made 669 inspections of ordinary logging operations, and 268 inspections of hand loggers operations.

Sawmills:—No new sawmills were erected during the year, the annual capacity remaining in the neighborhood of 2,500,000,000 feet.

Fire Protection:—In that part of the province lying east of the Cascade Mountains, the temperature and rainfall were nearly normal and no difficulty in controlling the forest fire situation was experienced during any part of the season. On the Coast, however, the summer was one of the driest and hottest known, and the fire hazard was serious throughout the season. Fortunately there were no strong, dry winds, and the losses were comparatively light. The force of fire wardens was smaller than in 1914, numbering 177 long term guards and 25 patrolmen, as against 190 and 121 respectively of last year. The fire permit system continued to be the greatest safeguard against the spread of clearing fires. In all, the patrol force granted 9,515 permits to clear 52,000 acres of land. Of this great number only 55 escaped control. Only 66 fires were set without first obtaining a permit. During the year 1,031 uncontrolled fires were reported. These fires burned over 244,000 acres and destroyed or damaged 187,000,000 feet of merchantable timber and $58,000 of logging equipment and other property, the total damage from fire being estimated at $166,000. In 1914 the number of fires amounted to 1,832, the acreage burned to 355,000, the timber destroyed to 102,800,000; damage to property $364,000.00; and the total damage to $436,000.00. The greater loss of timber in a less dangerous season is due to the necessity which existed for keeping fire fighting expenses to a minimum.

The cost of patrol in 1915 amounted to $160,000, of fire fighting $22,000, a total of $182,000. In 1914 patrol cost $23,000, fighting fires $144,000, a total of $372,000, just double the cost for 1915.

Permanent Improvements:—While war conditions prevented the carrying out of the programme outlined in previous years, for permanent improvements, considerable work was accomplished by the members of the regular force. With an expenditure of $5,000. Three hundred miles of new trail were built, 36 miles of telephone line erected, 12 cabins and 8 boats completed. The guards were able to clear out 800 miles of trail and repair 250 miles of telephone line without interference with their patrol duties.

Trade Extension Work:—The year 1915 marked the establishment of a new line of work by the Forest Branch, that of development of markets for the forest products of the province. A preliminary forest survey had shown that the annual timber crop which could be harvested was four or five times the present cut. The existing demand, however, could not even take care of the present production. The only possible relief for such a situation was by obtaining wider markets for British Columbia forest products, and the government entered vigorously upon such work as has already been outlined.

Toronto Branch Office:—Of chief interest to the lumber trade of Eastern Canada is the location, as an essential part of the department's trade extension work, of a branch office at Toronto. A lumber commissioner has ben appointed and offices have been taken in the Excelsior Life Building, corner Adelaide and Toronto Streets. An exhibit of British Columbia Forest Products has also been installed at this office and is open to lumber dealers, builders, architects, and the public generally.

The Lumber Commissioner will investigate the lumber market in Eastern Canada and pay particular attention to those lines which can best be supplied by British Columbia woods.

One of the Commissioner's most important duties will be to place before the trade the valuable qualities of Douglas Fir, Western Larch, Western Soft Pine, Western Red Cedar, and Western Hemlock.

B. C. Trade Facing Important Problems

Approach of Greater Activity Brings Forward Important Questions of Over Production, Price Cutting and Other Business Evils

Specially contributed for The Canada Lumberman by E. H. Newton

A year again has passed away, time swiftly speeds along;
We come again to praise and pray, and sing our greeting song.

The foregoing is part of an old familiar song which we used to sing when we were little boys and girls assembled together for the purpose designated therein, and we sang it with fervor and enthusiasm, because we were filled with a simple, trusting faith in one another, and in people and things generally. If it was the stage in our lives

Where Ignorance

was bliss, we were none the less happy on this account.

Today we assemble once a year or oftener, through your medium, or otherwise, not exactly to praise and pray, so much as to look back over the wreckage of time at close range and review with awe and consternation the treacherous outrages which have been perpetrated against our industry. No good comes from minimizing matters of such importance as these, and besides, I feel that there is a responsibility resting upon each one of us, and that there is too much at stake for us to shirk that responsibility, and besides we know that if we shoulder it as men there

Is Bliss,

and a feeling of satisfaction in knowing that we have done our duty as we see it, and with none other than this plea for mercy, I trust that I will be excused if I may have to say things that shock, in pointing out some of the dangers with which our industry has been surrounded.

'Tis Folly To

drift along unheeding these dangers, for they are lurking in our way, and are just as certain in their destruction of our industrial welfare as is the devilish ingeniosity of the wreckers of our ships of commerce.

With a full knowledge of the treacherous attacks which have from time to time been made upon our industry, is it not time for us to

Be Wise

and guard against the traitors which are sometimes found even within our gates? These people may not be part or parcel of the industry proper, but may be considered more in the nature of an appendix to the business end of it, and like that part of our individual anatomy, are capable, if they are over-fed and not closely watched, of deranging our whole system. These people call themselves brokers, but I think there should be a distinction of some kind, for there are some legitimate and honest brokers. (You see I do not go quite so far as the man who said that "All men are liars.") This other kind of broker may have a useful mission to perform, but the troublesome ones should be closely watched, for they are capable of doing irreparable harm, and over-shadowing all the good that they have ever done, and perhaps bringing reproach upon the name of all engaged in the business, causing us to wish ourselves back to the good old days when there were no appendixes.

We are here today friends, not because we have a song of trusting praise to sing. Perhaps many would feel like saying that they are here because they are the victim of circumstances, while others of us might say "We're here because we're here." I say that we are here, trying to conduct a legitimate and honorable business, and lift it from the depths of dishonor into which it has been dragged by causes, some of which have been beyond our control, and land it upon a higher plane.

The old ship upon which many of us have served a goodly portion of a lifetime has been tossed about by the storm of excessive violence for many months. The voyage has been rough and many good captains and crews have been washed overboard. We are the survivors, and as such, it is with renewed confidence and determination that we should take hold and steer the good old ship, which has already recovered sufficiently from the rigors of the storm to instill a feeling of safety in the minds of all on board, or in any way interested, on to greater, and still greater security.

The lumber business has not been the only one to suffer from the effect of all eyes having turned to study the map of Europe during the past few months; neither will it be the last to recover. But if indications count for anything, the demand which will be made upon lumber in the not far distant future will be such as will call for able men, and strong organization to handle it. When this demand comes it is not going to be smooth sailing for the manufacturer, nor are all the huge profits, which have their existence mainly in the imagination of the uninitiated public, going his way. There are breakers ahead, I can see them rolling in. You know there are people who think it is wrong to look out for trouble, and there have been instances where people have been washed from the decks of ships because they did not observe the breaker rolling in upon them, and seek safety before it struck them.

If all the mills in this province were to resume activity tomorrow, sufficient men could not be found in the land to operate them. This is a disagreeable truth, but it is a truth nevertheless. If the demand for lumber should be such that all the mills resumed operation, how many would be satisfied with operating one shift? If there are not enough men to operate the mills one shift, and part of the managers should decide to operate two shifts, what effect would this have upon the labor market both in the logging camps and in the mills when it is hard to get good men for the camps even now? I look for a good year's business for 1916, but I pray for the nervousness which has accompanied most of the transactions of the past year to discontinue. Let us plan as far as it is possible to do so, to anticipate both our needs and our difficulties. Nervousness is a disorganizer, so let us drop it behind for a change. The nervous customer who puts off ordering what he wants until he wants it in a rush, and then stands and snaps his fingers until he gets it, is an intolerable nuisance. We have read a great deal about frenzied finance, but nothing about frenzied lumber operations. We want a Lawson to write a book on this. There is plenty of matter. The man who is imbued with the idea that working at high tension, or constantly trying to do that which is bordering upon the impossible is conducive of best results in lumber manufacturing, and will produce greater profits than the thoughtful and carefully worked out policy applicable to good business and suited to the conditions, is laboring under a mistaken idea of things as they work out in practice. I maintain that when it is going to cost you two dollars to get one, then you are better off without the one, for to try to capture the one dollar under these circumstances would be a symptom of frenzy, and let us hope and pray that for the year 1916 no man worthy of being called a lumberman will develop any such symptoms.

There are several dangers which stand in the way of our real progress, and though they may be somewhat obscure now, they will be real and alive just as soon as the proper time comes. One of these dangers will be bumped into in the same place as it has been found in before. It is located in the narrow channel of over-production, and there does not seem to be any way to get by it without a bump. We have struck it so often in the past three years that we are now beginning to look upon it as a natural consequence. "Oh, but you just predicted great activity in the lumber business," I think I hear some one say. So I do, but it is not going to be an activity that will take care of the whole product of the log. We are going into strange markets, and most naturally expect strange demands to be made upon us. This may not be the best kind of business, and indeed it is pretty well agreed that business that only takes care of part of a stock is not the best kind, but then it is business, and it is up to us as business men and careful guardians to be thankful for small favors.

At the very best there are going to be certain grades and sizes which will accumulate on our hands, but if we all own nervousness or frenzy to seize hold of us and dictate our course, these undesirable acumulations will grow twice as fast, because in our haste to get out other sizes and lengths much stock will be sacrificed, or turned into this accumulation, and it is right here that the congestion starts. We begin to offer the broker inducements to move such stock, which in our frenzy we have piled up in haste, but must of necessity move at leisure, and pretty soon we find ourselves coming to the broker's terms on other stock in order to induce him to move some of the accumulation, and we figure that if we do run low on the good selling stock we can if necessary run double shift for a while and replenish it, quite forgetting, it would seem, that we are again doubling our accumulation of unsaleable stock, and doubling the opportunity for the broker to come back and set a still lower price on something more, always including some of the better stock, and so it goes. It is an old story, and the man who has watched the game played knows it, but what are we going to do to cure the evil? Whether there is work for the scientist to discover something that will give us more backbone, or whether we should go to the phrenologist to see if we are all following the right pursuits, I am not certain, but of one thing I am sure, and that is that nervousness and frenzy are twin brothers, and they are both destroyers of profits and disorganizers of system.

There has been a considerable demand from the other side of the line for some time past, as all know, which in itself is not an unfavorable indication. We can hardly interpret this to mean that the mills

over there cannot supply those needs, but the correct interpretation is more likely to be that the mills over there are standing firmer today than we are, and business, being a part of human energy follows the course of least resistence.

To see the way some people grab at low prices one would imagine that they thought they were giving the industry a stimulant, and were willing to make the sacrifice for the sake of performing a public benefaction. The Lord said, "The poor ye shall always have with you." So this is a settled fact, that some of us must always remain poor, but the unscrupulous "critter" we are not quite so sure about, and we wonder if he is always to remain in our ranks. He goes to the meetings, and he agrees to certain prices, always of course with a string tied to his undertaking with which he can play, and through which he can form a loop to get out if he wants to. This string may be attached to a certain number of cars to load which he will be allowed to accept business enough at the old price. As soon as this edict goes forth the wily dealers, or brokers send in a long list of half completed specifications, (the other being purposely left uncompleted) and they ask the mills for their lowest figures. The mill man who is playing with his string jumps at it, and offers a real nice price, and then when the orders have been accepted they are sent forward in their completed form, and this completion always adds something to the difficulties of filling them. The weak-kneed brother who grabs at this kind of business will never learn, and so long as he is allowed a string to his undertaking he cannot be caught, for he has made enough loops in his string that he can jump through them faster than any one can follow him. If he ships a greater number of cars than his string was attached to, of course they were old orders which he had on his books for a long time, and which he was in duty bound, as a man of reputation, to fill at the old rate. Were you ever there, brother? If all men are prevaricators, and we have it on good authority that they are, I do not wish to impute that all lumbermen are crooked or incapable. I know that such would not be supported by facts, and facts are the strongest support that any claim can have. Furthermore, it has not been my intention to deal in personalities in this letter, nor to point an incriminating finger at any one. I have no specific instances in mind to which I would point, and no other ambition impells me to write as I have done and am doing, except a wish to point out some of the weaknesses with which we are afflicted. If any person in our province or out of it finds anything in my remarks that fits them, or that they can make profitable use of, they are welcome to it. It is written for the common good of all, and with the hope that it will give offence to none.

And now let us pray that we may in future be delivered from the tempter's wiles so far that nothing may be offered to us that we cannot grab; that whatever we do grab may not work out to too great a loss if we did not have time to figure it carefully, or to get particulars, for fear that someone else would get on the wire ahead of us, and get the business from us. Let us console ourselves with the thought that we needed the business anyway, and that it really is not doing the other fellow any injury to get ahead of him, for quite likely he was bidding too low anyway to make the business of any real value to him. Let us forget the fact, and discharge from our memory for all time to come the thought that this business would be transacted just the same at a legitimate price if we only had the backbone to stand out for that price. Let us close our eyes to the fact that when the broker tries to impress upon us the desirability of any particular order, he may have interviewed others before us, and they may have quoted from experience. Let us believe that the broker has singled us out from amongst all the rest because he is interested in our welfare, and wants to see us prosper at the lowest possible prices. Let us forget that experience teaches us nothing unless we benefit by what it teaches.

Of course you have all read in the Book of Books where it says, "There is that which is crooked; who can make it straight?" And so if there is any crooked member in our fraternity who must go through life so, let us remember him, and offer him our sympathies. The way of the transgressor may be hard, but the way of a crooked man, if he must go through life so, must be harder.

Cold Weather Closes B. C. Coast Mills

Severe cold weather on the coast in B. C. which commenced shortly after Christmas has resulted in the closing of nearly all the mills and logging camps and has given quite a setback to the industry for the time being. Latest reports are that the snowfall has been very heavy making logging operations practically impossible, as most of the mills depend upon the logging camps for their continual supply of logs, the result has been the shutting down of the mills also. Many lumbermen see in this a blessing in disguise as it will have the effect of still further stiffening prices, which have already made substantial advances during the last few months.

Western Canada Agog with Optimism

Demand Increasing and Prices Advancing — Large Crops Create Good Trade—U.S. Orders Coming to Canada

Mr. Hugh A. Rose, eastern representative for the Canadian Western Lumber Company, of Fraser Mills, B. C., returned to Toronto on January 19th from his annual visit to the head office of the company at Fraser Mills. Speaking of trade conditions in eastern Canada, Mr. Rose had nothing but encouraging opinions to express. The demand for all kinds of B. C. timber, lumber, shingles, etc., has been increasing rapidly since the middle of last fall. This improvement has effected the whole industry and Mr. Rose states that every lumberman in western Canada is looking forward to a good season's trade during 1916.

There are several important factors that have brought about this improvement. One of the chief influences has been the enormous crop harvested in the prairie provinces last fall. The crop of 1915, as everyone knows, was abnormal, and it is hardly reasonable to expect that so great a crop will again be harvested in 1916. Every available farm hand was occupied late into the fall of 1915 in harvesting operations and in making shipments of the crop. The result is that there was, comparatively speaking, only a small amount of fall ploughing and there will, therefore, be a corresponding decrease in the acreage under cultivation for 1916 crops. In connection with the crop of 1915 there is apparently a serious problem before the country arising out of the extent of the crop as compared with the facilities for its movement. The indications at present are that, even with the three transcontinental railways, it will take the best part of a year, if not more than a year, before the last of the 1915 grain is shipped out of the west. This situation was recognized at an early date last fall by practically everybody in the west and the result was an immediate and widespread demand for lumber and timber to erect granaries so that the crops could be stored pending shipment. This was the commencement of the improved demand in the west. Shortly following this there came a great increase in the demand for lumber in the United States. This was caused by the great industrial activity in the first place by enormous war orders received by United States manufacturers. This put into circulation almost fabulous sums of money and it was followed quickly by an influence having an even greater and more direct effect upon the lumber industry, namely, the ordering of immense quantities of southern pine by the allied buyers for use in connection with the carrying on of the war.

Such an abnormal demand for lumber and so great a general increase in industrial activity naturally put an immediate and heavy strain upon the railroad companies which were driven into the market to secure lumber for car building material. In the course of a very few weeks it became apparent that the southern pine mills, driven to their utmost capacity, could not handle the great demand for lumber. Prices were rapidly advanced but the demand continued and in a short time the lumber mills in the Pacific Coast States began to receive the overflow orders. It was not long after this that even the Pacific Coast mills found themselves unable to handle all the orders coming their way. The demand has not only kept up, but has increased. The general industrial activity throughout the United States has led to the erection of warehouses and private homes to such an extent that practically every mill in the United States is now turning down business and many of the orders are flowing over into Canada.

British Columbia mills are today shipping extensive quantities of their product into the United States, bringing about a complete reversal of the situation of a few years ago, when United States mills were ruining the business of Canadian mills in the prairie provinces. Not only have the mills of B. C. been called upon to cater to United States trade, but some of the large spruce mills in the prairie provinces have been placed in a similar position. Several of these mills, which formerly were able to put their stocks into a few points in the middle west such as Chicago, and Minneapolis, are today shipping spruce right into New York city.

During January, the weather conditions on the Pacific have been unfavorable for manufacturing. Extreme cold has prevailed for several weeks and when Mr. Rose left B. C. he understood that there was scarcely a mill upon the Pacific Coast either in the United States or B. C. that was operating. This shutdown, of course, will only be of a very temporary nature, but when one considers the enormous producing capacity of the mills he will see that the effect upon trade conditions must be considerable. Moreover, this compulsory reduction in output has come at a time when stocks of lumber in all parts of the country are badly broken. Mr. Rose, during his trip to and from B. C., observed closely the conditions in the towns and cities through which he passed. He travelled by the Canadian Northern Railway and he reports that, practically everywhere, he saw retail yards in which the chief feature was the fence surrounding an almost vacant lot. The lumber piles had been reduced to practically nothing wherever he had an opportunity of making observations. De-

pendable reports which his firm had received from all parts of the country indicate that this condition is general.

Under all these circumstances it is natural that lumbermen in Western Canada should feel encouraged in regard to present conditions and the outlook. Mr. Rose says that he never came across in all his experience such remarkable optimism as prevails in the West today. No one will even listen to a suggestion of the possibility of anything but an enormous volume of business at splendid prices during 1916.

The closing down of the coast mills is the direct result of the heavy snow fall and cold weather in the logging camps. In B. C., the logging operations are carried on almost entirely by machinery and railroads. It is impossible to conduct these operations when the country is under a heavy blanket of snow. The mills count upon a continual inflow of logs from the woods, and when this is interrupted the production of lumber cannot continue. As the shutdown is universal no one mill is effected more than others. There is no fear of losing employees as there would be if one mill were closed and another running. The employees naturally remain and wait from day to day expecting the plants to be re-opened. The net result therefore is a great reduction in the volume of output which will naturally be an additional factor in stiffening prices. Prices on practically all lines of B. C. timber, lumber and shingles have increased considerably during the past few months and further advances are practically certain. The door trade situation in B. C. has been improving greatly of late, in a manner similar to the situation in connection with other lines of wood goods. Every door factory in fact from the California line north is loaded with orders, and prices have advanced from 5 to 7 points, or 28c to 35c per door in the last two months. This is due to several causes; increased demand, the increased cost of fir lumber and the scarcity of labor. The labor situation in B. C., partly as the result of the heavy enlistment for overseas service, has become acute.

One of the chief topics of discussion among the lumbermen of the Pacific Coast, Mr. Rose said, was the proposal of the Provincial Government to encourage the building of a number of Diesel engine schooners, as mentioned in recent issues of the Canada Lumberman. The proposition is being undertaken by a private company made up mostly of lumbermen, the understanding being that the Government will assist the undertaking by means of guarantees. Every lumberman who is interested in the export business today is also discussing the situation in connection with the Panama Canal and looking anxiously forward to the time when it will be re-opened for general traffic. It has been a severe blow to the industry upon the Coast that the Canal has not been available for shipments of late.

The Prairie Lumber Trade During 1915

Encouraging Conditions Growing Out of Several Years of Depression—Building Operations Increasing—Lessons Gathered from Adversity

There is no gainsaying the fact that during 1915 the lumbering and allied industries of Western Canada had a very quiet year. The war, of course, was the main cause, owing to the fact that the Prairie Provinces have hitherto obtained most of their money for railway building, municipal improvements and large engineering works from Europe. Another factor which made 1915 below the average was the poor grain crop of 1914. However, it should be noted that the entire year was not a dull one for the prairie lumbermen. Until September there was very little business obtainable except war orders, but during this month a sudden change came over the industry. About this time it became known that Western Canada had reaped its record crop—in fact two crops in one—it being estimated to value over $460,000,000. This naturally caused great optimism in all lines of business. At once there became a distinct revival in the lumber trade. The farmers began to pay their debts to the banker, to the government for their seed and grain, interest on mortgage loans, country store bills, machinery, and lumber bills.

Retail lumber dealers, who had been carrying extremely low stocks, began to stock up. This caused many mills, in order to meet this sudden demand, to start operations, and for many weeks the retailers were unable to obtain stock quick enough from the Coast and Mountain manufacturers to fill their orders. Most of these orders were for lumber for farm constructional purposes, to erect granaries, implement sheds and portable houses. Almost every dealer, consequent upon the huge demand for shiplap, six inch clear strips and dimensions, found himself cleared out of these commodities shortly after this revival, which continued until the end of November.

A strong advance occurred about November in prices in the yellow pine belt, occasioned by the large war orders which were given on account of the shorter ocean haul. This forced Eastern buyers, accustomed to having their requirements filled from the South, to place their orders on the Pacific Coast on both sides of the International boundary line. This factor, coupled with a shortage of stock, and the large number of mills closed down indefinitely, has caused a sharp advance in price by the manufacturers of all classes of lumber.

An encouraging feature of the review of the year's doings in the lumber trade in the Prairie Provinces is the fact that the years 1914 and 1915 have taught the lumbermen—both buyers and sellers—many lessons which can only be learned in the hard school of experience. One of these is in the matter of credits. The situation in this respect has materially improved in so far that the seller has discovered that it is just as important for him to give attention to getting paid for his material as it is for him to find a market in which to sell it. One large Winnipeg retail lumberman, when interviewed by the Winnipeg representative of the Canada Lumberman, said that the buyer has learned what it means to be in debt and to be obliged to sacrifice his holdings in a poor market in order to meet the demands of his creditors. This is one of the lessons which 1914 and 1915 have taught our Prairie lumbermen to remember. It is to be hoped that it will not require any further demonstration to make them see the folly of a loose credit policy.

A third point of interest in the retail lumber trade in the west is that many yards have been withdrawn from points where there was an over supply. This is a very important factor in weighing the pros and cons in the annual review of the lumber trade. This fact is one which should be entered upon the credit side of the ledger in estimating the losses and gains of the lumber trade of the Prairie Provinces for 1915.

It is difficult to forecast what is in store for the Prairie lumbermen for 1916. It appears certain that there will be more building than during 1915. To what degree this will materialize will depend very largely upon the extent to which the retailer may be disposed to throw open the "flood gates" of credit. It will, furthermore, depend to a great extent upon what attitude the banks find it possible to take in loaning money to farmers.

City building, however, will again be poor. In the country districts we cannot count upon much residential building in the larger towns, but we can, unquestionably, look forward to a brighter outlook in industrial building. Already there has been announced to be erected this spring a new bank building for the Bank of Hamilton at Winnipeg. One of the largest firms in Winnipeg is to erect a five-storey warehouse as soon as the weather moderates. Work will proceed on Winnipeg's new $13,500,000 aqueduct. $15,000,000 will be spent on road construction in Canada during 1916. On January 10 the Provincial Government of Manitoba sold bonds valued at almost $1,000,000 in New York. This money will be used for building purposes such as the finishing of the $4,500,000 legislative building at Winnipeg. At Regina a $1,000,000 oil refinery plant will be erected by the Imperial Oil Company. In Northern Alberta the sum of $10,000,000 will be spent this year on a scheme to develop a district lying between Athabasca and Fort Vermillion, a distance of 300 miles. The scheme includes the development of coal mines, the construction of a line of steamers for the Peace and Mackenzie Rivers, the manipulation of the by-products of minerals and other measures. It is anticipated that work will start early in the spring. Throughout Alberta, Manitoba and Saskatchewan new flour mills are being erected. Others will be started when the frost gets out of the ground. At Fort Frances, which, geographically is in Western Canada, there is to be constructed a new mill having a capacity of at least 2,000 barrels per day. All these construction features, which are only picked from many similar items, should undoubtedly tend to help the lumber trade in the Prairie Provinces.

In conclusion, there appears to be a great opportunity for the lumbermen of Western Canada to do a big business during 1916. The Prairie farmers will have plenty of money, and the volume of business possible is almost incalculable. They will erect dwellings, barns, sheds and outbuildings. A sign of what is forthcoming is shown by the fact that the Western Retail Lumbermen's Association recently issued 25,000 plan books of farm buildings and not one remains. A further issue, which has just been published, has been completely sold out.

After one of the worst periods of depression in the history of the lumber business of Western Canada it seems certain that the industry is now on the upgrade, and it is most probable that the spring of 1916 will see a distinct revival in the lumber industry of the Prairie Provinces.

In the Public Eye

A budget of comment on men and things of moment presented in the interest of our readers, independent of party politics and with malice toward no one.

Brigadier-General—pardon me, Sir Alexander—Bertram is off to summer lands in search, we are told, of new health, and hurling through the air in his direction goes a title. And surely no man ever tried so hard to earn the Government gratitude the title implies. Sir Alexander has loaded all the cares, crimes and virtues of the Shell Committee on his shoulders and tried to take them south with him. And the Government cares not where they go so long as they are out of sight and have any kind of a chance of being out of mind. But the public refuses to forget some things—and the Shell Committee is one of them. The public wants to know all about it, and is clamoring for an investigation so insistently and audibly that the Conservative party are hearing it even above the calls of party loyalty. That old-time Conservative organ the Hamilton Spectator is one of the latest to climb the fence and voice the sentiments of its subscribers. The Spectator hasn't made any half-way jump like the Ottawa Journal. It places the responsibility where it belongs—on the shoulders of the government. In an editorial dealing with the Shell Committee the Spectator says:

"Upon the Dominion Government rests the duty of setting on foot a most thorough and rigid investigation of its operations from beginning to end, and we cannot doubt that the ordaining of such an investigation will be regarded as one of the first tasks of Parliament at its approaching session."

How many more prominent Conservative journals will have to speak before Sir Robert Borden realizes that the machine oilers by whom he is surrounded do not voice the sentiments of the people?

* * *

Is Canada to receive no more shell contracts? This idea prevails in certain quarters. Still, it was only the other day that Lloyd George was appealing to the patriotism of Glasgow workmen. And that appeal surely carried a conviction that the Empire needs all the munitions her factories can make. Does it all mean that so far as munitions and munition contractors go Canada is not looked on as part of the Empire, but rather as a neutral country? Are our contractors put in the "cold business" class occupied largely by our Yankee cousins? Has Britain refused to forget that when men cried from the trenches for shells the Canadian manufacturer came forward with a dollar's worth of shell in one hand while the other was held out for $5.00? Are we to give our sons to the Empire by the half-million and yet to have a cold, hard, commercial rating that belies our loyalty? Is Canada as a whole to suffer that a few may become rich? These are questions we are not to ask. The answers might harm some of our alleged leaders. And we must be loyal to our leaders rather than to the Empire and the freedom the continuance of that Empire assures us.

* * *

"Three million dollars is the value of Manitoba Agricultural College buildings as they stand, including the site and furnishings, according to an official report made to the Government by the Canadian Appraisal Company of Montreal, appointed some time ago to make a valuation of the Provincial buildings. The Agricultural College cost the Province approximately four million, it was stated in Government circles. Where did the other million dollars go?"

Let me see, was not the Hon. Bob Rogers then Minister of Public Works?

* * *

The real test of sacrifice is now at hand. It comes not in the call for half a million men, but in the answering of that call. It comes when men who love not war but peace, not the blare of trumpets but the quiet fireside, are asked to prove that they love their country more than all else they hold dear in life. It comes when men are asked to give up good positions with the ease and comfort that accompany them, to serve as privates in the ranks—to face hardship and death, not for glory or love of excitement, but as their duty to that Empire that has guaranteed them liberty and the pursuit of a certain amount of happiness.

* * *

Nor has our business community yet learned the real meaning of rising to the occasion. Some lines of trade have been impaired by the war, but on the whole Canada is enjoying a very reasonable prosperity. We have given, some of us not over liberally, to the Red Cross Fund and the Patriotic Fund. But I venture to say that not one of us has been compelled to deprive himself to any serious extent in the giving, while most of us enjoy our usual comforts and luxuries in the same old way. It is no hardship to have to give half a loaf while the baker shop around the corner is still doing business and your bank account shows a goodly balance. It is when you have only one loaf and there is no more in sight that the giving hurts.

* * *

By the way, it looks from here as if Mr. Acton made an awful mess of that Hopkins clothing charge. He made his charge as bold as any lion and then when he got in front of Sir Charles Davidson he wanted to apologize so hard that he hired a lawyer to help him do it. He was evidently so unused to court procedure that he became nervous and engaged a lawyer even more nervous than himself. It never occurred to either of them to ask to have Hopkins' Toronto partner called for examination. To be sure he is a silent partner, but who knows but that the commission might have induced him to break his silence. There was Hopkins' bank account. Might that not have thrown some light on what happened to Hopkins in connection with one or more contracts that seem to have got tangled up with his real estate business. It might have shown where the money came from that is keeping Mr Hopkins in New York. Or, if Mr. Hopkins' silent partner had been called might he not have been able to explain just why Mr. Hopkins had at this somewhat inconvenient season ceased to bother about clothing contracts and taken such an extended vacation. Mr. Acton either went too far or not far enough. He should never have put his charge in print unless he intended to fight it all the way through. The sudden fright he developed reflects credit neither on himself nor on the trade press.

* * *

There has been so much Bertram in this column that some of his friends accuse me of harboring a grudge against the doughty knight. But far be this from the fact. I regret to report that previous to the appointment of the Shell Committee I did not know there was such a person as Sir Alexander on this fertile continent. But you will readily admit there has been much Bertram in the Shell Committee. According to his own modest statement he was simply all of it. He let the contracts and saved the money. Others had been appointed by the Government to assist him in this great work, but he wanted it well done, so he did it himself. Others might be swayed by personal preferences or outside influences. Of himself only was he sure. He burned the midnight oil and wore himself out in health that the Empire might live. We know he did, for he has told us so himself. Consequently, when you discuss the Shell Committee you must discuss Sir Alexander Bertram. All we ever asked for him was fair play—a full and free investigation that would show the grand work he has done for the Empire to which we belong and for Sir Sam Hughes, possibly the greatest of its citizens.

* * *

"We must take steps," said Mr. Walter Runciman, in the Imperial Parliament, "to see that Germany is unable to carry on a trade war against the entente allies after peace is signed." And it is pertinent to ask what Canada is doing in this connection. The allies are so busy whipping Germany into submission that they have little time for after-war plans. But no matter how badly the Teutons are beaten they will emerge from the war with their business organization unimpaired. They will be ready to jump in and command the world's markets the day peace is signed. They must have on hand a tremendous amount of manufactures for which the British fleet has prevented them finding a market. Once the seas are open the Germans will be busy. And the only way to curb their commercial invasion of the allied countries is to build a tariff wall around the central powers. Make it so high and strong that German trade aggressiveness will be held in check till the allies have had time to organize their commercial forces. This defensive measure is necessary from a military as well as a commercial standpoint. For so sure as Germany's commercial campaign is assured, just so soon will she proceed to prepare for another military onslaught on the world.

* * *

A national coal strike is threatened in Great Britain if conscription is put into effect. The Welsh Federation of Coal Miners, by a vote of 163 to 82, adopted a resolution in favor of a walk-out of miners in England, Wales and Scotland, if compulsory military service is inaugurated. If Lloyd George were the strong man his followers would have us believe he would take the leaders of these miners out and shoot them.

* * *

The Minister of Militia has asked that "men of standing in business, professional or mechanical life, will send their names to him." He conveys the idea he wants them as officers for he is further quoted as saying: "We want to know who is who before we make appointments or permit the raising of any new regiments under new auspices." But naturally the question arises as to whether the Minister means what he says or is simply making a bluff to cover some of the practices that have hitherto governed the appointment of officers.

Now if Sir Sam was as frank as he is loquacious would he not have wound up his statement with "only those having political influence need apply." For the past has shown that numbers of officers have been chosen not because of their fitness or capacity but for the amount of political pull they can develop. There are hundreds of incapable Canadian officers now stalled in England, so I am told. They may easily be found around the Savoy Hotel in London, having a good time at the expense of the Canadian taxpayer. With

rare exceptions the efficient have reached the front. They have helped cover Canada's name with glory. But thank heaven that every officer whose pull and influence secured him an appointment has not been allowed to reach France.

* * *

But why should this sort of thing be permitted in a country that is partially intelligent, more or less free and inclined to be democratic? Why should we be the victims of a party system that is all the more contemptible because it is half hidden under a cloak of hypocrisy? If "to the victor belongs the spoils" is to be the party system of this young country let us be open and above-board about it. Let us not fool ourselves with the idea that government is being carried on by the people for the people but announce to the world that our government is by the party for the party. In short, if we are to have a patronage system, give us one of the good old Yankee variety, where every office holder pays tithes to the party and knows the costs of a job beforehand. They make no bones about it. This sneaking method of pretending virtue while practising deceit fills us with disgust.

* * *

Canada has now more than a hundred knights—more than could find place at King Arthur's famous round table. She also has a minor aristocracy made up of honorary colonels, etc. And while the wearers are doubtless proud of their titles it is doubtful if even those who have honestly earned them are more respected because of them. There are others of course who hang to a rather precarious fame by the handle their title affords. But great Canadians do not require a title to keep their memory green in the minds of their country; others who have been "honored" by their country or rather by their party, do not receive more respect because they have been hung on a hook a trifle above the democracy that is the backbone of every new country. Sir John A. Macdonald is still "John A." to the men who loved and followed him; Alexander MacKenzie still holds a place in Liberal hearts that will never be attained by many a man who has been "decorated by his King." If titles have any value at all in Canada it is because they foster democracy. The man who refuses a title is a **patriot;** the man who accepts one is often more or less of a joke.

* * *

The same government which pays 5½ per cent. interest on war bonds keeps the rate of interest on post office savings at 3 per cent. Does said government wish to convey the impression that its bonds are twice as great a risk as money in the post office, or is it merely trying to create a market by offering bonds at bargain prices? Surely the government wants the people to save. Why not pay them a more attractive rate of interest till they have saved enough to invest in bonds? Why not encourage thrift among our people?

* * *

Will the Minister of Militia deny that he is directly or indirectly financially interested in the Ross Rifle Company?

* * *

The Shell Committee, its alleged crimes and self-asserted virtues, has been brought before Parliament by Dr. Pugsley, a Liberal statesman who has probably been taught that he who is without sin should throw the first stone. It is to be regretted that what should be only a business proposition is thus being made more and more of a political question. It is unfortunate that Sir Robert Borden failed to listen to the voice of the more independent of the Conservative press and order a full and free investigation into the workings of that committee. If there was nothing to hide he had nothing to lose. If there was something to hide a full investigation ordered by himself would free him from all blame and responsibility. Dr. Pugsley has made so many charges, though insignificant in comparison to the real facts, that an investigation should follow and if any or all of the charges are sustained the Government must share responsibility with the Shell Committee and the profiteers I have felt from the first that such an investigation was necessary for the protection of the manufacturing interests of Canada and with me those interests come before the political welfare of Sir Robert Borden, whom in many ways I admire.

* * *

In a recent issue, concerning shell committee charges, the Montreal Star, (Con.) says:

"In any case, the Government cannot permit these shocking and humiliating charges to remain uninvestigated."

* * *

After a long silence the peeved voice of the Opposition Leader is again heard in the land. He should be ashamed to criticize the Government, even if they deserve it. He has waved the British flag, he has told us what a great Britisher he is, but he has failed to live up to it. What is he doing to induce his countrymen to play their part in the cause of freedom? Is his a "soul so dead" that he cannot at least keep those of his own kidney, like Bourassa and Lavergne and Croquette quiet?

* * *

When are we going to get some information concerning the Ross Rifle? Rumors suggest that after the disastrous fight at Langmarck the British Government made a report to Ottawa concerning the rifle. If so, why is this report not made public?

SEARCHLIGHT.

Personal Paragraphs

Mr. Arthur H. Campbell, of the Campbell-McLaurin Lumber Company Limited, Montreal, has been appointed a member of the Transportation Committee of the Montreal Board of Trade.

Mr. Duncan McLaren of the Union Lumber Company, Toronto, recently underwent an operation and has been confined to the hospital for a few weeks. His many friends will be pleased to learn that he is making satisfactory progress towards a complete recovery.

At a recent meeting of the directors of The Shevlin Company, a holding concern for the stocks of the various Shevlin-Carpenter-Clarke Companies in Minnesota, Ontario and the west, Elbert L. Carpenter was elected president to succeed the late Thomas L. Shevlin, and Hovey C. Clarke was chosen vice-president.

The Canadian Western Lumber Company is increasing its selling force in Eastern Canada by appointing a representative at Montreal in the person of Mr. R. H. Underhill who will cover Quebec province under the direction of the Eastern sales office at Toronto. Mr. Underhill formerly covered Western Manitoba for the Canadian Western Lumber Company.

The many friends of Mr. J. Douglas Moir, of Wm. Whitmer & Sons Inc., will be glad to hear that he passed the crisis in a very acute attack of pneumonia on Monday January 24th at St. Luke's Hospital, Ottawa, Ont. Mr. Moir left New York on the sleeper on Sunday, January 16th to attend the 8th Annual Meeting of the Canadian Lumbermen's Association and was taken ill suddenly on the way up. He was conveyed from the Chateau Laurier to the hospital by ambulance shortly after his arrival. It will be two full weeks or more before Mr. Moir will be able to return to New York."

Campbell & Johnson Dissolved—New Firms Formed

The firm of Campbell and Johnson, Traders Bank Bldg., Toronto, one of the best known wholesale lumber firms in Ontario is being dissolved by mutual arrangement of its members. Two of the members of this firm, Messrs. J. L. Campbell and W. G. Paynes are entering upon the lumber business in partnership under the firm name of Campbell and Paynes. Mr. J. P. Johnson and his son Mr. A. K. Johnson will also open offices in the Traders Bank Bldg., at an early date and carry on a wholesale lumber business.

Messrs. Campbell and Paynes will continue to occupy the offices formerly occupied by Campbell and Johnson at 1521-22 Traders Bank Bldg., Toronto. The character of the business carried on by them will be the same as that heretofore carried on by Campbell and Johnson, namely, a wholesale lumber business, dealing especially in eastern Canadian woods and B. C. shingles and lumber.

Mr. J. L. Campbell is one of the best known wholesale lumber dealers in Ontario. Before coming to Toronto he was in business for a number of years in the west and still retains his connection with the firm of Campbell and Ferguson, Melita, Man., a progressive retail lumber and hardware business. Mr. Campbell started business in Toronto in 1907 with the firm of Campbell and Carman which was shortly afterwards succeeded by the firm of Campbell and Johnson. Six years ago the firm took Mr. W. G. Paynes into membership. He has been a member of the firm ever since. The new firm of Campbell and Paynes will be represented on the road throughout Eastern and Western Ontario by Mr. W. G. Paynes and Mr. J. L. McCormack of Brantford, Ont.

Abitibi Pulp and Paper Company's Progress

According to a statement by Mr. F. H. Anson, president, the Abitibi Pulp and Paper Company, now employs 800 men in the pulp and paper mills and about 2,400 in logging operations. During the summer 1,500 men are engaged in the mills and in the woods. Of this number 1,000 are employed at Iroquois Falls, where a model town has been established. The buildings include rooming houses, cafe, hotel, and 45 employees' dwellings, and it is proposed to construct 55 additional dwellings. The output of newsprint totals 215 tons per day, most of it going to the United States, and it is expected that the company will soon be turning out 225 tons per day. Mr. Anson states that the mills have proved to be efficient in every respect. Of the 25,000 horse power generated by the company at Iroquois Falls, 22,000 horse power is now being utilized, and the balance will be required when the maximum output of the mills is reached. The company is manufacturing 250 tons of ground wood and 50 tons of sulphite.

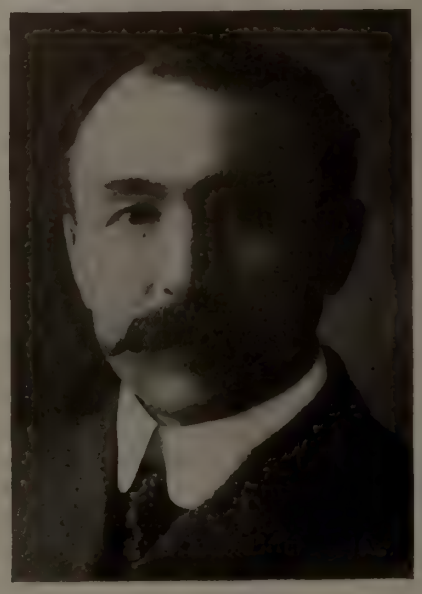
Forty-six vessels sailed from the port of Dalhousie, N. B., during 1915, carrying 17 million feet of deals, etc., 21,575 cords of pulpwood and 3 million laths.

Mr. P. D. Gordon, of Mason, Gordon and Company, Montreal, has been appointed treasurer of the Montreal Board of Trade.

Eighth Annual Meeting of the C. L. A.

W. E. Bigwood, Toronto, Elected President—Important Resolutions Carried—Officers for the Current Year

W. E. Bigwood, Toronto, the new President.



Senator George Gordon, Cache Bay, the retiring President.

The eighth annual meeting of the Canadian Lumbermen's Association was held at Ottawa, in the Chateau Laurier, on Wednesday, January 19th. One of the chief events of interest of the meeting was the reading of the president's address. The report referred to the fact that, notwithstanding the abnormal situation brought about by the war, trade conditions in Canada could not be called desperate. Reports of various recent annual bank meetings indicated that Canadian finances were on a solid foundation. Referring to the lumber trade the report stated that for some months past articles had appeared in the press regarding the enormous quantities of lumber that are being consumed at present by the allies and the possibility of disposing of still further tremendous quantities of lumber, portable houses, etc. Other reports had been published regarding the presence in Canada of alleged representatives of the Belgian and French Governments looking towards the placing of large contracts for lumber, etc. In every instance careful enquiry had been made by the Association, and so far they had yet to learn of any duly authorized representatives of these governments being in Canada.

The serious difficulty in regard to this branch of the business was the prohibitive freight rates for ocean transport. The president referred in detail to the situation in regard to tonnage but was unable to afford any definite encouragement in this regard.

Referring to the work of the Association the report stated that the time had now been reached when they must decide whether they should further develop various branches of their activities.

The report of the treasurer showed that the Association had had a successful financial year, coming through it with a substantial credit balance.

The report of the Executive Committee stated that there was a very strong feeling that the trade report branch of the Association should be developed to its full capacity, somewhat on the lines of the trade report branch of the National Association. To carry this out it would of course be necessary to increase the staff of the Association. The executive also asked that the Association should be authorized to develop the work of collecting claims or debts.

Reference was made to the importance of seeking the co-operation of architects in promoting the use of wood. The secretary of the Association had been in Toronto recently and had been invited to attend a luncheon of the Lumbermen's Section of the Toronto Board of Trade, at which there was a discussion regarding a proposal of the Toronto city architect that lumbermen should assist in securing proper consideration for lumber in proposed new city by-laws. In connection with the Forestry Branch of the Department of the Interior, the report stated, tests were being made at McGill University in order to establish statistics regarding the strengths of all kinds of timber. This was a most important step in the interests of the lumber industry of Canada.

An interesting reference was made to wood block paving, and the fact that most of the business in this line had gone to longleaf pine. Investigation, however, had shown that Canadian Norway pine was as good as, or better than any other wood for this purpose.

The committee also suggested the advisability of organizing a campaign for the advertising of lumber as against substitutes for wood.

The report of the committee on transportation dealt extensively with matters which had been under consideration throughout the year, such as ocean freight rates and the eastern freight rate case.

Secretary's Report

The secretary's report showed that Canada's imports of merchandise (not including coin and bullion) during the twelve months ending November 30th, were as follows:—

1913	$665,196,828
1914	495,935,908
1915	435,342,586

or a total reduction in the two years of nearly $230,000,000. Exports on the other hand were as follows:—

1913	$419,362,646
1914	397,905,887
1915	559,152,052

or an increase in the two years of $139,789,406. In the two years Canada had therefore improved her position by $369,643,648.

Exports of products of the forest for the same periods were as follows:

1913	$42,875,089
1914	41,954,640
1915	48,925,230

Officers for 1916

The election of officers for the year 1916 resulted as follows:—Hon President, J. R. Booth, Ottawa; President, W. E. Bigwood, Toronto; 1st Vice-President, Angus McLean, Bathurst, N.B.; 2nd Vice-President, Arthur H. Campbell, Montreal; Hon. Treasurer, R. G. Cameron, Ottawa; Directors: The Hon. Geo. Gordon, E. A. Dunlop, E. R. Bremner, W. C. Laidlaw, R. C. Walker, Duncan McLaren, A. E. Craig, Gordon C. Edwards, W. E. Bigwood, W. J. Lovering, His Hon. Sir. D. C. Cameron, K C M G., A. L. Mattes, Angus McLean, Arthur H. Campbell, George W. Grier, Alex. McLaurin, W. G. Power, W. C. Hughson, J. B. White, John Hendry.

A number of resolutions were carried, among them being the following:—

To take such action as is necessary in connection with the approaching visit of premiers and cabinet ministers from Australia and New Zealand, and also in connection with the proposed Imperial Trade Conference which may be held shortly in England;

To take such action as is necessary in connection with the probable enquiries from Great Britain and the allied nations for lumber, timber, portable houses, etc.;

To assist the "Economic and Development Commission" in every way possible;

To communicate with engineers in all cities, towns and municipalities urging the use of Canadian woods, particularly for wood block pavements.

A resolution was also passed by the Association to appoint a committee of three members to look into the question of insurance on lumber mills. It is expected that the outcome will be the formation of an insurance organization among Canadian lumbermen.

In the evening a joint banquet was held by the Association and by the Commission of Conservation, the Canadian Forestry Association and the Canadian Society of Forest Engineers. The banquet was exceptionally interesting and successful. The speakers of the evening were:—Hon. Sir Geo. E. Foster, Rt. Hon. Sir Wilfrid Laurier, Hon. Dr. Roche, Dr. Michael Clark, Dr. F. D. Adams, Dean of Science, McGill University, Attorney-General Daniels of Nova Scotia.

Quebec Spruce Deal Stocks Heavy

Editor Canada Lumberman:—

The demand for spoolwood is good owing simply to the thread manufacturers being unable to secure their usual supplies in Europe via the Baltic. We do not look for it to continue after the war is settled.

Large stocks of 3 in. spruce are on hand in all the yards. The output this winter will be reduced to some extent. Prices are about the same as in 1915.

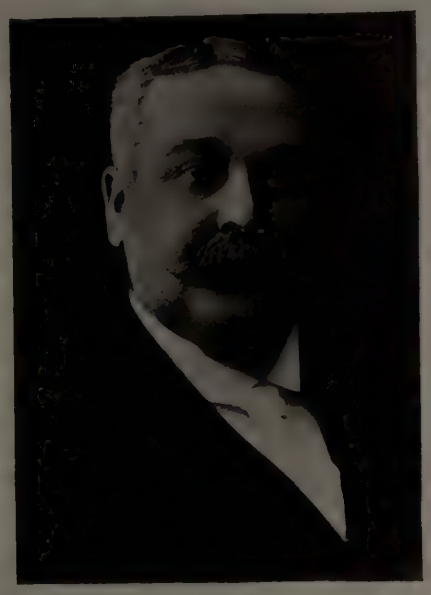
Stocks of planks and boards are heavy. A very small quantity was moved last season, and prices are low. This refers to narrow widths sawn after cutting the 3 in. We expect that the market will improve in the United States this summer.

Ocean freights are a much unknown quantity. Buyers are leaving now to charter in Great Britain.—Quebec manufacturer.

Toronto Lumbermen Annual Meeting

Board of Trade section elect officers for 1916—Retiring chairman's interesting address

G. W. Boake, the new Chairman



J. L. Campbell, the retiring Chairman

The annual meeting of the Lumbermen's Section of the Toronto Board of Trade was held on January 17th and was largely attended. The chief item of business for the meeting was the election of officers, which resulted as follows:—chairman, Mr. G. W. Boake, of the Boake Mfg. Company; vice-chairman, J. B. Reid, of Reid & Company; executive committee, A. E. Clark, T. H. Hancock, T. E. Rathbone, A. E. Eckardt and C. W. Wilkinson; secretary and treasurer, H. Boultbee; programme committee, J. L. Campbell, A. E. Eckardt, W. J. Lovering and H. Boultbee.

An amendment to the by-laws was carried so as to provide that in future the annual meeting of the Section will be held on the first Friday in the year instead of the third Monday as formerly. This change was made so as to prevent the annual meeting from clashing with that of the Board of Trade.

Retiring Chairman's Address

The retiring chairman, Mr. J. L. Campbell, delivered a short address, opening with an expression of the appreciation which he felt at having been president of the Lumbermen's Section of the Toronto Board of Trade during the past year. Such work as it had involved on his part had been entirely a labor of love. The part he had enjoyed most of all was the social feature of the meetings of the Section. These meetings had given him an opportunity of meeting the other lumbermen of the city and of coming into close contact with them, which he had found to be very much to his advantage. There had been other important advantages also. The Section had been able to discuss many questions of mutual interest to the members from a business point of view. Mr. Campbell felt that possibly the members did not yet realize the advantages of association, provided by such an organization as the Lumbermen's Section. It was a good thing, not only to have an opportunity to discuss business questions, but also an opportunity to get together and become well acquainted with one another. In all business there was a great deal of competition and the impressions which men were likely to form of one another under the strain of competition were liable to be very diverse. On the other hand, if they had the opportunity of meeting one another socially they were certain to find out that the other fellow was not such a bad fellow after all. Social intercourse among business men promoted to a large extent a greater feeling of satisfaction and mutual confidence, which was after all, a most valuable asset in all business relationships. Business was conducted almost entirely on the basis of confidence. If by meeting together they could improve the confidence existing between themselves, their meetings were sure to be of great value.

In regard to the actual benefits derived from the Lumbermen's Section of the Board of Trade, these, on the surface might not appear to have been very extensive. The Section might not have accomplished a great deal in definite results. It had, however, accomplished a few things which he had already mentioned and in addition it had inaugurated a movement which had lead to the creation of a Lumbermen's Credit Bureau among the retail trade in Toronto, which would prove of great advantage to its members and, inasmuch as it enabled the retailers to place their business upon a more practical and a safer basis, it would be a corresponding benefit to the wholesalers.

In addition, the lumbermen now formed a part of the Toronto Board of Trade. Mr. Campbell felt that possibly they were inclined to under-estimate the value of such an institution as the Board of Trade. The services of the Board of Trade to its members were indeed of great importance. Large questions of general interest to the business men of the city were continually coming up and only through the co-operative action of a Board of Trade could they be handled to mutual advantage. Such questions as those regarding freight rates, and transportation matters in general were continually coming up for consideration and the only watch dog the business men of the city had was the Board of Trade. He believed that the Toroto Board of Trade had looked after its work in these lines very well. As an example, there had come up last year the important question of sanitation of railway cattle cars. The railway companies had wanted to charge $3.50 per car for this service. The Toronto Board of Trade had taken the matter up and brought about a reduction in the charge to 75c, thereby effecting a very great saving to the whole Dominion.

The Board of Trade had been the only body in Toronto that had had an eye to the Hydro-Electric By-law when it was submitted to the citizens for a vote. This by-law may have been a good thing or a bad thing. He thought that in principle it was a good thing. The Board of Trade, however, had been able to discover that certain things in connection with the by-law had been done in a slipshod manner. For instance, the by-law had been passed through the City Council without being considered clause by clause. He mentioned this merely to show that the City Council passed a good deal of loose legislation for which the people of the city had to pay the piper and it was a good thing, therefore, to have a watchful Board of Trade which would at least make an effort to protect the citizens' interests. The fact that the Hydro Electric by-law had been handled by the City Council in a slipshod manner was evidenced by Sir Adam Beck's promise to bring in legislation in the Ontario Legislature to overcome the weak points in the by-law. If the Board of Trade had not been on the watch this would not have been done and the by-law would have been sanctioned by the people without Sir Adam Beck's additional guarantee.

If the Board of Trade was thus able to demonstrate its usefulness to the citizens of Toronto it was their duty to support it and it was the duty of the lumbermen to do their share towards its maintenance. The Lumbermen's Section of the Board of Trade might not have been of any great benefit to the Board, but he thought that the influence which it had exerted was of a cumulative nature and had been appreciated by the Board itself.

In conclusion Mr. Campbell repeated his appreciation of the honor he had felt in acting as president of the Section during the year and expressed his hope that during the coming year the Lumbermen's Section would increase in members, usefulness and influence.

On motion of Mr. A. E. Clark, seconded by Mr. G. W. Boake, a vote of thanks to Mr. Campbell for his very capable and successful work as chairman during the year was unanimously carried.

Mr. Campbell then retired in favor of the new chairman Mr. G. W. Boake who conducted the rest of the meeting.

The Board of Trade elections resulted in two candidates nominated by the Lumbermen's Section being elected. These were Mr. J. B. Reid, elected by acclamation upon the Board of Arbitration, and Mr. Walter C. Laidlaw, elected as a representative upon the National Exhibition Association.

Better Trade Conditions in United States

R. S. Kellogg, secretary of the National Lumber Manufacturers Association in a report upon the trade during 1915, says:—"The close of the year 1915 finds the lumber industry of the United States emerging from a long period of depression—a longer one, perhaps, than that passed through by most of the other leading industries of the country. The immediate cause of this depression was the European war, which, for a time, cut off practically all export trade, and also, by reflex action upon the other industries in the United States, brought about a heavy falling off in the domestic demand for forest products in almost every form.

"Beginning last September, heavy foreign orders for lumber were placed in the South; the railroads which had been out of the market for a long time, came in with large requirements for car repairing and car building, which have been steadily maintained, while an exceptionally open fall facilitated building operations throughout the United States on an unusually extensive scale.

"From the middle of March, 1913, until the first of September, 1915, lumber production throughout the United States averaged greater than lumber shipments, with an inevitable increase of stocks on hand and a weakening of the market. Since the first of September conditions have been reversed. Lumber shipments have steadily exceeded lumber production. Stocks are being reduced to a normal basis, and prices are again getting upon a better foundation. Whether this in turn will lead to overproduction and demoralization as in the past remains to be seen."

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Wanted good sound Basswood logs, 12 in. and over in diameter. Quote best price F.O.B. cars. Apply Hay & Company, Limited, Woodstock, Ont. 3-6

WANTED—Four cars 1-in. No. 2 Common and Better Hard Maple. State when cut, lengths, widths, and price, with Toronto Freight rate. Box 286, Canada Lumberman, Toronto, Ont. 2-5

WANTED—A quantity of Hard Maple and Birch, both for immediate and future delivery. 1 inch and thicker. State quantity you have to offer, price and full particulars. Box 285, Canada Lumberman, Toronto, Ont. 2-5

Wanted

1 in. Soft Elm, 1 in., 1½ in. and 2 in. Birch and Maple, 1 in. and 2 in. Hemlock. Apply Box 299, Canada Lumberman, Toronto, Ont. 3-3

Maple Squares

Wanted to buy 700,000 Maple squares, 1 in., 1¼ in., 1½ in., 1¾ in. and 2¼ in. Lengths 12 in. and up. A. K. Hansen & Co., St. Peter Street, Quebec City. 3-6

Wanted to Buy

450,000 ft. 2 in., 2½ in., 3 in. and 4 in. log run Birch. Terms 75 per cent. cash on shipment, balance on arrival. Apply P. O. Box 643, Montreal, Que. 3-6

Grey Elm

Wanted 100,000 ft. of 1½ in. grey elm, No. 1 common and better, this lumber not to be edged, and can be loaded direct from the saw, but must be in 6 or 12 ft. lengths. Write for prices f.o.b. cars shipping point. Box 295, Canada Lumberman, Toronto, Ont. 3-6

Wanted for shipment whenever in shipping condition:
2,000,000 ft. 3 in. No. 1 Com. & Bet. Soft Elm
1,000,000 ft. 2½ in. No. 1 Com. & Bet. Soft Elm
1,000,000 ft. 2 in. No. 1 Com. & Bet. Hard Maple
500,000 ft. 2½ in. No. 1 Com. & Bet. Hard Maple
Box 274, Canada Lumberman, Toronto, Ont. 24-3

WANTED—During summer will need—
Soft Maple
Hard Maple
Birch
Beech
Elm
Ash
Basswood
Can use all grades or whatever you cut at your mill. What have you to offer?
Box 284, Canada Lumberman, Toronto, Ont. 2-5

For Sale–Lumber

For Sale

White Pine and Hardwood, estimated 300,000 feet, will cut to order. G. A. Patrick & Son, Delaware Saw Mills R. R. 2, Lambeth, Ont. 1-6

FOR SALE—Considerable quantity of hemlock ties suitable for Electric Railways, Sidings, etc., ready for immediate shipment. Monteith Bros., Rosseau, Ont. 24-3

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.
GEO. C. GOODFELLOW,
e Montreal, Que.

White Oak For Sale

Thirty thousand feet White Oak, cut, 1, 2, 3, 4 inches thickness, various lengths from 12 to 32 feet. Also odd sizes, including squares 4, 6, and 8 inch. A snap for quick sale.
CAMERON & CAMERON,
24-3 Beaverton, Ont.

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

Wanted position as band saw filer, long experience and good references. Box 300, Canada Lumberman, Toronto, Ont. 3-7

Position wanted as Band and Resaw, also round saw filer. Single cut. Five years' experience. Good references. Sober. Paul Laurin, Box 275, Bathurst, N. B. 3-3

Wanted position by experienced double cut band sawyer, accustomed to Spruce and Hardwoood. Best of references. Box 301, Canada Lumberman, Toronto, Ont. 3-3

Wanted position as mill foreman where one or more band mills are running. Sober and best of references. Box 302, Canada Lumberman, Toronto, Ont. 3-3

WANTED to hear from lumbermen who anticipate needing a mill foreman this spring, by an experienced mechanic who can give results, open to engagement. Any capacity. Box 283, Canada Lumberman, Toronto, Ont. 2-5

Situation wanted, a man thoroughly acquainted with pine and hardwood lumber, both grades and values, is open to take a position either in the purchasing or selling, where a fair to good salary will be paid. Apply Box 293, Canada Lumberman, Toronto, Ont. 3-3

Open for year round position April 1st to take full charge for company with large stock of logs interests of the sawing, grading, estimating and inspection of all shipments. Married man with twenty years of experience as lumber inspector and manager. Box 305, Canada Lumberman, Toronto, Ont. 3-4

Do not close down your planing mill, or stick in the mud this season. You might have to invest three or four thousand in machinery, etc., and pay me a salary of $2,000, but I can show you how to make your plant run full and overtime right up till Christmas, making a real live profit, and I can work out all the details. My record will convince you of my ability, and my plans are tried and proven. Besides, I can show you the promises of the necessary orders. Investigate to-day. No harm in writing for information, and the deal won't wait. This is no advertising proposition. If later you want to talk it over with me, you pay my fare and expenses from Toronto. Address Box 294, Canada Lumberman, Toronto, Ont. 3-3

Position Wanted

A young married man, 32 years of age, will be open for a position on or before March the first. Fifteen years' experience as inspector, scaler and estimator; will consider any other capacity; will go anywhere. Box 281, Canada Lumberman, Toronto, Ont. 2-4

Band Sawyer, five years' experience, references; will speak for ability and habits.

Filer, six years' experience, references; no proposition too large.

Foreman, thoroughly understand organizing a plant for quantity and quality, a good education and practical man.

A line to the undersigned box number will put you in touch with one or all of these men. Box 304, Canada Lumberman, Toronto, Ont. 3-3

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

WANTED at once, an up-to-date Band Sawyer for left-hand mill, Maritime Provinces. Must be a hustler and be able to crowd capacity. None other need apply. Box 292, Canada Lumberman, Toronto, Ont. 2-3

Hardwood Lumber Office Man wanted to handle buying and selling. Must thoroughly understand Northern Hardwoods, and have good Ontario connection. Married man preferred. Must furnish A1 references. State salary and experience. Box 306, Canada Lumberman, Toronto, Ont. 3

Wanted At Once

Competent warehouse and commissary manager for large lumber company in Maritime Provinces. Must have excellent recommendation and be thoroughly reliable. Good position for the right man. Box 282, Canada Lumberman, Toronto, Ont. 2-3

WANTED—By lumber firm in Northern Ontario a first-class office man who has had experience in the mercantile business, and who has a general knowledge of the lumber and logging business as far as office work is concerned. Single man between 30 and 45 years preferred. Apply Box 290, Canada Lumberman & Woodworker, Toronto, Ont. 2-3

For Sale–Machinery

For Sale

Steam Log Hauler with 14 Sleds, Wooden, heavily ironed. A Bargain. Apply G. C. Jackson, Auditor of Claims, C. P. R. Offices, Montreal. 2-3

FOR SALE—Second hand Bull Lathe, 60-in. swing, 84-in. bed. $150.00 cash; also a lot of Rubber Belting, 6 in. to 16 in., at Low Prices.
MOORINGS MACHINE SHOP,
1-4 40 Pearl Street, Toronto.

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

Machinery For Sale

One McGregor Gourlay second hand Resaw, 54-in. wheels, carries 5-in. saws, machine in first-class condition, only used on light work. Located in Central British Columbia.

Two second hand McGregor Gourlay Q. Y. Planers and Matchers, one 9-in., one 15-in. wide, in good condition, ran every day till October, when fast feed Matcher was installed. Located in Saskatchewan. Box 275, Canada Lumberman, Toronto, Ont. 1-4

Engine For Sale

Corliss Engine, 150 h.p., 18 cylinder, 24-inch leather belt, heater and pump, first-class condition, no fault, changing plant to electric. Inspect at Guelph Lumber Co., Guelph, Ont. 24-3

For Sale

Two 54 in. x 12 ft. Stationary Boilers, in use only 8 months, complete with full arch fronts, smoke box and stack, and all regular fixtures and fittings, working pressure 100 lbs.
WILLIAMS & WILSON, LTD.,
2-4 Montreal, Que.

WOODWORKING MACHINERY FOR SALE—1 20-in. American Wood Scraper; 1 42-in. Fay & Egan power feed band rip saw; 1 38-in. Atlantic tilting frame band saw; 1 Preston variable power feed rip saw table; 1 No. 10 Ober automatic handle lathe; 1 Ober double belt automatic handle sander; 1 No. 51 Crescent universal woodworker; 1 12-ft. Defiance equalizing double cut-off saw. H. W. Petrie, Limited, Toronto, Ont. c

Saw Mill Machinery For Sale

Second-hand Machinery for Complete Saw Mill, all practically new, in excellent condition, including Bullwheel, Steam Kicker, Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8-ft. Waterous Bandmill, 5-saw Slab Slasher, 48-in. Edger, Trimmer, also Independent Lath-mill, and Filing Room outfit. Power Plant complete. Offers accepted for all or any part. On view at the Waterous Engine Works Company, Brantford, Ont. t.f.

Business Chances

Factory Wanted

Wanted to rent substantial factory in Western Ontario. Prefer woodworking plant. Give particulars.
E. C. Bradley Lumber Company,
2-4 Cincinnati, Ohio.

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

Miscellaneous

Automobile for Exchange

We have a "Light Six" Chandler, 1915 model, electric light, self starter, and all up-to-date equipment, in good condition. Cost new $2,350. Will sell in exchange for lumber, any kind of lumber, dead cull and better, and will make a big cut in the price of the car. J. & W. Duncan, Limited, 1801 Ontario East, Montreal. 24-3

A Chance to Make Money on a Timber Limit

Newfoundland timber limit, 112 square miles, well situated right on railway and within several miles of ocean shipping port; will average nine cords pulp wood and two thousand saw logs per acre, spruce and pine. Present demand for pulp wood and with duty removed by Newfoundland Government, makes this an exceptional opportunity for investment at a minimum of outlay. The demand occasioned by the war and the proposed embargo on pulp by Sweden will make a timber limit about as valuable as a gold mine. Particulars from Box 277, Canada Lumberman, Toronto, Ont. 1-4

30 Replies

are often received to "Wanted" and "For Sale" ads. on this page. Even 50 replies are not an uncommon return from the investment of the small amount a condensed ad. costs. And isn't that good business—to get right into close touch with so many people interested in what you have to buy or sell? For you can be sure their transactions with you will not end when they have closed the business your single ad. announced.

They Profit Most Who Serve Best

The brief but forcible maxim heading this article is taken from the creed or other official utterance of the Rotary Club, an international association of successful business men. Its brevity and its simple truth are consciously or unconsciously acknowledged by all progressive business men. It appealed so strongly to a well-known wholesale lumber firm of Toronto, that they have unofficially accepted it as their business guide.

Toronto's wholesale lumber trade includes many men whose business principles are based upon the same idea, and it would not do to single out anyone of them as having a monopoly of appreciation of the profits derived from good service. One of the younger firms, however, that of Terry and Gordon, belong so definitely to this class that we need not apologize for saying a few nice things about them.

The firm of Terry and Gordon, of Toronto and Vancouver, confine their activities largely to the distributing of building lumber, lath and shingles.

A word about the personnel of this firm:—In 1901 Mr. H. J. Terry left the employ of the Dominion Radiation Co. and joined the staff of Mr. C. A. Larkin as travelling salesman. He showed exceptional ability in this field of endeavor and rapidly gained a thorough knowledge of the wholesale lumber business. In 1907 Mr. Terry severed his connection with Mr. Larkin and commenced business on his own account in partnership with Mr. J. K. Muir of St. Catharines, under the firm name of Muir and Terry. Through careful management and hard work this firm made substantial progress from the start.

On January 1st, 1911, Mr. A. E. Gordon joined the forces of the firm as a partner, and the firm name was changed to Muir, Terry & Gordon. Mr. Gordon brought with him a wide and successful experience in the lumber trade. Commencing with Mr. John H. Eyer in 1899 as bookkeeper and later as inspector, salesman and assistant manager, Mr. Gordon obtained a thorough training in all branches of the business. On January 1st, 1909, he severed his connection with Mr. Eyer to enter a wider field of experience as sales manager of the Ontario Lumber Co. Toronto, continuing there till he entered the firm of Muir, Terry & Gordon.

For four years this partnership continued, handling a greatly increased volume of business. On January 1st, 1915, Mr. Muir retired, the business being continued under the firm name of Terry & Gordon.

In March 1915, Messrs. Terry & Gordon opened a branch buying office in Vancouver, B.C., under the management of Mr. Frank W. Gordon a brother of Mr. A. E. Gordon. Mr. Frank Gordon's advent to the firm's forces brought an additional asset in the form of eight years' practical experience in the lumber business in Ontario and British Columbia.

In 1915 Terry & Gordon also added to their staff Mr. Frank A. Kirkpatrick whose long and successful experience as a practical lumber salesman is well known to the trade; also Mr. Ernest P. Sharpe who is fast coming into the front ranks as a successful and reliable salesman.

The firm are represented in Northern Ontario by Mr. Bert Morrison a thoroughly competent inspector and bushman of long experience, also Mr. W. D. Watt a sterling knight of the lumber rule.

Mr. Clarke Allen has held the position of accountant and office manager for the firm since January 1st 1912, having previously served The Rathbun Co. of Deseronto for twenty years as accountant and their successors Taylor & Green (now Jas. Taylor & Son) of Gananoque, as manager for four years.

As well as handling large quantities of the products of Ontario and Quebec forests, the firm are specializing in all British Columbia wood products, representing exclusively The British Columbia Timber and Trading Co., as well as several other prominent saw and shingle manufacturers of British Columbia, in Ontario.

The policy of this firm is an absolutely square deal to every man, and honest, wide-awake, and efficient service. They enter the year 1916 with every prospect of making a record turnover of satisfactory business handled, despite the somewhat depressed conditions brought about by the war.

The Canada Lumberman wishes them every success in their work.

Mr. A. Brostedt, district freight and passenger agent for the Canadian Northern Railway Company at Vancouver, B. C., in a recent interview said:—"Following the giant wheat crop and prosperity generally throughout the prairies, there is already a considerable demand for shingles and lumber. This should increase by spring into a good healthy trade. Between Chilliwack and Hope, on our line, several small shingle and lumber mills have been established, and these are now doing considerable cutting and are shipping to the prairie markets. Some 500 miles of new lines have been opened up by the Canadian Northern in the Northwest. There are many homesteaders in these newly-opened sections, who will require material which can be supplied in this province."

Union Lumber Co.
Limited

Dry Norway Lath

No. 1 6/4 x 3/8 x 4'
No. 2 6/4 x 3/8 x 4'
No. 3 6/4 x 3/8 x 4'
32"

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

For Sale or Lease

As a going concern—Situate at Sault Ste. Marie, Ont.

Up-to-date Saw Mill, Shingle, Lath and Picket Mill

DAILY CAPACITY		
	Lumber	120 M
	Shingles	12 M
	Lath	30 M
	Pickets	12 M

High level land tram to piling ground. Mill served by railway with 3 spur sidings. Approximately 160 acres available for booming logs adjacent to Mill, together with convenient dockage facilities.

For further particulars write

Algoma Steel Corporation, Limited
SAULT STE. MARIE, ONT.

Review of Current Trade Conditions

Ontario

Trade conditions continue quiet throughout Ontario. In the large cities there is very little likelihood of any extensive building operations during the coming year, although there is a likelihood that the amount of money spent upon new buildings will be greater this year than last. No one at present seems to know what to expect in connection with the demand for such lines as are needed for war materials. The shell box situation has become very uncertain. New orders are not being given out to any great extent and shipments upon old orders are not being asked for rapidly. Of course, this situation will depend largely upon the activities of the opposing forces in Europe during the coming summer and it is quite within the bounds of possibility that a great demand for shell boxes will develop in the near future.

Reports from retail firms indicate a fair spring business. Stocks have been allowed to dwindle almost to nothing in a great many cases, and with a fair demand from the farmers there is sure to be some improvement in the retail situation.

The lath situation in Ontario is very strong. The production of lath last year was light, and while the demand in Ontario is not active there is a good demand in the Northern States. This is using up a lot of Ontario lath.

Present indications are that the consumption of Ontario lumber in the United States will continue good, as a result of the high prices now prevailing for yellow pine. It looks as though the Northern States will take enough of our lumber during 1916 to keep prices fairly steady. There is a good demand for Canadian hemlock at points in the Northern States. Hardwoods continue firm. The volume of trade is fair and in some lines, such as birch, the demand is very strong and stocks are light.

Eastern Canada

The volume of business at Montreal is light. Building operations are at a standstill and shell box manufacturers are producing only on a limited scale. Prices are steady. The trade with the United States is satisfactory and the outlook is good. Large orders for spruce have recently been put through at good increases in prices.

Nova Scotia's products during 1915 according to an estimate by the Halifax morning Chronicle amounted in value to $124,622,658. The value of the products of the forest is estimated at $4,600,000.

Prices of eastern spruce at Boston continue firm, the base price for frames being $26. Random quotations are also firmer, but orders are not quite so numerous. Recent prices have been: 2 x 3, $21; 2 x 4, $22; 2 x 5, 2 x 6 and 2 x 7, $21 to $21.50; 2 x 8, $24.50 to $25; 2 x 10, $25.50 to $26; 2 x 12, $26.50 to $27. A striking improvement is reported for northern and eastern boards. First class covering boards 5 in. and up wide, 8 ft. and up long, are quoted at $22, but fairly satisfactory boards are still to be had for $21. The best matched boards 10, 12, 14 and 16 ft. are bringing $25, with $23 and $24 for stocks not quite so good. The demand for shingles at Boston is quiet. Prices are easy. Good white cedar extras are bringing $3.30 to $3.40, and clears $2.90 to $3. Red cedar shingles remain fairly firm, but the enquiry has slackened off to some extent. The best brands of extras are bringing $3.48. Lath are fairly active at $4.15 to $4.25 for 1⅝-in. For 1½-in. the usual price is $3.75.

Great Britain

Business was much restricted on the spot market in London during the first two weeks in January, on account of the small quantity of stock on hand and the likelihood of very restricted arrivals. Only a few small parcels were expected from Canadian ports. Values continue on the up grade for everything and tonnage is scarcer than ever. Very little forward business is in progress. Deliveries at London docks for the week ending January 1st amounted to 2,913 standards, as compared with 5,432 standards during the corresponding week a year ago. At Foy, Morgan and Company's recent auction sale 3 x 3 dry unsorted St. John spruce 9/20 sold at £17 10s.

At Liverpool, there is a strong demand for all kinds of birch, and today's prices of both Halifax and Quebec are considerably advanced over those of even a month ago. Much the same thing applies to pine, stocks of which are limited, and fancy prices are talked of both for logs and planks for next season's shipments. Since the beginning of the year spruce prices have continued to advance and have reached figures higher than anything ever recorded previously, while still higher prices are asked for stocks now offering. This condition is likely to continue. The spot market at Liverpool continues firm and further advances are expected. If the present rate of consumption continues many buyers will have to come into the market who will realize that delays are expensive.

The trade at Manchester is a little quieter and is confined largely to those firms which are engaged on war contracts. Prices continue in favor of holders and are approximately as follows for spruce deals: 3 in. x 11 in., at £27; 3 in. x 9 in., at £24; 3 in. x 8 in., at £23; 3 in. x 7 in., at £22; 3 in. x 4 in. to 6 in., at £21 10s. A year ago the prices were as follows: 3 in. x 11 in., at £12 10s.; 3 in. x 9 in. and 10 in., at £11 10s.; 3 in. x 7 in., at $10 5s. All ex quay Manchester. The trade at Glasgow continues quiet. Stocks of all descriptions are exceptionally light.

United States

Many meetings of retail lumbermen have been held during January in the United States, and all of them were notable for the fact that they gave evidence of more optimism than there has been for some years past. All conditions are reported to be favorable for a good yard trade in the spring, and in view of the condition of mill stocks and the exceptionally heavy foreign orders it seems unlikely that retailers will hold off in the hope of anything like lower prices. The general business of the country is progressing at a rate which will prevent anything in the way of depression in lumber values. Many rumors of extensive enquiries by the French Government for railway ties and house material are in circulation and are having a strong effect upon the market situation.

On the Pacific Coast, extremely cold weather during January resulted in shutting down many plants and causing a considerable reduction in the output. Shingle production in Washington has been reduced almost to nothing.

Northern hemlock manufacturers are enjoying record prices for hemlock bark, recent purchases having been made at $9. This is a direct outcome of the war, which has cut off a large part of the supply. The demand for hemlock lumber is very satisfactory.

Trade conditions in New York and New England would be good were it not for the fact that the railroads cannot handle the business that is offered. War business is responsible for a large amount of factory and warehouse construction in the east.

Northern pine at Chicago is advancing in price. Stocks are broken and the demand is satisfactory, particularly for the low grades. Retail yards are rather quiet. The northern pine trade at Buffalo has not been active since the opening of the year, but there is a more optimistic feeling among retailers and increased business is expected soon. Prices continue firm. Hemlock at Buffalo is quiet. Stocks are only moderate at the mills. Prices are firm. At North Tonawanda, retailers are beginning to place orders for hemlock. Much building is in prospect and dealers are looking forward to a good spring, with stronger prices.

An attractive calendar has been sent out by the New Ontario Colonization Company Ltd., whose mills are at Jacksonboro, Ont., and sales office at Buffalo, N. Y. The calendar is decorated with a striking colored picture entitled "The Big Prize," representing two hunters in a birch canoe, who have just brought down a large moose.

The annual meeting of the Canadian Pulp and Paper Association will be held at the Ritz Carlton Hotel, Montreal, on February 10th.

EFFICIENCY

The hours I spent at work, dear heart,
Are as arithmetic to me
I count my motions, every one, apart—
Efficiency.

Each hour a task, each task a test
Until my heart with doubt is wrung
I conservate my darndest, but at best
The Boss is stung.

O, theories that twist and turn
O, frantic gain, O laggard loss,
I'll standardize and strive at last to learn
To please the Boss.

James Gavan in The Stearns Co-operator.

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Trade Steady—The Log Output

St. John, N.B., January 19th, (Special to the Canada Lumberman):—The market at St. John has not changed to any extent during the past two weeks. If anything, a firmer and more optimistic feeling is gaining on the wholesale trade. Prices for English deals remain firm. Some trades for the coming year have been made at an advance all around over last year's prices. A good many inquiries are coming on the market. The market in England remains good, while at the first of the month stocks were very heavy, in fact the greatest in years; the consumption was keeping pace with the import and if the Admiralty kept taking the available stocks, as they had in the past, prices would go higher.

Deals on wharves at St. John would demand, for short average stock, $18 per M. on a basis of 50 per cent. 7 and 8 x 3 and 50 per cent. 9 and up. Of course, long average deals cut from State of Maine logs are bringing fancy prices and those mills here which have anything in that line to offer are reaping a well deserved harvest. All the mills at St. John are now idle and will continue so until spring opens navigation. A limited supply of logs are on hand to start with, but in all probability an early drive of logs will come with ice, so no doubt the mills will be well supplied by June. About 15 to 18 million feet are being wintered over, mostly long logs.

The United States market shows a splendid revival, especially in the board lines, which has been at a standstill for a year. Buyers who now come upon the market will find boards extremely hard to find, and prices are a good $2 over two months ago. All the boards throughout the province will no doubt be cleaned up by spring, and this will give the mills a chance for piling and also to get a better price for side stock for 1916. The two and three inch market, both New England and New York, show a very firm tone. The New England base price for 2 x 8, 20 ft. and under stands today at $26. If this continues the United States market should be strong for 1916, and should be a good competitor for the English.

Laths are also stiffening, and should leave $3 upon the wharves at St. John.

The shingle market does not show any signs of moving up or down, but remains firm at prices quoted all season.

The log cut on the St. John this year will not be so large as last year. Upon the upper St. John it will be about the same, as follows:

St. John Lumber Co.	for Van Buren, Me.	47,000,000
Murry & Gregory Ltd.	for St. John, N.B.	12,000,000
Randolph & Baker	for St. John, N.B.	5,000,000
Cunliffe Bros. for Stetson Cutler & Co.,	for St. John, N.B.	10,000,000
Currier, Alfred, for Stetson, Cutler & Co.,	for St. John, N.B.	4,000,000
Pelletier, for Stetson, Cutler & Co.	for St. John, N.B.	1,000,000
Noble, for Stetson, Cutler & Co.,	for St. John, N.B.	7,000,000
To go through sorting booms at Van Buren, Me.		86,000,000
Coming to St. John from above		38,000,000
Miller Estate on Tobique		4,000,000
Randolph & Baker	Grand River	6,000,000
Sundry lots		2,000,000
For mills at St. John, about		50,000,000

This, if all logs come out, will probably work up to 55,000,000 feet for mills here.

Locally, the market is stagnant and factory work and building is about at a standstill. Conditions will no doubt remain this way until late spring. What the outcome may be will depend on war conditions entirely. Refuse lumber is in a somewhat steadier position, caused by outside buyers coming into market and exporting for outside trade.

Montreal Trade Quiet—The Pulp Situation

Montreal, January 24th (Special to the Canada Lumberman): Only a small business is passing in lumber. Building is almost at a standstill and shell box makers are, as a rule, producing on a small scale. Under such circumstances trade is slow, although in spots the orders are on a fairly god scale. Prices are maintained.

Wholesalers with United States connections report that the outlook is not only good, but that business is satisfactory. Recently some large orders for spruce were put through at a substantial increase in price.

The important feature in the pulp and paper market is the embargo by Sweden on sulphite pulp going to Great Britain. As Canada is a large producer of sulphite the inference is that she will benefit by the diversion of trade to this country. There are 14 mills manufacturing sulphite in the Dominion, their surplus being in the neighborhood of 8,000 tons monthly. A considerable portion of this, however, is already sold under contract, and goes to the United States. We have in that country an outlet for all that can be made, under present circumstances, the supply of the European product having been largely restricted owing to the war. The Swedish mills are finding it increasingly difficult to manufacture pulp, in consequence of the short supply of coal and chemicals, and there is a pretty well founded belief that the Swedish Government has adopted the embargo as a reprisal on the British Government. A loophole in the embargo exists, as the Swedish Government will issue licenses to approved firms to export sulphite to Great Britain. The embargo will probably result in the British papermakers looking to Canada to replace part of the Swedish supply, but even if this country were able to supply the demand it is questionable if ships could be obtained to transport the material. Some Canadian sulphite pulp has recently gone to the other side, and inquiries for more are coming in. The shipping problem is also a serious matter as affecting ground wood.

A proposal by the British Government to reduce importations of paper and wood pulp by 40 per cent. into Great Britain would of course be one way of meeting the situation, as it would mean the enforced reduction in the size of newspapers—a measure which would no doubt be welcomed by the proprietors.

B.C. Lumber Commissioner's Permanent Exhibit at Toronto

Mr. W. J. VanDusen of the Forest Branch of the Department of Lands of British Columbia, is at present on a visit to Ontario and Eastern Canada in connection with the work of organizing the Department's work. The operations of the Department in the east will be directed from the Lumber Commissioner's office which has recently been opened in the Excelsior Life Bldg., corner Adelaide and Toronto Streets, Toronto.

The B. C. Government has done remarkable work of late in the way of promoting the interests of the lumber industry, and the opening of an office at Toronto is a part of its general plan along these lines. In the new office an interesting exhibit has been installed showing all kinds of B. C. lumber and timber products. The arrangement of the exhibit is very effective. It contains many examples of wall panelling in Douglas fir (veneer panels in all widths up to 8 in. and solid panels), western red cedar, Sitka spruce and western hemlock. Dimension stock and boards are shown in Douglas fir, western hemlock, Sitka spruce and western red cedar. Douglas fir is also exhibited in capping, trim and base, as well as in a wide range of doors in various designs. The exhibit also includes a complete assortment of all grades of B. C. red cedar shingles in bundles and laid on sample roofs, as well as samples of western red cedar shingle bolts. The ceilings of the office are treated in Douglas fir beams. The floor is Douglas fir edge grain flooring.

A large number of samples are included in the exhibit, among them being mouldings, stepping, base, siding, shiplap in Douglas fir, western hemlock, western red cedar and Sitka spruce.

In the wall panelling, doors and flooring, the exhibit shows a great variety of finish in various stains, gloss finish, natural oil and waxed finish, colored wax finish, cabinet finish, etc., to indicate the great variety and suitable finishes for B. C. woods. In addition to the exhibits, the commissioner carries at the office a full supply of pamphlets dealing with B. C. woods, their strengths, uses and qualities, and all information upon these subjects is at the disposal of any one who is interested. In the near future the exhibit will be increased by the addition of samples of western white pine, western soft pine and western larch.

Improvement Certain in British Columbia

Editor Canada Lumberman:— New Westminster, B.C., Jan. 10th.

While the past year was anything but satisfactory the latter part of it showed a marked improvement and it is our opinion that a further advance in both demand and price of at least 15 per cent. is well within the reach of the lumber trade of this province. We ourselves have made every preparation to take advantage of it and believe that with thorough co-operation on the part of the manufacturers of this province we are well within the possibility of realizing our hope.—The Timberland Lumber Company Ltd.

J. & D. A. Harquail

Company, Limited

Manufacturers of Lumber

Extensive New Brunswick and Quebec timber limits, abundant with Virgin Spruce, Pine and Hardwoods.

Twenty years' experience in Milling and Manufacturing, together with a practical knowledge of Building and Architecture, is why our Customers tell us that the Dressing, Grading, and Manufacture of our Stock is just a little better than they expected.

Large stocks of 1 in. Spruce Lumber always on hand.

Try a car of our Air-dried Dressed Spruce.

We also make a Specialty of Kiln Dried Stock.

Our personal attention given to every detail.

Write, wire or phone us for quotations.

Established 1894 ***Incorporated 1908***

Campbellton, New Brunswick

London Wood Goods Markets During 1915

Churchill and Sim, London, Eng., in their annual wood circular, say:—

The continuation of the war throughout 1915 has very materially affected all kinds of business in this country, but, on the whole, exceptional prosperity has fallen to the lot of the timber trade. Three governing factors have combined to create and maintain throughout the year a favorable situation for buyers of wood. The war has produced the almost unknown phenomenon in the timber trade, of continuously rising markets in all branches of soft woods. Commencing in January with smaller stocks than had been arranged for, owing to the declaration of the German Government as regards contraband in the autumn of 1914, the position of the market gradually improved throughout the season, firstly, under the influence of a strong and active demand, emanating (either directly or indirectly) almost entirely from Government sources; secondly, by reason of a constantly growing increase in tonnage rates from all wood-producing countries, and, thirdly, owing to the complete elimination of the competition of the usual shipments from Finnish and Russian Baltic ports. The consequent shortage, mainly of whitewood, which would, in the ordinary course of events, be quite sufficient of itself to create a favorable market position, was accentuated by the extreme difficulty of securing adequate tonnage for the removal of the usual quantities from the White Sea ports until quite late in the season. It became abundantly clear during the summer, that given a continuance of the rate of demand, a scarcity of wood, especially of whitewood, was bound to declare itself, and that more than the usual quantities in the sizes suitable to British requirements, which were accessible from the northern ports, would be wanted for winter consumption in this country. Under such circumstances Canadian shipments of spruce, especially from the lower ports, assumed greater prominence than usual, and buyers were enabled in part to satisfy urgent calls for stock from them. The important question of tonnage rates has always been, even in normal times, one which afforded buyers considerable anxiety, and has introduced into their calculations of delivered cost a somewhat speculative character; but during the whole of 1915 it has been the one important and overshadowing consideration to all importers of wood. So uncertain were the prospects in this respect early in the year, when buying would, in the ordinary course of events, have been in full swing, that the majority of merchants shrank from the pure speculation involved in free on board purchases, and declined altogether to commit themselves except upon a c.i.f. basis of quotation. The result was that the usual practices customary in the trade have been reversed, and from all shipping centres charters of steamers were effected by shippers in the first place, and contracts followed upon the basis of tonnage quotations. It may be said, generally, that the rise in these quotations has been progressive throughout the season, to the great benefit of buyers, who were enabled to turn over their stocks to advantage, secure in the knowledge that higher prices must be ahead of them as tonnage became scarcer and dearer.

It is worthy of being put on record in a year like this that, based upon the rates current at the close of 1915, timber freights are responsible for approximately 35 per cent. of the delivered value of stock from Sweden, 50/60 per cent. from the White Sea, and 60/65 per cent. from the pitch pine and spruce ports, while from the Oregon pine districts the proportion is even higher.

Wood imported into the United Kingdom in the following years:—

	1912 Loads	1913 Loads	1914 Loads	1915 Loads
Colonial Deals, Battens, etc.	895,496	961,539	847,392	1,126,522
Colonial Timber and Hardwoods	53,109	39,656	37,051	31,176
Foreign Deals, Battens, and Boards.	4,872,093	5,674,598	3,993,186	3,698,062
Foreign Timber and Hardwoods	3,783,423	4,340,665	3,091,597	2,459,563
Colonial and Foreign Staves	169,295	182,131	93,439	110,763
Total, in Loads	9,773,416	11,198,589	8,062,665	7,426,086
Value	£26,238,259	£30,878,619	£22,692,061	£30,789,087

In spite of the vastly increased arrived value of wood this season, and especially when it is borne in mind how much higher is the proportion represented by freight charges, which have to be settled upon a cash basis, the financing of the trade has apparently given merchants little trouble.

Imports into London from Sweden dwindled greatly, as shown by the following table:—

	1911	1912	1913	1914	1915
Deals. Pcs.	996,000	1,357,000	1,258,000	1,582,000	2,066,000
Battens Pcs.	3,699,000	4,663,000	4,004,000	5,579,000	8,923,000
Boards Pcs.	16,195,000	18,534,000	19,441,000	25,445,000	21,774,000
Firewood Fthms.	27,000	26,000	37,000	20,000	1,000

Imports into London from Russia were as follows:—

	1912	1913	1914	1915
Deals Pcs.	3,327,000	3,559,000	2,242,000	1,654,000
Battens and Ends. Pcs.	4,631,000	5,031,000	3,749,000	2,351,000
Boards Pcs.	6,003,000	8,238,000	6,867,000	8,934,000
Wainscot Logs. Pcs.	16,176	11,093	6,089	.....
Lathwood Fthms.	556	584	98	167
Staves Loads	5,760	4,195	1,445	195

A New Era Facing Canada's Business Men

Editor Canada Lumberman:— Grand Forks, B. C., Jan. 5.

Some time ago the Honorable Martin Burrell gave to Canada and to the Canadian people the slogan "Patriotism and Production," which has become a part of the life of every true Canadian.

In every little hamlet, village, town, and city throughout the Dominion, hearts have been touched and deeds accomplished, which when we look back after years of plenty will appear to us to be the wonder of the century.

In the short time since this slogan was given to the Canadian people, wonderful changes have taken place in the Industrial life of Canada. During the past year 25 per cent. more acreage has been cropped than ever before. In every city large or small, every vacant lot has brought forth a harvest, thus not only supplying the needs of the Canadian people but also supplying to our Mother Country. the staff of life to continue in her most righteous war.

Not only did this slogan "Patriotism and Production" appeal to the owners of the land, but it also touched the hearts and pockets of the men of large financial interests and in consequence they were not behind their fellows. Manufacturing concerns, which had been idle for years were financed and became the employers of labor. Other large manufacturing plants were constructed, and as a result, we have, in Canada, laid a solid foundation for continuous prosperity. When the history of Canada is written the slogan of the Honorable Martin Burrell "Patriotism and Production" will be handed down as the guiding star to Canada's future greatness, and the Honorable Martin Burrell will be accounted among Canada's greatest statesmen.

But what of the lumber industry? Has this guiding star been followed by the industry employing the largest quantity of labor of any industry in Canada? Most assuredly so. The starting up of the mills and logging camps must necessarily depend on the general prosperity of the country, practically 90 per cent. of its output being marketed in Canada. The immense crop in the western provinces has resulted in an extraordinary demand for better houses, larger barns, better sheds, and as a result, the stock of dry lumber in British Columbia has never been so small in years.

This guiding star has caused a co-operation of all branches of the industry in a national movement to educate the consumer and promote the use of wood wherever it is the best available material, or can be made equal to other materials for the services required. Lumbermen have learnt what other successful merchants knew long ago. that in order to make money, money must be spent in promotion. The lumber associations of the west have met together with that object in view.

The Province of British Columbia, through the efforts of the Honorable W. R. Ross, Minister of Lands, realizing that the lumbermen were at last getting together and taking some constructive progressive action, and seeing the necessity for further expansion, admirably came to the assistance of the industry, knowing that any assistance given would bring large returns to the Province. A special officer was sent to foreign countries to regain the former large export trade and also to further increase it. Large orders for many million feet of lumber were thus secured for the export mills of the Province of British Columbia. As the export trade would not very materially assist the interior lumbermen, the Honorable Mr. Ross had his forestry officials meet with the interior associations to discuss ways and means and as a result a policy of advertising British Columbia interior lumber was inaugurated with a grant of $50,000 to carry it through. As the prairie provinces are the large consumers of the lumber of the interior, particular attention was paid to the needs of the consumers of lumber in those provinces. Numerous pamphlets describing the different kinds of woods, with specifications and plans of different houses, cattle and horse barns, piggeries. poultry houses, implement sheds, etc., were issued and distributed. A special agent was appointed to lecture at the different centres in the prairie Provinces and to further the use of British Columbia woods. The result of this most progressive policy of the Lands Department of British Columbia, is going to be a very much larger consumption of lumber and better prices.

When this great war is over there will still remain the commercial battles of peace. Let us have a world wide outlook and an industrial and commercial policy suited to deal with the world as it is. We must be careful where we buy our goods in the years to come. Let us have inter-provincial trade whereby the British Columbia lumberman buys his supplies from the prairie farmer, and the prairie farmer buys his lumber from the British Columbia lumberman, thereby bringing content and plenty to all. This is not sentiment but good common sense. Why then should we still be burdened with an inadequate dumping clause in our customs tariff, which allows surplus fruit from the western States to be dumped on to our prairie market, and surplus lumber to be brought in below the cost of production. Why not give our Canadian fruit grower and our lumberjack a chance? In both fruit growing and lumbering at least 60 per cent of the cost is paid out for labor. Let us therefore as men vitally interested in the destiny of our industries. plead, insist and demand that an amendment to the dumping clause should be enacted forbidding the entry of any commodity when invoiced below the cost of production.

It has been stated and largely advertised that any change would increase the cost of production to the consumer. This is a misleading statement for the following reasons. There are every year, hundreds of acres of fruit which are never picked on account of this unfair competition. For several years not over 60 per cent. of the lumber mills have been operated owing to this unfair competition. Therefore by making adequate amendments to the dumping clause and making it possible to pick all the fruit and to operate all the mills. competition would be so keen that the consumer would still get his fruit and lumber at a moderate price.

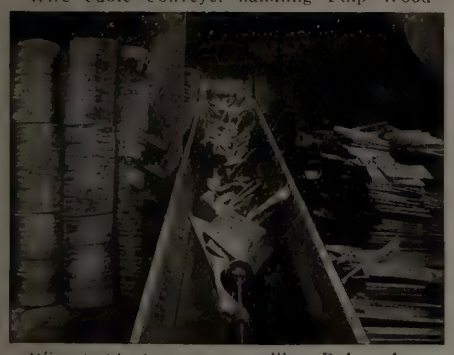
We know that when peace has been restored, a new era of prosperity and progress will dawn upon British Columbia and upon the whole of Canada and this country will offer opportunities for labor and enterprise which will not be surpassed in any other part of the world.

Absolute confidence and optimism characterizes the lumbermen of British Columbia, in spite of being compelled last year to face an indifferent market which would respond only when prices were hammered below the cost of production.—W. Mark DeCew.

The Forest Products Laboratories of Canada, Montreal, are preparing a bulletin on B. C. fir, showing the characteristics of this lumber, comparative tests, etc.

Cable Chain Refuse Conveyer with Wooden Flights at Intervals

Wire Cable Conveyer handling Pulp Wood



Wire Cable Conveyer handling Refuse from Cooperage Plant

Actual Test is What Counts—

Only under the severe service of real working conditions can the work of a product be determined, and only the dependable piece of equipment will stand up under the strain.

JEFFREY

Elevators and Conveyers

have been standing the test of "Hard Service" for many years, and well. They embody all the principles of Handling Efficiency and Economy that only years of actual operating experience make possible.

Our Illustrated Catalog and Price-List No. 160-6 will furnish you convincing performance records on our wide range of machinery for Saw Mills, Pulp Mills and Woodworking Plants, including

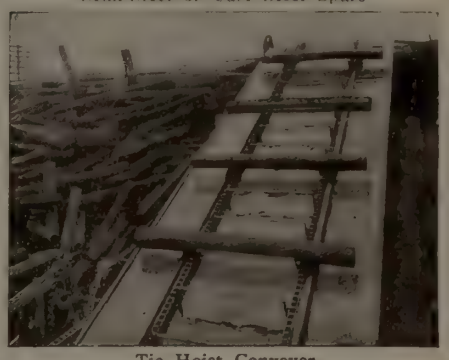
Chains and Attachments, Sprockets, Gears, Hoists, Elevators, Conveyers, Log-Haul-Ups, Cable Conveyers, Pulleys, Hangers, Locomotives for Lumber Haulage, etc.

Send for copy, and tell us about your requirements when you write.

The Jeffrey Manufacturing Co.

Canadian Branch and Warerooms, Montreal

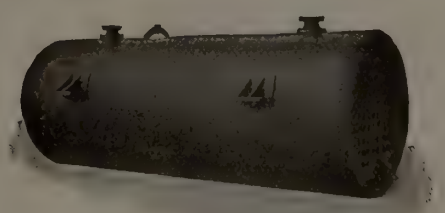
Jeffrey Standard Haul-Up Chain with Semi-Steel or Cast Steel Spurs



Tie Hoist Conveyer

Chain Lumber Carrier

Jenckes Boilers



We make a Specialty of

Horizontal Tubular Boilers

for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

Sherbrooke Montreal Cobalt So. Porcupine St. Catharines Toronto Vancouver Nelson

Clyde Stocks, Imports and Consumption

The following table shows the amount of deals, etc., in Clyde at 31st December, 1914 and 1915, with statement of imports and consumption for the year ending 31st December, 1915.

	31st December 1913 St. Pet. Stds.	31st December 1914 St. Pet. Stds.	31st December 1915 St. Pet. Stds
1st Pine Deals	92	53	178
2nd "	115	128	346
3rd "	436	507	865
4th "	185	74	52
1st Pine Ends	5	11	72
Unassorted Pine Deals, Planks and Boards	936	597	527
Red Pine, etc.	33	133	30
Quebec Spruce Deals and Boards	1,347	3,387	4,532
Lower Port Spruce	1,420	3,318	10,722
Lower Port Pine	12	97	183
Oak Planks and Boards	225,849 c.ft.	196,321 c.ft.	98,939 c.ft.
Birch and Maple Planks & Boards	144,088 "	118,326 "	83,405 "
Ash Planks and Boards	13,182 "	10,528 "	6,139 "
Maple Flooring	3,844 "	2,093 "	272 "
Oregon Pine Timber and Planks	365,430 "	351,042 "	78,641 "
Clear Spruce	40,487 "	18,470 "	2,547 "

Large Order for Pacific Coast Fir Goes to U.S. Firms

Lumber mills on the Columbia River and the Puget Sound have been invited to bid on an order of 200 million feet of fir lumber for immediate delivery to the French Government. Contracts for all this material have been placed with a San Francisco lumber broker and the entire order is to be filled by the mills in Oregon and Washington. All the large mills in Portland are bidding on portions of the order varying from 10 million feet to 50 million feet. The order includes a large quantity of railroad ties and lumber and timber for trenches. It is expected, on account of the keen competition, that the price to the mills will not exceed $12 or $13 per thousand. Under the terms of the contract the lumber is to be delivered f. o. b. at the mills and the French Government is to provide transportation. It is expected that the shipment will be handled entirely by water, but if the Panama Canal is not opened again in time it may be moved to the Atlantic by rail. The French purchasers are to assume the risk in connection with transporting the shipments, the responsibilities of the mills ceasing when the stock is delivered either on cars or on ships.

National Association to Meet in Chicago

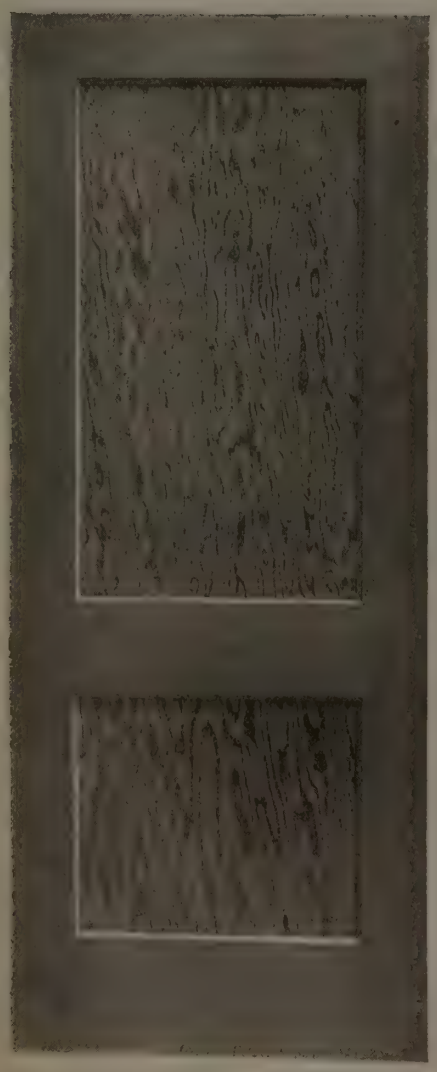
The annual meeting of the National Lumber Manufacturers' Association will be held at Chicago on May 31st, June 1st and June 2nd. In connection with the trade extension department of the Association much excellent progress has been made. A large amount of technical and popular literature is being prepared which will be widely distributed. Arrangements are being made for holding special meetings of lumbermen in ten of the larger cities of the United States to discuss questions of trade extension. Other meetings of a similar nature will also be arranged for subsequently. Very complete mailing lists of architects, engineers, manufacturers, retail dealers and others are being prepared, and a regular press service is being inaugurated.

Predicts a Shingle Shortage

Editor Canada Lumberman: Vancouver, B.C., January 18th.

We are most optimistic in regard to future prospects, and our optimism is founded on the fact that we have already done quite a large volume of business at advanced prices, and that we have a large number of orders booked for shipment within the next few months at still further advanced prices. We cannot recollect there ever being a winter in our past experience when the demand for shingles was so active as it has been during the portion of the winter season already past. Not only has this activity been a result of speculation by wholesalers in placing orders for future shipment, but in our experience to a great extent has been the result of orders placed by the retailers, who evidently during the depression of the past year or more have allowed their stocks to become almost extinct and are anxious to have orders placed for the very earliest possible spring shipment in order to be prepared to meet the demands which they consider sure to come.

We consider this a wise action on the part of any retailers who have thus anticipated the future, as there is practically no surplus of shingles left on hand at the mills this fall, and the winter here on the Coast has been an unusually severe one, forcing practically all of the mills to shut down indefinitely until weather conditions are more favorable. The result of this, in our minds, will be, that there will be a shortage of shingles to meet the early spring demands, inasmuch as there will be no winter accumulations to draw from as in past years, and that the demand will be much more active as a result of a general betterment of conditions throughout this continent.
—The Robert McNair Shingle Company.



Fir "Twopan"

Canadian Western Lumber Co., Ltd.

Fraser Mills, B.C.

Canada's Largest Lumber Manufacturing Plant

Mixed Car Shipments
containing
Doors, Mouldings,
3 Ply Panels and
guaranteed quality X X X
B.C. Red Cedar Shingles

PROMPT SHIPMENTS

Fir Timbers
and
Dimension Flooring,
Ceiling, Finish, Casing,
Base and Interior
Trimmings

GUARANTEED QUALITIES

The 1916 model is a ***FIR*** Door made with 3 Ply Rotary Cut beautifully Grained Veneer Panels and Edge Grain Stiles and Rails.

Eastern Sales Offices

Toronto—H. A. Rose, L. D. Barclay Montreal—R. H. Underhill

"Everything in Canvas"

Contractors to the Army and Navy of the British Empire

DURING the past few years our manufacturing facilities have increased fourfold. The amalgamation of the Woods Company, with the Smart Bag Co. into which it is now known as Smart-Woods, Limited, offers for your approval the products of one of the strongest and most reliable manufacturing corporations in the whole of Canada.

AS a result of this amalgamation, not only have our manufacturing facilities been wonderfully increased, but we are now in a much better and greater position to offer you all lines previously stocked, as well as many others that come direct from our recently added factories.

In addition we may say, "Our foreign trade has increased by leaps and bounds—both European and American—and we are prepared to enter into competition in every civilized portion of the globe."

Smart-Woods' Special Surveyor's Tent. Write for Catalogue.

WE are now open for competition in every thing that is possible to be made out of canvas, as well as all lines of Lumbermen's and Contractor's Supplies, such as Blankets, Clothing, etc., etc., it being one of our greatest pleasures to quote prices at any time. Our wonderful large stocks of raw material and increased number of factories, (Ottawa, Toronto, Montreal, Winnipeg, Renfrew and Welland), enable the execution of largest orders on shortest possible notice.

Samples and quotations will be furnished at any time and every possible expediency rendered to hasten shipments as soon after ordering as possible.

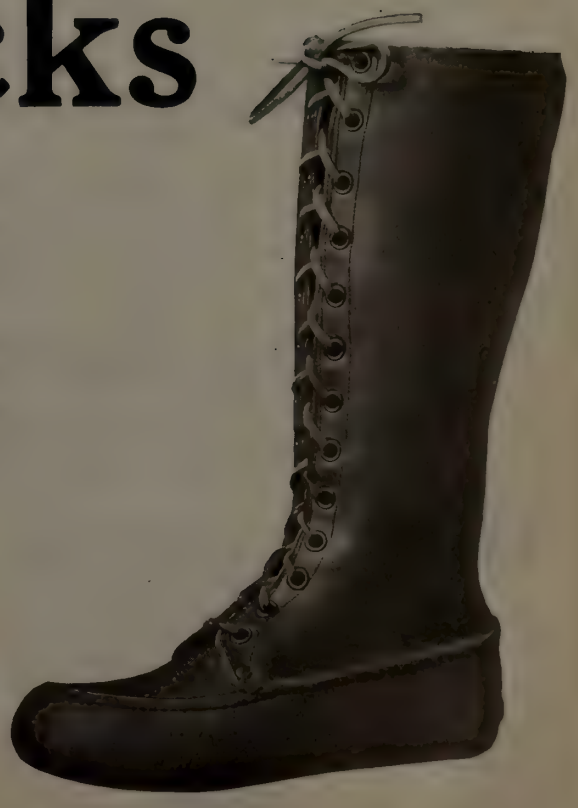
Smart-Woods LIMITED

OTTAWA - MONTREAL
TORONTO - WINNIPEG

Midland Quality Shoe Packs

WE are marketing a brand new line of "Midland Quality" Shoe Packs. Special care is exercised in the waterproofing of all leather. The models shown here are two of our several styles. You should see them to appreciate the true merit of these new Shoe Packs.

Write us for Prices and Particulars



The
P. T. Gendron Shoe Pack Company
Midland - Ontario

THE EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS DIEU RIEN
MONTREAL - Canada
Head Office at Montreal.

SPRUCE rough or dressed

1" No. 2 and Better Birch, 1914 cut
also Basswood, Hemlock and Pine

Saw Mills at MONT LAURIER.
Dressing Mills at ST. JEROME.

Herman H. Hettler Lumber Co.
Midland, Ont.

Manufacturers of

WHITE PINE and RED PINE
LUMBER and LATH

EXCELLENT PLANING MILL FACILITIES

Special Attention Given to Prompt Delivery

CEDAR
Shingles

Campbell, MacLaurin Lumber Co.
Limited
Board of Trade Building, MONTREAL

Pine, Spruce
Hemlock
Hardwoods, Lath

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
Eastern Townships Bank Building, MONTREAL, Quebec

EDGINGS

Ontario

Geo. Rivers, Strathroy, Ont., is establishing a basket factory business at that place.

The township of Elderslie, Ont., is receiving tenders for 10,000 feet of cedar 4 in. thick and 16 ft. long. The township clerk is Mr. R. C. Pearce, Paisley, Ont.

The Trenton Cooperage Company, Trenton, Ont., report that their recent loss by fire amounted to between $6,000 and $7,000, the damage being confined to stock. None of the plant was burned.

The township of Kincardine, Ont., is receiving tenders for 4,000 feet of plank 16 ft. x 3 in. and 4,000 feet of plank 14 ft. x 3 in., all hemlock or tamarac. The township clerk is John Corbet, R. R. No. 1, Lorne, Ont.

A. F. Campbell has started a sawmill at Arnprior, Ont., giving employment to about 20 men. Mr. Campbell recently purchased a limit near White Lake from which he will secure logs. He will also undertake custom work.

Mickle, Dyment & Son, Gravenhurst, Ont., report that there will be no cut at the Dyment Mickle mills at Whitney or Fenelon Falls during 1916, and that the Mickle Dyment plants at Gravenhurst and Severn will cut about half the quantity they cut during 1915.

Eastern Canada

J. B. Campbell & Son, sawmill owners, Clarksville, N. S., have been registered.

The Davidson Lumber Company, Springfield, N. S., are contemplating replacing their stock gang with a circular mill.

The Mile End Sash and Door Company, Montreal, P.Q., has been registered. Mr. Arthur T. Cote is interested in the company.

The Dominion Timber & Minerals Ltd., have been incorporated with head office at Montreal and capital stock of $250,000 to carry on business as lumbermen, loggers, etc., in all their branches. Those interested are L. E. Mailhiot, L. A. David and S. H. Bush, all of Montreal.

The Eagle Lumber Company, Limited, Montreal, has purchased a saw mill and 25 miles of timber limits from Mr. Deslauriers, St. Marguerite, Que. Tis mill was built last year. The company has in addition a dressing mill and sash and door factory at St. Jerome and a saw and dressing mill at Mont Laurier.

The Belgo-Canadian Mines and Timber Lands Limited, have secured letters patent to carry on business in the province of Quebec as manufacturers and dealers in timber, lumber, sawlogs, etc. The head office of the company is at Montreal, P. Q., and the capital stock is $40,000. Those interested are C. L. Melkman, S. E. Melkman, G. J. Barry, attorney, and F. A. Beique, all of Montreal.

Western Canada

The Rogers Lumber Company have purchased the business of the Lumber Manufacturers Yards Ltd., at Bounty, Sask.

The Reliance Lumber Company Ltd., have sold their business at Liberty, Sask., to the Lumber Manufacturers Yards Ltd.

The Monarch Lumber Company Ltd., have purchased the business of the Lumber Manufacturers Yards Ltd., at Milden, Sask.

The Dutton Wall Lumber Company Ltd., have purchased the business of the Lumber Manufacturers Yards Ltd., at Swanson, Sask.

The McLean Shingle Mill at Port Moody, B.C., has been closed down temporarily. The machines are being overhauled and refitted.

The Burnaby Lake Lumber & Shingle Company Ltd., has been incorporated with head office at Vancouver, B. C., and capital stock of $5,000.

The Apex Lumber Company Ltd., has been incorporated with head office at Vancouver, B. C., and capital stock of $50,000 to carry on business as lumbermen, loggers, lumber, shingle, sash and door and general manufacturers and to own and operate sawmills.

The Riverside Lumber Co. Ltd., Riverside, Calgary. Alta., recently lost their sawmill at McGillivray, B.C., by fire, and also 1,000,000 feet of lumber which was totally destroyed. The amount of the loss is estimated at $65,000. The company propose to rebuild at once.

The Manning-Sutherland Lumber Company, Calgary, Alta., will establish four or five lumber yards in the near future on the new Canadian Northern branch running southeast from Camrose, Alta. It is expected that the yards

will be located at Bawlf, Heisler, Forestburg and one or two towns east of Forestburg.

J. B. Johnson, Vancouver, B. C., representing a company which is about to be formed, is considering the establishing of a timber creosoting plant at North Vancouver, B.C., the plant to cost about $100,000 and to give employment to from 40 to 70 men. The promotors are asking for certain concessions in the way of fixed taxation. Mr. Johnson states that his company is ready to go ahead with the proposition as soon as it receives a favorable reply from the North Vancouver Council.

The Cache Creek Timber Company has been registered as an extra-provincial company to carry on business in the province of British Columbia as sawmill operators, lumber manufacturers, etc. The head office of the company is at Nashville, Tenn., U. S. A., and the provincial office is at 904 Standard Bank Bldg., Vancouver. The capital stock of the company is $50,000 and James H. Lawson, Vancouver, is attorney for the company.

The Athabasca Power Company, Limited, have secured letters patent to carry on business in the province of Manitoba as manufacturers and dealers in lumber, timber, logs, wood and all articles into the manufacture of which wood is used. The head office of the company is at Winnipeg, Man., and the capital stock is $100,000. Those interested are R. C. McPherson, R. W Killey, E. W. Lowery, S. L. Goldstine and A. H. Bogstrom, all of Winnipeg.

Some of the Past Year's Lessons

Editor Canada Lumberman: Winnipeg, January 15th.

Our experience during the past year has, of course, been the same as the experience of others in the business, in that had it not been for the big crop and the resultant large sales in the fall, the year's operations would have been very unsatisfactory. During the first six or seven months of the year, our sales were the lightest since we started operating, but our fall sales were so heavy that they did a great deal toward retrieving the situation.

The same applies to collections, which were extremely slow until the returns began to come in from the new crop, and since that time they have been the best that we have ever known.

We are looking for a business somewhat above normal during the early spring, but do not think that in times like these we are any of us warranted in believing that conditions are going to be other than approaching normal.

It will be hard to estimate of how much value the experiences of the last year or two have been to both buyers and sellers throughout the whole west. The credit situation has materially improved, in that the seller has discovered through trying experiences that it is just as important for him to give attention to getting paid for his material, as it is for him to find a market in which to sell it. The buyer has learned what it means to be in debt and to be obliged to sacrifice his holdings in a poor market in order to meet the demands of his creditors. This lesson is to be learned through experience alone, and it is to be hoped that it will not require any further demonstration to make us see the folly of a loose credit policy.

During the past year the retail situation has been cleared up considerably by the withdrawal of yards at points where there was an over-supply, and this must be entered on the credit side of the ledger in estimating the losses and gains as pertaining to the lumber trade in general.—William P. Dutton.

Prices Will Hold During 1916

Editor Canada Lumberman: Enderby, B.C., January 17th.

The Mountain mills in British Columbia had an unusual demand for their product during the fall months of 1915, which held up well into December. This demand came principally from the rural districts of the three prairie provinces of Alberta, Saskatchewan and Manitoba, due to the heavy crops, the increased price for farm products and inability of the railways to handle the crops, making it necessary for the farmer to build small granaries to protect his grain against the elements, or store his grain in granaries in small towns till empty cars could be secured to move it to market. This demand was chiefly for No. 1 common dimension, boards and shiplap and drop siding, causing an exceedingly heavy shortage of these items in the mountains. Stocks of dry common are practically exhausted in the mountain mills. Stocks are about 125 million feet short at present of what they were January 1st, 1915. Inquiries are coming in quite freely from the line yards, and there is an inclination with many line yards to place their spring requirements early. The manufacturer has been able to advance the price of his product over the prevailing price for the same period a year ago and with short stocks and increased demand the advance is being well maintained by the larger mills. The trade outlook for the first six months of 1916 is very encouraging. Should the crop outlook appear favorable as the season advances, the year 1916 should be better than any period since 1912. Some mills are logging more heavily than at any time since 1913, but generally speaking the output will be practically the same as in 1915. The present prices, we think, will hold till another crop is assured, in which case the manufacturer will be warranted in further advancing his price.—Okanagan Saw Mills, Limited.

The annual dinner of the R. Laidlaw Lumber Company's staff at Sarnia, Ont., was held on January 15th. After the dinner a pleasant and profitable evening was spent in discussing matters of interest to the lumber business.

Blair & Rolland, Limited

Lumber & Pulpwood

20 St. Nicholas Street, Montreal, Que.

Dressed as Required, Spruce and Pine

MILL RUN 1 in. x 4 x 10 ft. up
" 1 in. x 5 x 10 ft. up
" 1 in. x 6 x 10 ft. up
" 1 in. x 7 x 10 ft. up
" 1 in. x 8 x 10 ft. up
MILL RUN 2 in. x 4 x 10 ft. up
" 2 in. x 5/7 x 10 ft. up
" 2 in. x 8 x 10 ft. up
" 2 in. x 9 x 10 ft. up
" 2 in. x 10 x 10 ft. up
MILL RUN 3 in. x 4/5 x 10 ft. up
" 3 in. x 6 x 10 ft. up
" 3 in. x 7 x 10 ft. up
" 3 in. x 8 x 10 ft. up
" 3 in. x 9 x 10 ft. up

P 1 or 2 Sides V joint, Beaded or Novelty Siding Prompt and Good Work. We Ship Mixed Car Loads as Required.

Roofing, P 2 S and Matched

1 x 4 up x 8 up—about 60 per cent. 12 and 13 ft.

Mill Cull Spruce

2 in. x 4 up x 10/13 and 3 x 9 x 10/13
3 in. x 4 up x 10/13

1,700,000 pcs. MILL RUN SPRUCE LATH 4 x 1⅜ x ⅜
500,000 pcs. MILL RUN WHITE PINE LATH 4 x 1⅜ x ⅜
200,000 pcs. No. 2 WHITE PINE LATH 4 x 1¼ x ⅜

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Wholesale Lumber and Timber

SHELL BOX STOCK

White and Red Pine, Spruce

Hemlock, Birch, Maple

Railway Ties, Fence Posts, Etc.

Prompt shipment. Satisfactory stock. Good service. Write for Prices

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Circular Cross Cuts
Trimmers
Edgers
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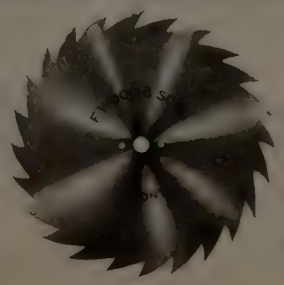
Concave, Etc.



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We make a Specialty of Repairs and can give your orders prompt attention

35 years' practical experience in making saws in Canada

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SAW MILL CHAINS

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High Carbon Steel Pins.

Patterns Full Weight—Full Strength

We are prepared to make prompt shipments of standard sizes from our own factory and warehouse in Toronto. Let us figure on your requirements.

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Write for Catalog No. 110D.

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A. R. Williams Machinery Company, Limited, Vancouver, B. C.
Waterous Engine Works Company, Limited, Brantford, Ont.

FREE SAMPLE
Stops Bleeding

There's a sample of Douglas' Egyptian Liniment awaiting your request. It's free—absolutely free—along with literature explaining the manifold uses to which it can be put.

No person or animal need bleed unnecessarily where Douglas' Egyptian Liniment is kept. It staunches bleeding immediately.

In cases of toothache, sore throat, neuralgia, rheumatism, etc., it effects immediate relief. In the stable its use is invaluable for thrush, cuts, spavins, calluses, etc.

Send at once for your free sample.

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Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

Style No. 777

Style No. 150

The Garlock Packing Co.

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Branches:
Calgary
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Are your horses of use to you?

This seems an absurd question—and the answer is always **"Of course they are"**—In which case provide your stables with:

Johnson's Reliable Veterinary Remedies

Johnson's Horse Liniment, No. 1 (Alcoholic)

1 gal. jugs (Imperial)	$4.50 gal.
1 lb. bottles	8.00 doz.
2 lb. bottles	15.00 doz.

Johnson's Horse Liniment, No. 2 (an oil liniment)

1 gal. jugs (Imperial)	3.00 gal.
1 lb. bottles	6.00 doz.
2 lb. bottles	11.00 doz.

Johnson's Horse Colic Remedy
A sure and speedy cure for all kinds of Colic

1 gal. jugs (Imperial) 40 doses	5.00 gal.
1 lb. bottles 4 doses	8.00 doz.
2 lb. bottles 8 doses	15.00 doz,

Johnson's Veterinary Healing Ointment (Gall Cure)

2 lb. tins	2.00 per tin
4 oz. tins	3.50 doz.

Johnson's Condition Powders (Concentrated)

1 lb. Packages	3.60 per doz.

Johnson's Camp and Household Remedies, such as Cough Syrup, Healing Ointment, Headache Powders, Big 4 Liniment, Stomach Bitters, Cathartic Pills, etc., etc., have stood the test of twenty-five years and are in use all over Canada, from the Atlantic to the Pacific. Prices are lower than those of all other manufacturers. Letter orders receive prompt attention.

A. H. Johnson, Wholesale Druggist, **Collingwood, Ont.**

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

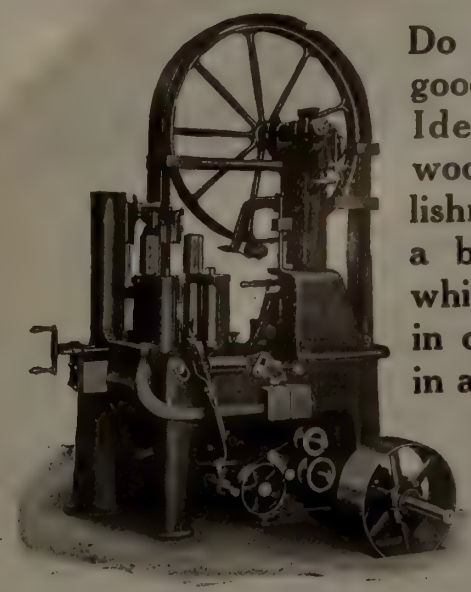
And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa, Deputy Minister.
December 20th, 1912.



Ideal Band Resaw

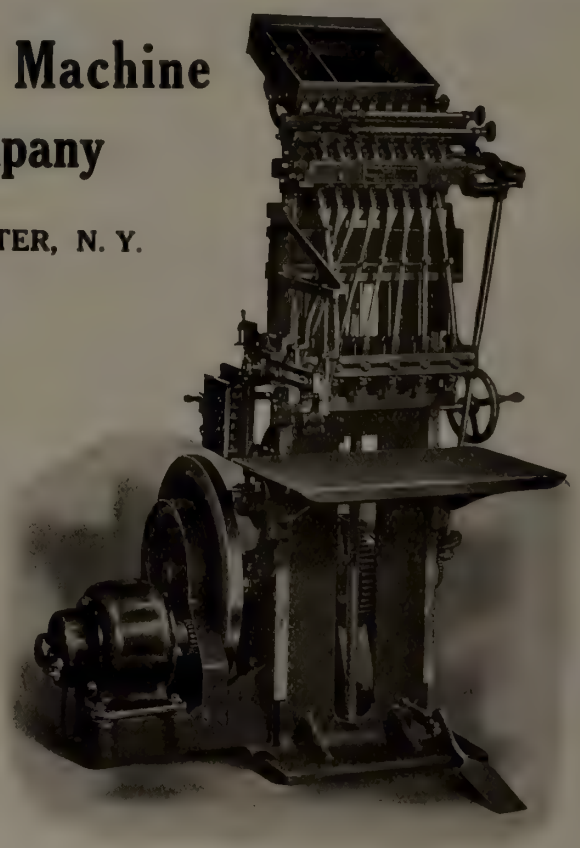
Do you realize how good a resaw our Ideal is? Every woodworking establishment should have a band resaw, and while you are putting in one, why not put in a good one. Our Ideal Band Resaw, as built today, embodies thehighesttype of workmanship, material and design, and is astonishingly low in price. There are a thousand of them in use, giving universal satisfaction, but if their merits were generally known, there would be five thousand. Let us tell you about it, and give you the names of your neighbors who know about this machine.

Wm. B. Mershon & Company

Saginaw, Michigan

Morgan Machine Company

ROCHESTER, N. Y.



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Nailing Machines,

Lock Corner Box Machinery,

Box Board Matchers,

Box Board Printing Machines.

Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the **Morgan Machine Company** for latest developments in machinery for the Box Industry.

Morgan Machine Company

ROCHESTER, N. Y.

New **RAILS** Relaying

12 to 80 pounds per yard.

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Jno. J. Gartshore

58 Front St. West, Toronto

"Crown Brand" Corn Syrup

A Real Food to Work On!

Give the gang "Crown Brand." It is very nourishing —and with Bread, makes almost a perfect diet.

Simply delicious with porridge, and hot bread of any kind.

The best sweetener for all kinds of cooking and far cheaper than Molasses or sugar.

Have your wholesaler send up a supply of "Crown Brand" Corn Syrup and give it a fair trial.

In barrels about 700 lbs.
½ " " 350 "
¼ " " 175 "

or in smaller packages if you prefer them.

The Canada Starch Co., Limited, Montreal

National Oats

Clean Western Oats, in bulk or in strong, well sewn bags; especially suited for Camp Use.

National Elevator Co., Ltd.

Oat Specialists

Calgary WINNIPEG Port Arthur

HOE

Chisel Tooth Saws

The Choice of Lumbermen in two Hemispheres

More than 80,000 of these saws are now in use in all parts of the world. Hoe Chisel Tooth Saws are backed by 86 years' experience in the manufacture of saws. They are made from the finest steel, evenly tempered throughout. Special Flanged Shanks and Superior Bits are supplied for sawing hardwood.

We are the oldest Saw manufacturers in America

R. HOE & CO. 504-520 Grand Street, NEW YORK CITY

Saving $100,000.00 Yearly on Coal Bills

Arrangement of Jones Underfeed Stokers in Dutch Oven for burning paper mill refuse in conjunction with coal.

That may sound fabulous but it is a fact established by the Minnesota & Ontario Power Company. Before the installation of Jones Underfeed Stokers 695 tons of coal at $3.50 per ton were the daily requirement. With the Jones Stokers and Dutch ovens, as illustrated, the mill waste was utilized and only 5 tons of coal were burned each week.

This is only one example of many showing the immense saving in fuel bills effected by Jones Stokers.

We will be pleased to correspond with you regarding the use of Jones Stokers in your plant. Write us.

Jones Underfeed Stoker Co., Limited

National Trust Building - TORONTO

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is the Flooring that is manufactured expressly to supply the demand for the best. It is made by modern machinery from carefully selected stock, and every precaution is taken throughout our entire system to make it fulfil the requirements in every particular. Write us for prices.

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Winnipeg Agents: Bisset & Webb, Limited, 151 Notre Dame Ave. East, Winnipeg, Man.
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the kind you have been looking for.

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Pure wool Blankets, Sweaters, Underwear. Hand Knit Mitts and Socks. Palmers Shoe Packs, Buck and horse hide Moccasins, etc.

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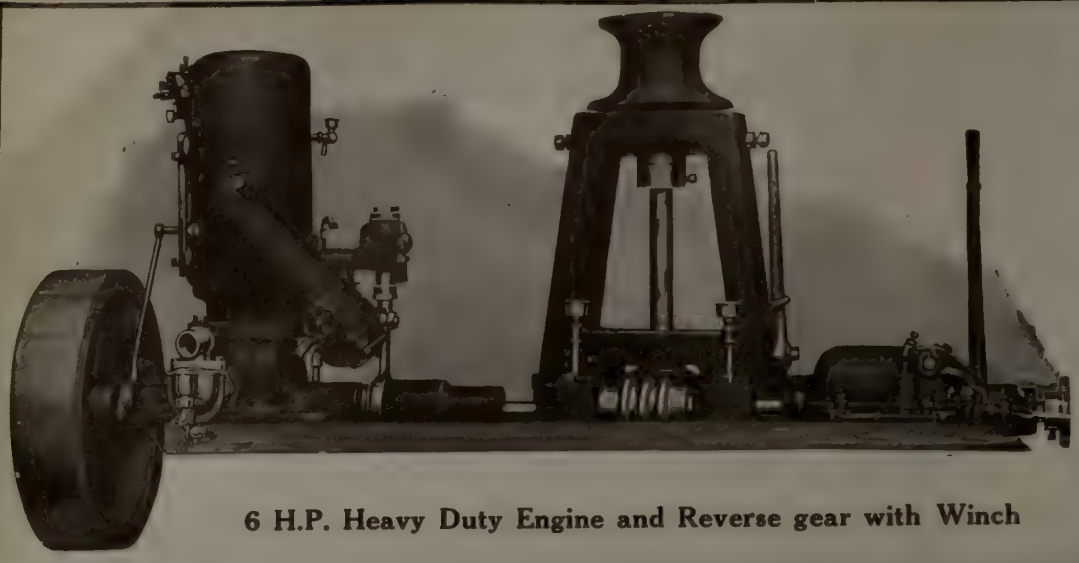

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River Driving Costs

will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

Adams Launch & Engine Co.
Penetang, Ont.

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Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

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The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
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It's a Pink anyway you take it, and it's the best Peavey made.

Lumbermen Always Find Their Man In

WANTED & FOR SALE DEPARTMENT

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Canada Lumberman
and Woodworker
Toronto - Canada

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:

1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing ..	27 00	29 00
1 x 8 common and dressing ..	27 00	29 00
1 x 10 common and dressing..	31 00	32 00
1 x 12 common and dressing..	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common.	25 00	26 00
1 x 12 inch box and common..		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and c. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00

Hemlock No. 1:

1 x 4 and 5-in. x 9 to 16 ft. ...	17 00
1 x 6-in. x 9 to 16 ft.	20 00
1 x 8-in. x 9 to 16 ft.	21 00
1 x 10 and 12 in. x 9 to 16 ft.	22 00
1 x 7 ,9 and 11 in. x 9 to 16 ft.	19 00
1-in. No. 2, 6-ft. to 16-ft. ...	16 00
2 x 4 to 12, 10 and 16 ft.	19 00
2 x 4 to 12-in., 12 and 14 ft. ...	19 00
2 x 4 to 12-in., 18 ft.	22 00
2 x 4 to 12-in., 20 ft.	24 00
2 x 4 to 12-in., 22 ft.	25 00
2 x 4 to 12-in., 24 ft.	26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	16 00
Clear in B. C. cedar, kiln dried	50 00

Douglas Fir:

Dimension Timber up to 32 feet:	
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	33 50
8x10, 8x12, 8x10, 8x12, 10x10, 12x16, 16x16, 16x18, 18x18, 20x20, up to 32 ft.	34 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	34 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x20 up to 32 ft.	35 00
10x20, up to 32 ft.	35 50
6x18, 8 x 18, up to 32 ft.	36 00
6x20, 8x20, up to 32 ft.	37 00

Timber in lengths over 32 feet take the following additions: 33 to 35 ft., 50c; 36 to 40 ft., $1; 41 to 45 ft., $3; 46 to 50 ft., $5; 51 to 55 ft., $7; 56 to 60 ft., $9; 61 to 65 ft., $12.50; 66 to 70 ft., $15; 71 to 75 ft., $18; 76 to 80 ft., $22.

Fir flooring, edge grain	35 00
No. 1 and 2 1-in. Fir rough ...	38 00
No. 1 and 2 clear 1¼, 1½ and 2-in. Fir rough	40 00
1½-in. No. 1 4-ft. pine lath..	5 00
1½-in. No. 2 4-ft. lath	4 75
1½-in. 32-in. pine	2 65
1½-in. No. 1 4-ft. hemlock lath	4 00
1½-in. mill run hemlock lath	3 75
XX B. C. cedar shingles	2 25
XXX 6 butts to 2-in.	2 95
XXXX 6 to 23-16-in.	3 15
XXXXX	3 35

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1sts and 2nds, 4/4	39 00
Birch, No. 1 com. and bet., 4/4	30 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00
Birch, 1sts and 2nds, 10/4 and 12/4..	45 00
Birch, 1sts and 2nds, 16/4	50 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4..	30 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet...	28 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	28 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1sts and 2nds, 4/4	37 00
Hard maple, common and better, 4/ .	28 00
Hard maple, 12/4 & 16/4, 1sts and 2nds.	46 00
Red oak, plain 1sts and 2nds, 4/4..	59 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	65 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain, 1sts and 2nds, 4/4.	59 00
White oak, plain, 1sts and 2nds, 1½ and 2-in.	65 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	75 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	85 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	88 00
White oak, ¼ cut No. 1 common	55 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:

1-in. x 7-in. and up	$52 00	54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00

Pine good strips:

1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00

Pine good shorts:

1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No.. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ..	29 00	30 00
Pine, No. 1 dressing shorts ..	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ..	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips ..	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips ..	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips ..	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	25 00	26 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in..	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	17 50	18 00
1"x3" to 6", 12'-16'	19 00	20 00
Pine mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine mill culls stock 1 x 12 ...	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	15 00	17 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1¼-in.	19 00	21 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
Mill culls, white pine, 1"x7" and up	20 00	21 00
Mill run Spruce:		
1"x4" and up, 6'-11'	17 00	18 00
1"x4" and up, 12'-16'	18 00	20 00
1"x9"-10" and up, 12'-16' ..	22 00	24 00
1¼"x7" 8-9" and up, 12'-16'	22 00	24 00
1¼"x10" and up, 12'-16'	22 00	24 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 White Pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
White Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	70	75
According to average and quality, 30 to 35 feet	50	60

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00

Birch Planks

1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00

Cuts and Better

4/4 x 8 and up No. 1 and better	55 00
6/4 x 8 and up No. 1 and better	65 00
8/4 x 8 and up No. 1 and better	65 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00

No. 1 Cuts

1 in., 8 in. and up wide	42 00
1¼ in., 8-in. and up wide	55 00
1½ in., 8-in. and up wide	57 00
2 in., 8-in. and up wide	60 00
2½ and 3 and 8-in. and up wide	75 00
4 in., 8-in. and up wide	85 00

No. 2 Cuts

1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	47 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in.	25 00
1 in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00

No. 1 Barn

1 inch	31 00	45 00
1¼, 1½ and 2-in.	36 00	45 00
2½ and 3-in.		45 00
4 inch		50 00

No. 2 Barn

1 inch	28 00	36 00
1¼, 1½ and 2-in.	30 00	36 00
2½ and 3-in.		38 00

No. 3 Barn

1 inch	21 00	28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00	25 00

Box

No. 1, 1, 1¼, 1½, 2-in.	22 00	25 00
No. 2, 1¼, 1½, 2-in.	19 00	23 00

Mill Culls

Mill run culls, 1-in.		19 00
1, 1¼, 1½ and 2-in.		20 00
No. 2	17 00	18 00

Lath

No. 1, 32-in. pine	1 75
No. 2, 48-in. pine	4 25
No. 1, 48-in. pine	4 75
No. 3, 48-in. pine	3 75

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1 E.			
	6 ft.	8 ft.	10 ft.	14x16 ft.
2 r 4, 6, 8	14 00	17 00	20 50	18 50
2 x 10	18 00	18 50	21 50	19 00
2 x 12	18 00	19 00	23 50	20 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	18 50
2 x 4-10-18-20	20 50
2 x 6, 8 to 16	18 50
2 x 8, 8 to 16	18 50
2x4-6 and 8-in.; 24,26,28, 30, 32 ft...	26 50
2 x 10 and 2 x 12; 8-16 ft.	23 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	25 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	27 50

No. 1 Common Boards

4 inch	19 00
6-inch	21 50
8, 10, 12 inch	23 50
Mixed widths	22 50

Flooring

4 or 6 inch No. 1	33 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00

Shiplap—Finished

6 inch	20 00
8, 10 and 12 inch	21 00

Siding

6 inch No. 1	33 00
6 inch No. 2	31 00
6 inch No. 3	21 50

Lath

No. 1 Cedar, pine, spruce (not mixed)	4 00
No. 1 Cedar, pine, spruce (mixed) ...	3 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	25 10
3 x 8 in.; 8 to 16 ft.	22 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	25 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	27 00

BRITISH COLUMBIA COAST FIR

Dimension S 1 S, and E.

2 x 4 in.; 6 and 8 ft.	17 50
2 x 4 in.; 12 x 14 ft.	18 50
2 x 4 in.; 10 x 16 ft.	19 50
2 x 4 in.; 18 x 20 ft.	20 50
2 x 4 in.; 22 x 24 ft.	21 50
2 x 4 in.; 26 x 32 ft.	23 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	20 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	22 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	23 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	25 00
2 x 14 in.; 10 to 16 ft.	25 00
2 x 14 in.; 18 and 20 ft.	27 00
2 x 14 in.; 22 and 24 ft.	28 00
2 x 14 in.; 26 to 32 ft.	30 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	21 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	22 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	23 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	24 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	26 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft. ...	24 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ...	24 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ...	25 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ...	25 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	32 00
Nos. 1 and 2, 1 x 4 in., E. G.	31 00
Nos. 1 and 2, 1 x 6 in., E. G.	29 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	23 00
No. 3, 1 x 4 in. or 6 in.	20 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	19 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ...	20 00
No. 2 Shiplap, 6 in.	19 00
No. 2 Shiplap, 8, 10 and 12 in.	20 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	19 00
Common Boards, 8 to 12 in.	20 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 75

LATH

Fir lath, 3/8 x 1 3/8 in. x 4 ft., bundled in 50's	4 00
Cedar lath 3/8 x 1 3/8 in. x 4 ft.	4 50

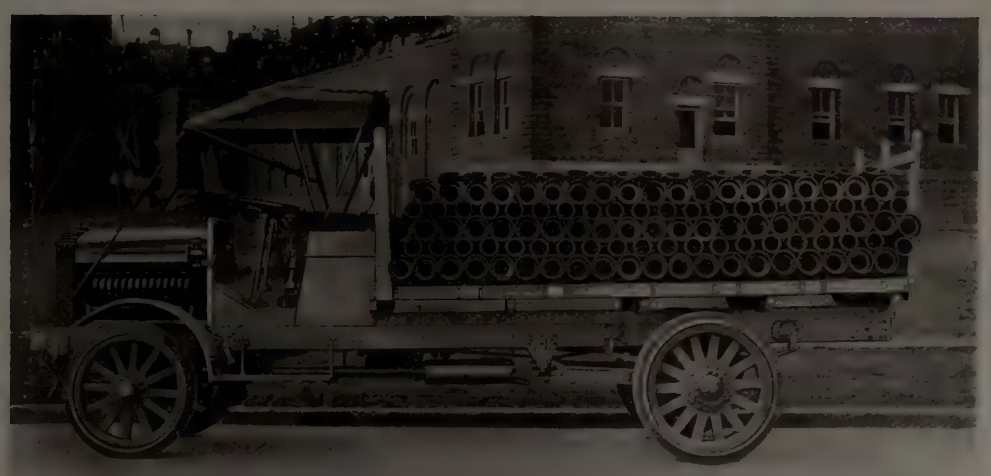
BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$94 00
Uppers 5/4 to 8/4	92 00
Uppers 10/4 to 12/4	97 00
Selects 4/4	84 00
Selects 5/4 to 8/4	82 00
Selects 10/4 to 12/4	92 00
Fine common 4/4	61 00
Fine Common 5/4	65 00
Fine common 6/4	65 00
Fine common 8/4	67 00
No. 1 Cuts 4/4	51 00
No. 1 Cuts 5/4	57 00
No. 1 Cuts 6/4	59 00
No. 1 Cuts 8/4	61 00
No. 2 Cuts 4/4	32 00
No. 2 Cuts 5/4	43 00
No. 2 Cuts 6/4	45 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	33 00
No. 3 Cuts 6/4	34 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	46 00
Dressing 5/4 x 10	51 00
Dressing 5/4 x 12	52 00
No. 1 Moulding 5/4	58 00
No. 1 Moulding 6/4	58 00

Continued on page 66)



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The production of Motor Trucks by the National Steel Car Co., Limited, is a logical development of the resources of the Company.

More than a year ago the National Steel Car Co., Limited, commenced to use its resources and facilities in the designing and manufacturing of Motor Trucks, its progressive steps being directed by careful study and analysis under laboratory conditions, supplemented by service tests of exceptional severity.

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Details of the specifications and the service which goes with every National Truck gladly sent upon request. Address enquiries to Hamilton Office.

National Steel Car Co., Limited

Operating Offices and Works: HAMILTON, CANADA

MONTREAL OFFICES: Shaughnessy Bldg. Foreign Offices: London, Eng. Paris France

CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	58 00
No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	32 - 33	21 - 23	13 - 15
5/4 to 8/4	34 - 36	23 - 25	13 - 14
10/4 to 16/4	39 - 41	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	35 - 37	22 - 24	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	34 - 36	23 - 25	14 - 16
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	32 - 34	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	44 - 46	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	60 - 62	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in.	92 00	98 00
Selects, 1 to 2 inch	80 00	88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	70 00	72 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	36 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 00	34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	28 00	29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		23 50
Spruce, 8 in. and under dimen.		26 00
10 and 12 in. random lengths, 10 ft. and up	25 00	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	23 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	23 00
5 inch and up merchantable boards, 8 ft. and up; p 1s	20 00	21 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	21 00	22 00
1⅜ in. spruce laths	4 15	4 25
1½ in. spruce laths	3 55	3 75

New Brunswick Cedar Shingles

Extras	3 30	3 40
Clears	2 75	2 90
Second clears	2 40	2 60
Clear whites	2 25	2 30
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.	3 45	3 50
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfection, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in. extra red clear		3 30

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(Continued on page 72)

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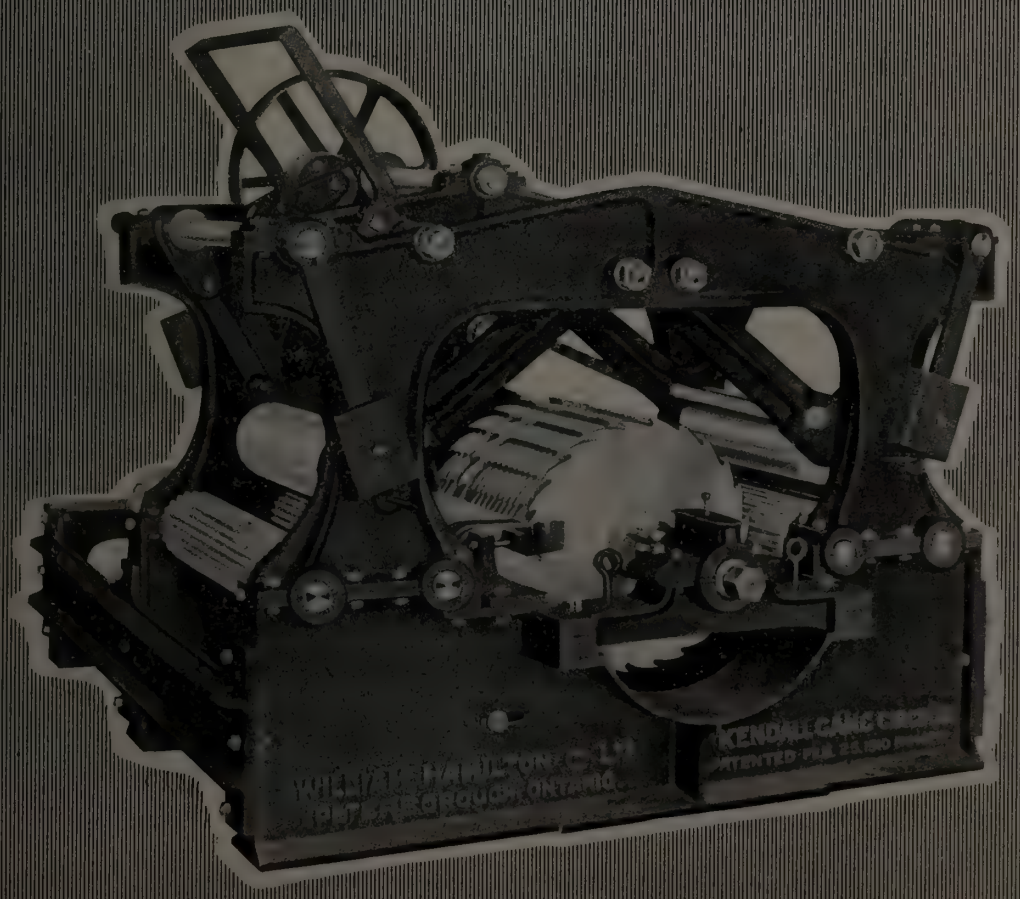

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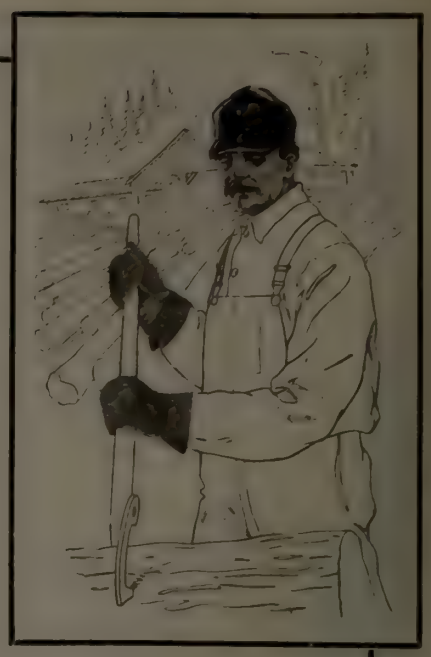

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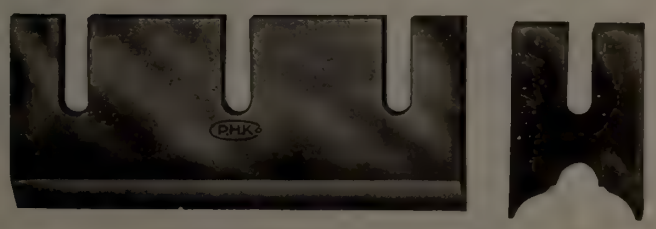

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Waterous Engine Works Company

TIES
Fesserton Timber Company
Harris Tie & Timber Company
Spears & Lauder

TIMBER BROKERS
Cant & Kemp
Farnworth & Jardine
Lacey & Company, Jas. D.
Smith & Tyrer Limited

TIMBER ESTIMATORS
Sewall, James W.
McInnis, A. D.

TIMBER CRUISERS
Campbell Lumber Company, L. E.

TRANSMISSION MACHINERY
Canadian Link Belt Company
Jeffrey Manufacturing Company

TUGS
West & Peachey

TURBINES
Smith Company, S. Morgan

VENEERS
Hoffman Brothers Company
Webster & Bro., James

VENEER MACHINERY
Perrin, William R.
Philadelphia Textile Machinery Co.

VETERINARY REMEDIES
Douglas & Company
Fleming Bros.

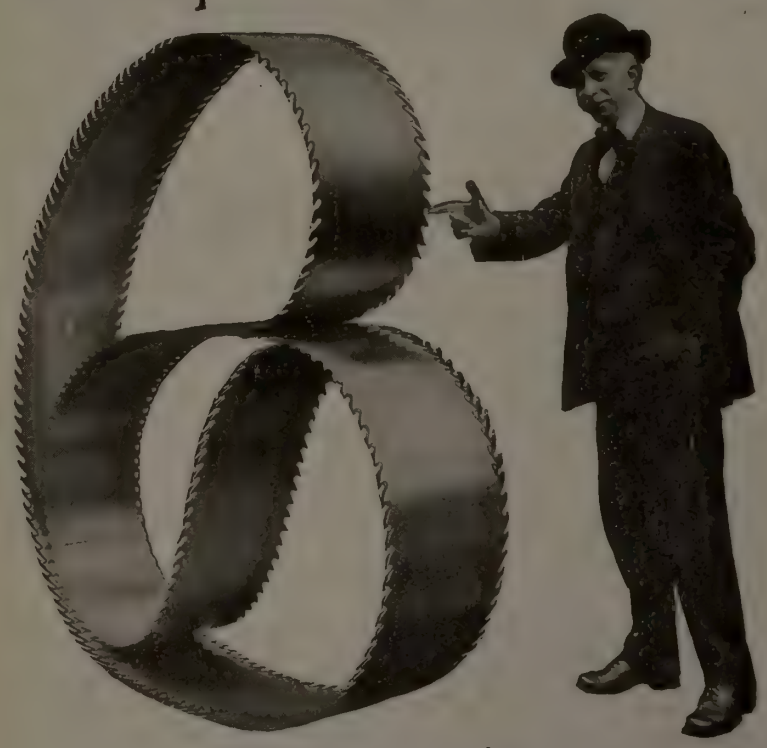
WATER WHEELS
Boving Hydraulic & Engineering Co.
Hamilton Company, Wm.
Smith Company, S. Morgan

WOODWORKING MACHINERY
Berlin Machine Works
Canadian Blower & Forge Company
Long Manufacturing Company, E.
Waterous Engine Works Company

WOOD PULP
New Ontario Colonization Co.
River Ouelle Pulp & Lumber Co.
St. Gabriel Lumber Company

The Superintendent Smiles

That's why they are called



The Saw with a Smile

One of our big mills reported a cut, on Dec. 6th, of over one million feet in twenty-two hours. *They smiled.* So will *you*—when you use them.

You have probably promised yourself to try ATKINS SAWS sometime. Well—*now* is the time.

Specify ATKINS BAND, CIRCULAR, GANG, CROSS-CUT or any other type of Mill Saw. Try ATKINS MACHINE KNIVES. We'll make good.

When he sees his ATKINS STERLING STEEL SAW

MADE IN CANADA

E. C. ATKINS & COMPANY

Factory – HAMILTON, ONT.

Makers of Sterling Saws

Vancouver Branch 109 Powell St.

A Test In Your Workshop

will convince you of this fact:

That it is cheaper to use two files where you now use only one.

Take a certain piece of work and give one man a new file, and another a half worn file on a similar piece of work.

The man with the new file is doing what you are paying him for. The other man is filing away your time.

The man with the new file takes a pride in his work.

The man with the old file starts with a grouch, and the work suffers.

When the inefficient point in the files is reached it is good policy for you to have your men discard them.

And they should be replaced with the five famous brands:

KEARNEY & FOOT
GREAT WESTERN
AMERICAN
ARCADE
GLOBE
(Made In Canada)

Made in Canada by a plant controlling 90% of the file business.

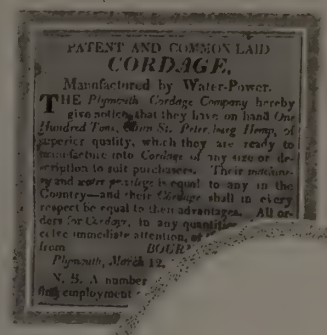
Backed by 50 years' experience in the making of efficient files.

Send for your FREE copy of "File Filosophy" NOW.

Nicholson File Co.

Port Hope, Ontario

DEALERS EVERYWHERE.


PATENT AND COMMON LAID
CORDAGE,
Manufactured by Water-Power.
THE Plymouth Cordage Company hereby give notice that they have on hand One Hundred Tons, Clean St. Peter burg Hemp, of superior quality, which they are ready to manufacture into Cordage of any size or description to suit purchasers. Their machinery and water privilege is equal to any in the Country—and their Cordage shall in every respect be equal to their advantages. All orders for Cordage, to any quantity, will receive immediate attention, if sent from
Plymouth, March 12.
N. B. A number of boys will find employment

Plymouth Policy

Our first ad

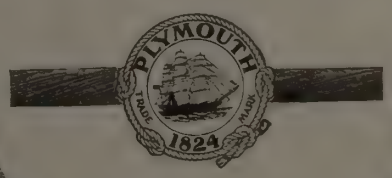
shows the stress laid, even in the earliest year of the business, upon the policy which governs the manufacture of Plymouth Cordage—"highest quality only".

It is well to know that we have always had such a policy. It makes you feel certain that the same policy will be continued.

In the light of our growth this course is obviously the profitable one for us to follow. And the greater service which it enables us to render to those who sell or use our goods likewise makes it the natural one.

At no time have we seen any reason for changing this policy. Instead, we receive proof every day that "highest quality" is the only quality worth sticking to in cordage—whether you make it, sell it or use it.

PLYMOUTH CORDAGE CO.
NORTH PLYMOUTH, MASS.—WELLAND, ONT.
INDEPENDENT CORDAGE COMPANY, LIMITED
TORONTO, ONT.
CANADIAN SALES AGENTS



Steam Log Kickers

The illustration shows our Standard Double Deck Steam Log Kicker which we manufacture with cylinders 8 in., 10 in. and 12 in. bore. This kicker is made for either single or double deck mills. The bottom head of the cylinder is cast solid, eliminating the necessity of taking the machine apart for packing. The joint between the valve case and cylinder is a "ground joint" which is perfectly steam tight and requires no packing.

Catalogue on request

The E. Long Mfg. Co., Limited
Orillia, Ont.

AGENCIES :

MONTREAL
Williams & Wilson, Limited.
EDMONTON & CALGARY
Gorman, Clancy & Grindley, Limited.
WINNIPEG
Stuart Machinery Co. Limited.
VANCOUVER
Robert Hamilton & Company.

This mark on your saw mill machinery is an indication that your lumber manufacturing equipment is the best and most economical money can buy.

Throw Out Those Old Valves!!

Don't tolerate kicking or leaking valves on your Steam Feed. Just as sure as your valves kick, your cutting capacity is going to take a drop. The Sawyer "feels" his work through his lever. A kicking valve scares him off his work; a leaking valve won't let him do his best. Both kinds are money losers for you.

WATEROUS VERTICAL STEAM FEED VALVES

Will neither kick nor leak.

In the first place, the vertical position of this new valve allows perfect drainage into the exhaust port at the bottom. Should the connection break the valve drops of its own weight and shuts off the steam. That's a ***safety*** feature.

Then, the exhaust—mostly water—doesn't pass through the valve plug, but through the lower part of the valve chest. That's why the valve ***cannot kick.***

And—most important of all—with the vertical valve there is no weight on the valve seat and consequently ***no wear*** and ***no leakage.*** It's a ***real*** steam conserver.

Further, the **Waterous Vertical Valve** is balanced to work easy, there is no dead steam between it and the cylinder. Just as soon as the sawyer moves his lever he gets the full "punch" of the live steam on his piston. That makes a ***fast, quick-acting, satisfactory feed.***

If yours isn't that kind now, attach **Waterous Vertical Valves** and see what a difference they will make.

Write for Information and Prices

The Waterous Engine Works Co., Limited

BRANTFORD, CANADA

Agency—H. B. Gilmour, Vancouver, B.C. *Branch*—Winnipeg, Man.

$5,000,000.00
worth of mixed metal sold annually.

"FROST KING" METAL

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. **Price 30c per lb.**, Fort William and East; West of Fort William **35c per lb.**, delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

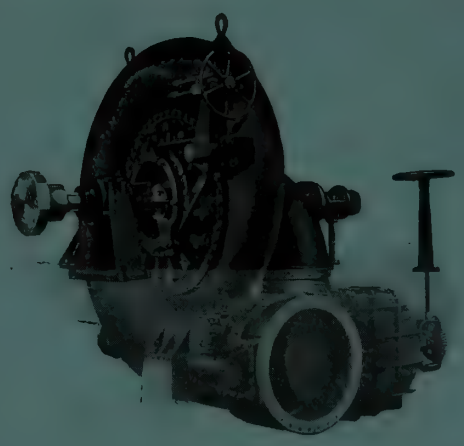
Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Smith Hydraulic Turbines

for driving the

Paper Mill and Pulp Grinder



This type of equipment specially designed for high head developements.

Our particular claim for these turbines is service, the kind of service that responds to the demand

Promptly and Efficiently

Write for Bulletin F

S. Morgan Smith Co., York, Pa.

H. B. VanEvery—CANADIAN REPRESENTATIVE
405 Power Bldg. - - - Montreal, P. Q.

Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.
Limited

General Mill Supplies MONTREAL

A Mighty Good New Year's Resolution

"I resolve to use only the best material during 1916—to buy only on a Quality basis—not to let price obscure my judgment—to buy my material as I would have others buy mine."

If you will use and apply the above "resolve" to your daily buying—you'll mighty soon find yourself among the great army of buyers of

AJAX
Loading and Conveyor Chain

We don't want to merely tell you it's the best chain made—we want you to prove it to yourself.

Montreal
Alexander Gibb, St. Nicholas Bldg.

Standard Chain Company
Pittsburgh, Pa.

Winnipeg
Bissett and Webb

Vol. 36 Toronto, February 15, 1916 No. 4

Canada Lumberman & Wood Worker

WATER WHEELS GOVERNORS, PUMPS

Highest quality

Boving Hydraulic & Engineering Co.
LINDSAY, ONT. Limited

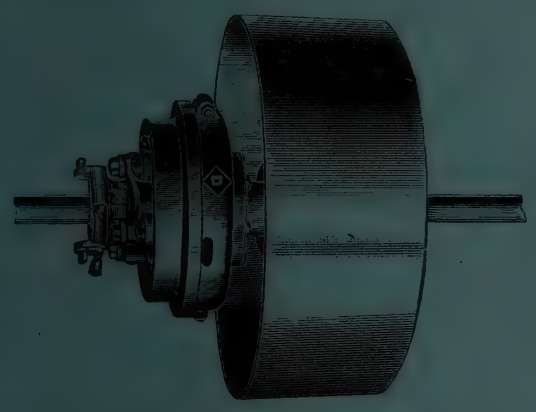
Made in all styles

Electric-Welded Boom Chain

We also specialize
Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.



DODGE FRICTION CLUTCH PULLEYS

For Saw Mills and Planing Mills

A simple, positive, durable clutch! Every Friction Clutch Pulley we sell is guaranteed suitable and satisfactory for the work or money refunded. All sizes split or solid for quick shipment.

Dodge Manufacturing Company, Limited
TORONTO -:- MONTREAL

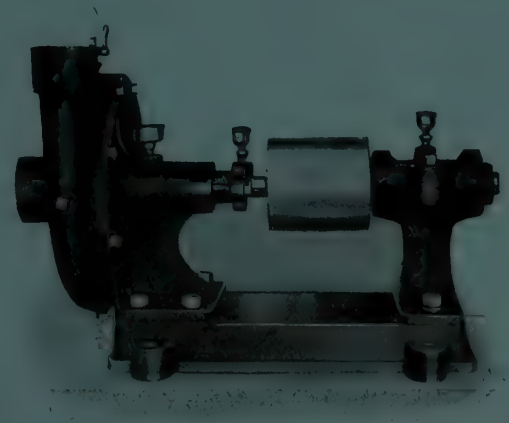
GENUINE "TURBROS"

Balata Belting

Waterproof and Stretchless.
The best belt for sawmills.

Manufactured and guaranteed by

Turner Brothers Canada, Limited
MONTREAL

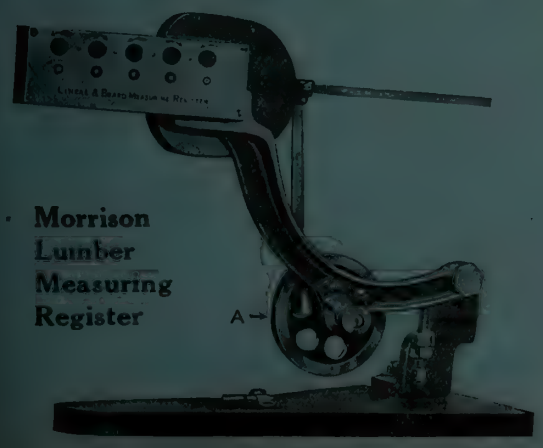


When next in the market for

PUMPS

let us figure on your needs.

The Smart-Turner Machine Co., Ltd.
Hamilton, Canada



Morrison Lumber Measuring Register

Measure Every Stick in the Order

Too much lumber in a definite order will hurt your profits while too little may damage your reputation. Equip your machines with Morrison Lumber Measuring Registers and have an accurate count, either in board or lineal feet, of every stick of lumber in every order you turn out.

We make a high class line of

Steam Specialties

Reducing Pressure Valves
Pop Safety Valves
Injectors, Ejectors, Etc.

Our literature will interest you

The James Morrison Brass Mfg. Co., Ltd.
93-97 Adelaide St., West, TORONTO

Alphabetical Index of Advertisers, Page 54 Classified Directory to Advertisements, Page 60

COSTS LESS PER DAY

AMPHIBIA BELTING

COSTS LESS PER DAY

Put Good Belting

on your

Good Machines

Your machines are expensive, and naturally you expect them to turn out the quality and quantity of work commensurate with their cost.

Then why harness them with belting which cannot begin to do them justice?

Use

"AMPHIBIA"

Planer Belting

and get the most work from your machines, in the quickes time, at the lowest cost per day of service.

Try a sample run of "AMPHIBIA" Planer and prove its merits.

"Leather like gold has no substitute."

Sadler & Haworth

Established 1876

Tanners and Manufacturers

For 40 Years Tanners and Manufacturers of the Best Leather Belts

MONTREAL, 511 William Street

TORONTO	ST. JOHN	WINNIPEG	VANCOUVER
38 Wellington St. E.	149 Prince William St.	Galt Building	107-111 Water St.

The FLEXIBLE WATERPROOF BELT

"AMPHIBIA"

"AMPHIBIA"

Geo. Gordon & Co., Limited

Cache Bay, Ontario

RED and WHITE PINE

Cross Arms, Shaped, Bored and Painted

3¼ x 4¼ x 3′ 6″	2000 pcs.
3¼ x 4¼ x 4′	1600 "
3¼ x 4¼ x 6′	2300 "

Cross Arm Material D 4 S

3¼ x 4¼ x 4′	12000 pcs.
3¼ x 4¼ x 6′	9000 "

All Selected Norway.

Dressing done on short notice. ***Send us your inquiries.***

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

QUALITY LUMBER

We are now teaming out and loading at New Liskeard our stock of choice MILL RUN, JACK PINE. Well manufactured and dry.

1 x 4 in. 8-16 ft.	40,000	2 x 4 in. 8-16 ft.	42,000
1 x 5 in. 8-16 ft.	25,000	2 x 8 in. 8-16 ft.	92,000
1 x 6 in. 8-16 ft.	30,000	2 x 10 in. 8-16 ft.	4,500
1 x 7 in. 8-16 ft.	10,000	4 x 4 in. 8-16 ft.	2,000
1 x 10 in. 8-16 ft.	250	6 x 6 in. 8-16 ft.	30,000
1 x 4 and up 6-16 ft. mill culls	40,000	6 x 8 in. 8-16 ft.	22,000
1 x 4 and up 6-16 ft. dead culls	15,000	8 x 8 in. 8-16 ft.	9,500
2 x 4 and up 6-16 ft. mill culls	9,600		

We will quote special prices now to save expense of piling.

LET US HEAR FROM YOU.

Branch Office
852 Cambie Street
Vancouver

Terry & Gordon

Wholesale Lumber Merchants

Head Office
704 Confederation Life Bldg.
Toronto

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

HEMLOCK

CACHE BAY

48,000 ft. 2 x 6 No. 1 Hemlock, 10-12-18 ft.
40,000 ft. 1 x 4 and up No. 1 Hemlock, 10 to 16 ft.
300,000 ft. 2 x 4 and up No. 2 Hemlock, 42% 4", 20% 6", 16% 8", 16% 10", 6% 12"
37,000 ft. 1 x 4 and up No. 2 Hemlock, 60% 4", 21% 6", 17% 8", 2% 10"
60,000 2 x 8 14 ft. No. 1 Hemlock

LONGFORD

350,000 ft. 1 x 4 and up No. 2 Hemlock
350,000 ft. 2 x 4 No. 2 Hemlock
400,000 ft. 2 x 6 and up No. 2 Hemlock

The Long Lumber Company

HAMILTON, ONT.

Something to "Crow" About

Hocken's Hemlock

When selling a customer it is comforting to feel that you are offering stock that you can conscientiously "crow" about—such stock is Hocken's Hemlock. Get our prices.

Hocken Lumber Company, Limited

Otter Lake Station, Ont.

NEW ZEBRA, WOOD, WESTERN UNION, and PRIVATE CODES USED.

Telephones:
1391 Long Distance.
400 Private Branch Exchange.

Cables:
"HILLAS," HULL

W. N. HILLAS & COMPANY

WOOD BROKERS

FOR EVERY CLASS OF TIMBER

***Head Office*: HULL, England**

To the Lumber Companies of Canada:

You have the Goods. Place your Lists with full particulars in our hands. We are in daily touch with all the Buyers in the United Kingdom.

PLEASE NOTE.—We pay cash against all documents, and take the whole of the Delcredere risk on Buyers.

HART & McDONAGH

Wholesale Lumber

We announce to the trade the opening of our Toronto Offices at

513 Continental Life Building

We are carrying on hand a full line of

Dry Birch Stock

specially suitable for Ammunition Boxes and Gun Stocks.

WE OFFER IN BIRCH END STOCK

1 x 8½"	1 x 9" and wider
1 x 6 and 7"	1½ to 4"

Spruce, Basswood, Ash, Hemlock and Pine

IMMEDIATE DELIVERIES CAN BE GIVEN ON ALL THIS STOCK

Write, wire or telephone your enquiries

Bartram Brothers

Cable Address, "Bartram"
Code, ABC 5th edition.

Ottawa, Canada

Limited

Stock on hand unsold.

February 15, 1916

NORWAY MILL RUN

1 x 4/5 x 10-16	1,437,944
1 x 6 x 10-16	365,909
1 x 7/9 x 10-16	155,520
1 x 8 x 10-16	36,900
1¼ x 4 x 10-16	30,292
1¼ x 5 x 10-16	11,798
1¼ x 7 x 10-16	30,521
2 x 4 and up x 10-16	14,800
3 x 4 and up x 10-16	122,382
4 x 5 x 10-16	6,179

NORWAY CULLS

1¼ x 4/7 x 6-16	40,392
3 x 4 and up x 6-16	121,032

WHITE PINE GOOD

1 x 4 and up x 6-9	1,512
1 x 4 and up x 10-16	5,825

WHITE PINE MILL RUN

1 x 5 x 10-16	73,034
1 x 7/9/11/13 x 10-16	92,686
1 x 10 x 10-16	2,098
1 x 12 x 10-16	9,442
1¼ x 4 x 10-16	4,651
1¼ x 5 x 10-16	2,165
1¼ x 6 x 10-16	3,371
1¼ x 7 x 10-16	7,771
1½ x 4 and up x 10-14	150,000
2 x 4 and up x 10-16	4,311
3 x 4 and up x 10-16	118.850
4 x 5 x 10-16	1,562

WHITE PINE CULLS

1 x 4 and up x 6-16 No. 2	107,913
1¼ x 4/7 x 6-16 No. 1	5,987
2 x 4 and up x 6-16 No. 1	5.680
3 x 4 and up x 6-16 No. 1	49,153

MILL RUN LATH

1½ x 3/8 x 32 in. Norway	645M
1½ x 3/8 x 32 in. W. Pine	187M

MILL RUN SPRUCE

1 x 4 x 8/16	199,197
1 x 5 x 8/16	354,226
1 x 6 x 8/16	387,930
1¼ x 4 x 10/16	8,700
1¼ x 5 x 10/16	21,400
2 x 3 x 8/16	15,900
2 x 4 x 8/16	32,400
2 x 4 x 12	16,000
2 x 4 x 16	5,200
2 x 5 x 8/16	294,000
2 x 6 x 8/16	264,400
2 x 6 x 12	17,000
2 x 7 x 8/16	88,500
2 x 7 x 12	3,600
2 x 8 x 12	3,600
2 x 10 x 12	4,500
2 x 10 x 9-16	45,000
2 x 11 x 8/16	5,600
2 x 6 and up x 8/16	25,200
2 x 7 and up x 8/16	9,900
2 x 7 and 9 x 8/16	15,000
2 x 7 and 9 x 16	42,000
2 x 10 and up x 8/16	4,400
3 x 5 x 8-16	155,000
3 x 6 x 8-16	163,000
3 x 7 x 8-16	134-000
4 x 6 x 10-16	10,000

SPRUCE CULLS

1 in.	155,000
1¼ in.	14,500
2 in.	66,000
3 in.	400,000

We have large stocks of 3" spruce deals, scantlings, planks and boards for export.

"Most of the lines listed are dry"

EXPORTERS OF DEALS TO U. K. AND EUROPE

Watson & Todd Limited

WHOLESALERS

Shell Box Stock

4 x 5—1915 Cut Norway

Send us your enquiries

OTTAWA

Also

Montreal and Liverpool, Eng.

The

Harris Tie & Timber Co.

Ottawa - Canada

Lumber - Lath - Shingles

Cedar Poles and Posts

Railway Ties - - Piles

Fraser Limited

Fredericton, N. B.

SELLING AGENTS FOR

Donald Fraser & Sons, Limited
Cabano, P. Q.

Fraser Lumber Co., Limited
Plaster Rock, N. B.

F & M Lumber Co., Limited
Whitworth, P. Q.

MANUFACTURERS OF

Spruce Lumber
Rough and Finished

Shingles, Lath, Piano
Sounding Board Stock, etc.

Fraser Bryson Lumber Co., Ltd.

Office, Castle Building 53 Queen St. Ottawa, Can.

Wholesale Lumber Dealers
and Selling Agents for

Fraser & Co.

Mills at

DESCHENES - - - QUEBEC

White Pine
Red Pine
Spruce
Lumber and Lath

River Ouelle Pulp & Lumber Co.

Manufacturers of

SPRUCE

Lumber Lath Pulpwood

Head Office and Mills at:

St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of
Quebec City

Also Mills at:

Crown Lake, Powerville, Riv. Manie
On Nat. Transcontinental Ry.

White Cedar Shingles

We offer for Immediate and Spring Shipment
dry stock 1915 cut in all grades.

Our production is the largest in Canada.

Our Shingles are uniform in quality, being well manufactured and graded.

White Cedar Shingles are Good Shingles

Prices and Terms alike to all buyers

The Canadian White Cedar Shingle Association

F. G. WHEATON, Amherst, N.S.

Canadian Sales Agent

Western Representative:—

ALF. H. GILHAM, 78 Pearson Avenue, TORONTO

John McKergow, President — W. K. Graffety, Managing-Director

The Montreal Lumber Co. Limited

Wholesale Lumber

Ottawa Office: 46 Elgin St. — Montreal Office: 759 Notre Dame St., W

James P. Grant — John K. Campbell

Grant & Campbell

Manufacturers of

SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

New Glasgow, N. S.

FOR SALE
HARDWOOD LUMBER

Dimension Stock, Mattress Frames, Hard and Soft wood slabs cut to lengths required. Hemlock, Cedar, Posts.
Orders receive prompt attention.
Phone 37 — Residence 15
JOHN P. NEWMAN Wiarton, Ont.

PATENTS SECURED OR OUR FEES RETURNED

Being next door to the Patent Office, we have personal interviews with Examiners, thus earlier allowance of your Patents. We have access to all Records and solicit the business of Manufacturers, Engineers, and others who realize the advisability of having their Patent business transacted by Experts. Send for our Booklet, etc.

HAROLD C. SHIPMAN & CO.
Reg. Patent Attorneys — Ottawa, Canada

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OFFICE, SCHOOL, CHURCH & LODGE FURNITURE
SEND FOR CATALOGUE

It Just Depends

Advertising and Dynamite are both useful, but the results of each depend upon how it is handled.

Canada Lumberman and Woodworker

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Lumber

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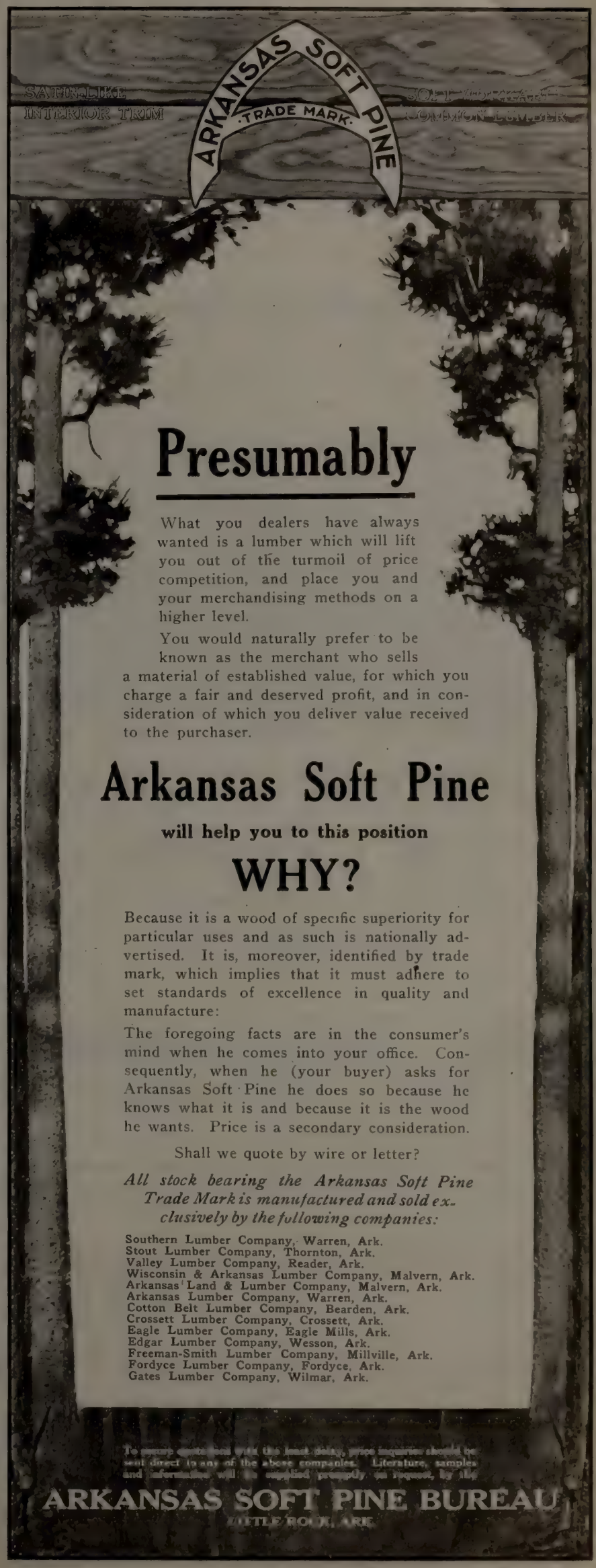

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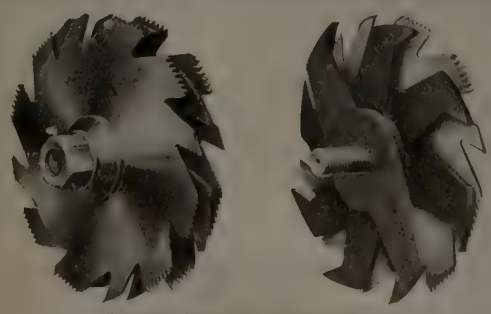

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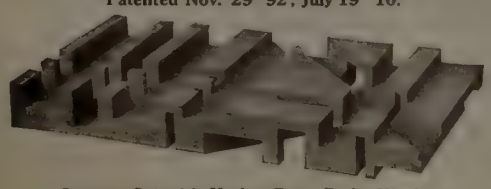

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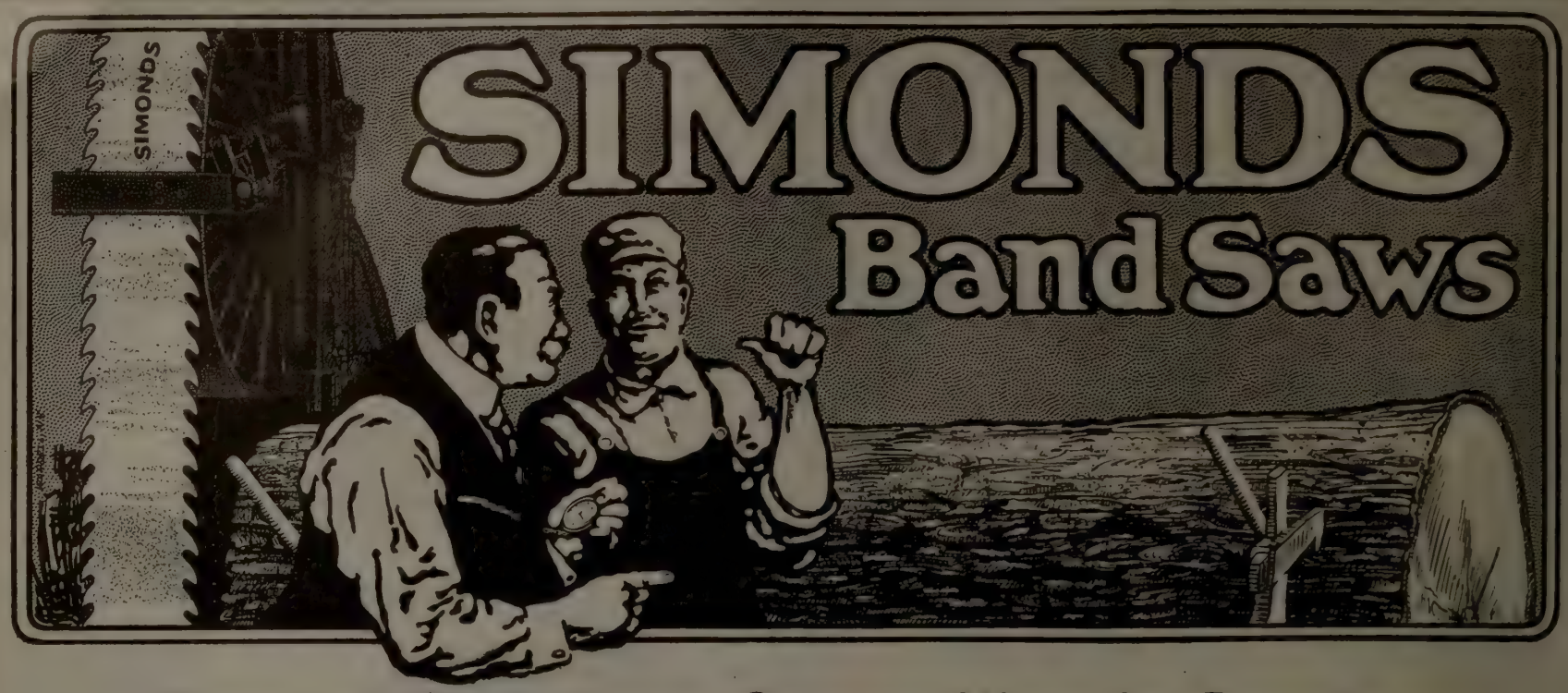

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THE WILLIAM DAVIES COMPANY LIMITED

TORONTO **MONTREAL** **WINNIPEG**

Canada Lumberman & Wood Worker

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Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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Grading Rules under Discussion for the Toronto Market

A few years ago the Canada Lumberman published a series of articles dealing with the importance of grading rules for lumber and advocating the adoption of a set of rules for the chief woods used in Eastern Ontario. Although we met with much approval from lumbermen, when it came to a matter of getting manufacturers to accept a set of rules, or to approve even of the principle, the whole thing fell flat. What the interests were that killed the idea at that time we do not know very definitely, nor for that matter do we care much about it as it is now simply a matter of trade history, but the idea was killed so effectivtly that it has not been brought forward again by anyone else up to the present time, so far as grading rules for Ontario are concerned.

Perhaps the plan, as then conceived was faulty in that it may have started at the wrong end of the ladder, so to speak. It seemed to those who took an interest in the matter at that time that the proper people to draw up and put into effect a set of grading rules were the manufacturers. It may be, however, that an equally logical way to introduce standard grading rules would be by enlisting the services of those who are closer in touch with the consumer. It is now likely that a plan of this nature will be tried in the near future, for the trade in Toronto are considering definitely a plan for drawing up and putting into force a set of grading rules which shall be known as the grading rules for Toronto, shall have the endorsation of the Toronto Board of Trade and be fathered by the Lumbermen's Section of the Board. Whether such a plan is feasible or not remains to be seen. In the light of trade history in the United States we can see nothing to prevent it from being put into effect and having possibly a far wider application than simply among the trade of Toronto. The successful introduction of a set of grading rules for Toronto could not be brought about without, to a great extent, standardizing the grading of lumber throughout the whole province of Ontario. The chief woods which it is proposed to include in the Toronto rules are pine, spruce and hemlock.

If anything were wanted in the way of an argument or proof of the value and importance of adopting grading rules by means of which to standardize the trade it could be had in the case of the hardwoods, which have been subjected to standardized grades by the two great hardwood associations of the United States. Before these grading rules were put into effect the hardwood trade both in the United States and Canada was in a condition of chaos. No one knew what was meant by any so-called grade which might be mentioned in connection with a transaction. The only way in which to know what one was purchasing was to see the stock beforehand. Nowadays one has only to mention the grade of hardwood that he wants and both parties can understand exactly what stocks are to change hands, even though the transaction be completed by correspondence or telephone and the purchaser may not have seen the stocks. In fact, the middleman may purchase hardwoods without seeing them and depend upon them giving satisfaction to his customer when they are delivered. These are the elementary benefits secured by a definite set of grading rules and they ought to appeal to everyone in the business.

For some reason which we have never been able to appreciate, but which have been explained to us time and again by parties who think that a uniform set of grading rules would in some mysterious manner do an injustice to them by depriving them of their own right to grade stocks as they see fit, or as their predecessors have graded them, the efforts to standardize grading rules in Ontario have been of no avail. Surely it is worth while providing by standard rules a means of simplifying transactions and reducing the possibilities of a disagreement, to say nothing of making it much more difficult for an unscrupulous merchant whether he be manufacturer, wholesaler, retailer, jobber or scalper to sell one kind of stock and deliver another. As things stand today the path of the man who wants to be dishonest with his customer is almost a primrose one, in the lumber business. He knows that not even a court of law can clear up a dispute about a grade of lumber, because there is no definition of what such a grade may be.

Of course it is every man's business who buys lumber to know lumber when he sees it, but he often wants to buy when it is impossible to inspect the stock personally and he wants to know, just as any other business man wants to know, that he is getting in return for his money just what he is expecting. In almost every other line of business the tendency has been for many years in a direction directly opposite that which has prevailed in lumber. Catalogues and samples have made it possible for the purchaser to know just what he is getting before he parts with his money. Why should it not be so in connection with lumber, especially when there is no valid reason against it, outside of the difficulty of drawing up the rules in the first place, a difficulty which can surely be overcome by conscientious effort?

In the past, the lumber business has lost millions of dollars worth of trade to substitute materials. Unless business methods are simplified in many ways, one of which is the adoption of grading rules, the consumer will turn more and more to substitutes, for, after all, the consumer is the one who suffers most in the long run. With a set of grading rules in force, a consumer of lumber, that is to say a man who uses it as a raw material for his factory, or as a building material, will have himself to thank if he does not get value for his money, and if he finds that he has been purposely defrauded, he will have a definite standard upon which to base his claims, if he thinks fit to take the matter before the courts. So far as we can see the case for standard grading rules is complete and unanswerable and we hope that the Toronto trade will be able to put the plan into effect and that their example will waken up those others in the trade and industry who have blocked the proposal in the past.

Lumber Business Lacks Co-operative Publicity

Nothing has been more noticeable in connection with the lumber markets of Canada and the United States during the last few years than the rapid fluctuations in prices and the uncertainties which seem to be inherent to the lumber industry and trade. During these extreme fluctuations in demand and price the conditions of supply have apparently defied anything in the form of regulation, with the result that the industry rises and falls between prosperity and depression and seems to be beyond the working of any ordinary law which will ensure a comparatively long period of average stability and success. The conditions bringing about this state of affairs are to be found inside the lumber industry itself, the result largely of the manner in which it has developed from a small industry to a world wide one, with nothing done on a large scale to develop its methods, in proportion to the increase in its importance. Salesmanship methods connected with the lumber industry have been developed in pretty much the same manner as those in connection with other industries, but the industry itself, that is to say, its production end, has, to a large extent, lagged behind in the matter of co-operative regulation. Logging and manufacturing methods. from a practical point of view have gone ahead of late years, but the conditions of tenure in connection with the ownership of timber, the methods of protection against fire and other forest losses, the methods of control of cutting operations, and, most important of all, the regulation of the quantity of timber that shall be cut and placed upon the markets in the shape of lumber, are all working still at cross-purposes to prevent the industry from becoming anything like as stable as it should be. The result is that in a period of reduced demand and low prices, the evils of depression are greatly magnified because of the industry's inability to help itself.

The tendency of association work in the United States during the last few years has been to give this matter more attention than in the past. Advertising campaigns to promote the use of lumber have been commenced and are showing good results, and they promise to have, in the long run, a much more significant result than the chief one for which they were designed. They will undoubtedly cause greater use of lumber, but they will also educate the lumberman himself, that is to say the manufacturer, the wholesaler and the retailer in such a manner as to show him far more clearly the ways in which the opportunities of the past have been neglected. Advertising of lumber will show the lumberman chiefly, when it has been well worked out, that the greater the amount of co-operation they can work out among themselves, the greater will be the beneficial results. It will show them that, in connection with over-production, the chief factor has been the impossibility of getting anything in the form of a definite conception of the production of the country and its relation to the demand. It will show them that, working in the dark as to this important point, the lumberman has been driven by the force of circumstances to consider his manufacturing operations from his own individual point of view, taking into consideration only the production of lumber and the marketing of it, irrespective of whether he is doing so to his own best interest, to say nothing of the interests of others engaged in the same industry. The way in which these conditions have led to the use of one kind of lumber for pruposes for which other kinds were better suited, leading to dissatisfied users and the ultimate use of substitutes, is now fairly well understood by the lumber industry, thanks to what their own advertising efforts have taught them.

We might go into this situation at far greater length and not commence to exhaust it. We have only sought to indicate it with the idea of commending the tendency which is developing so widely of late towards co-operation and the advertising of lumber products in the United States. We would like to see a similar development in Canada. We believe that the lumber industry will not be in anything like its proper place until its advertising efforts have been subjected to the fullest possible measure of co-operation, and its production activities have been subjected to co-operative control to an extent far beyond that which at present exists.

The tendencies toward both of these goals are quite definite in the United States today and to a small extent also in Canada. They were well put recently, in an address by Mr. E. A. Sterling before the National Lumber Manufacturers' Association.

"The depressed state of the lumber market for the past few years," he said, "has reacted unfavorably on the systematic production of wood crops. There has been overproduction of lumber, greatly reduced demand and low prices, which have made, in many regions, even incomplete utilization of standing timber unprofitable. The lumbermen have been facing the most critical period in the history of the industry, and their success or failure in devising ways and means for the betterment of conditions, and the stabilizing of the lumber market, will have a very marked influence on the future development of forestry."

Mr. Sterling then reviewed the unfavorable conditions as they affect what he said is the second largest manufacturing industry in the United States, with an annual output valued at more than one billion dollars, and represented by nearly 80,000 manufacturers and distributers of forest products. This analysis brought out the fact that because of the magnitude of the industry, and the many individuals and corporations involved, the lumber market is unable to adjust itself to varying conditions of supply and demand. It was also shown that there has been no organization of lumbermen, which, in any way, attempted to regulate prices, but that instead of this, and because of the magnitude of the business and the many interests involved, there has been overproduction, which demoralized the lumber market.

Another condition which has not been given much consideration by foresters is the competition of building materials which take the place of wood. It was explained that during the past few years there has been a very great development along these lines, and that the substitute people are spending millions annually for advertising and publicity in order to make a market for their material, and they have succeeded to such an extent that lumber is permanently replaced in many places where it has had universal use.

The lumber industry is now following the modern practice adopted by other manufacturers in marketing their products. Mr. Sterling outlined the policy and plans of the lumbermen in this regard as follows:

"The lumbermen are now fully awake to this situation, and have not only organized a defense, but are launching an educational publicity propaganda which will be an offensive movement in behalf of wood products. Practically every popular magazine and many newspapers now carry lumber advertisements, and with this publicity, which tends to create a desire on the part of the ultimate consumer to use lumber, goes service and information which will enable the buyer to get greater satisfaction and better use of the lumber he buys. The trade extenion propaganda of the lumber industry is founded on the common sense policy that where lumber is as good or better than any other building material, it should unquestionably be used; that where by treatment to prevent decay or retard fire, or by any other processing or adaptation, it can be made entirely suitable, it should also be used, and that where it is not safe or economic, or otherwise suitable, some other material should take its place."

In Canada we have had very little in the shape of definite co-operation and organization along the lines that have been undertaken in the United States. The B. C. Forest Service has been a pioneer in this direction and has secured remarkable results in a comparatively short time. Why should not the organizations of lumbermen already existing in Canada take a more national view of their work and co-operate to develop a similar movement for the improvement of the industry and incidentally for the better economic utilization of the timber resources which are yet left to us.

At the annual meeting of the Hardwood Manufacturers' Association, held recently at Cincinnati, Ohio, the president, in his address spoke in part as follows:—The situation that we look upon today is very different from that of one year ago. The clouds that then darkened and depressed the business life of our country, and especially of our industry, have lifted and I cannot but feel that all signs now point to a period of prosperity such as we have not experienced for years. The past three months have seen the inert and exhausted lumber industry spring back to life and strength with a vigor that means prosperity for some time to come. Orders are plentiful. For some kinds and grades almost too plentiful, for the pendulum has swung far to the other side, and instead of a surplus of stock at the mills, as there was a few months ago, there is now actually a shortage of many items.

When the Panama Canal is again open to traffic it is probable that some of our exporters will pay attention to the Cuban market for lumber. A letter has been received from a leading lumberman of Havana asking quotations on timber and suggesting $23 as a popular price for spruce c. i. f. Havana.

Toronto Trade Discuss Inspection

Will Consider Adopting Definite Grading Rules for Pine, Spruce and Hemlock

The Lumbermen's Section of the Toronto Board of Trade held a meeting on February 4th at which the vice-chairman Mr. J. B. Reid introduced a discussion upon grading rules for the inspection of lumber. Mr. Reid, who occupied the chair during the meeting, expressed the opinion that it was time the Lumbermen's Section should take up the question of the inspection of pine, spruce and hemlock lumber and appoint a committee to draw up a set of inspection rules, which should be adopted by the Section and established as the recognized rules for the city of Toronto. If they carried out such a proposal they would be in a position, whenever there was any dispute, to point to the rules as a recognized standard for settling all differences of opinion. This has been a long felt want in connection with the trade of Toronto and in fact of the whole country. He suggested that they should appoint a committee to work upon the problem for as long as might be necessary in order to draw up rules that would suit the majority of the trade. The trouble arising out of the settling of claims would then we minimized wonderfully, and once such a system of grading had been adopted its influence would soon be felt in connection with all branches of the trade, that is to say, retail, wholesale and manufacturing. Not only would many of their trade problems be solved, but by establishing a set of rules they would do a great deal to make the trade more pleasant and to develop and maintain pleasant friendships among members of the trade.

Mr. A. E. Clark suggested that it might be well also to try and have the Canadian Lumbermen's Association take up the same matter and possibly endorse the same rules.

Mr. Reid thought that their best plan would be to get something going in Toronto first of all, and when they had been successful with this he believed that the other associations or groops of lumbermen would naturally fall in line.

Mr. A. E. Gordon approved of the idea and suggested that as a guide they might make use of the rules which were drawn up a number of years ago by the former Lumbermen's Section of the Toronto Board of Trade.

Mr. A. E. Clark suggested that it would be a good thing when a committee had been appointed to have them call in a number of the best inspectors employed at the large Ontario mills, so as to have the benefit of their ideas.

After considerable further discussion upon the subject it was decided to leave it over until the following meeting and to notify all members that the question would be brought up, so that a good attendance could be had.

At a meeting of the Section held on the previous Friday, Mr. W. J. Lovering reported on behalf of the committee appointed to cooperate with the city architect of Toronto in securing information regarding the strengths of various Canadian timbers. Mr. Lovering stated that they had had an interview with the city architect who informed them that Mr. John S. Bates, superintendent of the Dominion Government Testing Laboratory at McGill University, Montreal, was conducting an extensive series of tests of Canadian timbers. The tests of Douglas fir had now been completed and the results were ready to be published. The next series of tests would probably be upon red and white pine, or spruce. The Section decided to write to the superintendent of the Testing Laboratories recommending that the next tests be made upon red and white pine.

Interesting short addresses were delivered by Mr. W. J. VanDusen of the B. C. Forest Service who explained the work of the B. C. Lumber Commissioner's office recently established at Toronto; Mr. A. E. Gordon of Terry and Gordon, Toronto, and Mr. Hugh A. Rose, eastern representative for the Canadian Western Lumber Company, Fraser Mills, B. C., the latter two having recently returned from a visit to B. C. and having found the lumber trade in the west permeated with optimism regarding the prospects for a splendid year's business during 1916.

Stiffening Up Quebec's Fire Protection Regulation

Quebec limit-holders are asking the Provincial Government to make several changes in the regulations regarding the protection of the forests from fire. Hon. Jules Allard, Minister of Lands and Forests, has received these proposals with favor, and practically pledged himself to bring them in at this session as a Government measure. The limit holders ask that the law shall prohibit the setting out of settlers' clearing fires between April 1st and November 15th, without the written permission of a qualified ranger. The law at present makes the "permit season" only from April 15th to June 15th, and after September 1st. That is, the present law fails to specify any form of control whatever over settlers' fires between June 15th and September 1st. The limit holders ask that the entire season of fire danger be blanketed. Settlers are today the greatest enemies to forest preservation in Quebec.

The limit holders are asking also that minimum fine for failing to obey the requirements in respect to permits shall be one hundred dollars. The present fines are mostly trifling, perhaps $2 and $5, and do not accomplish their purpose. It is asked that no option of fine shall be allowed a man found guilty of setting fire to the forest in order to provide himself employment at fire fighting. Twelve months should be the minimum sentence. It is asked also that rangers or other forest officers should have authority to summon any male adult to help extinguish fires, such persons to receive the regular remuneration.

Annual Meeting of Mountain Lumbermen

At the annual meeting of the Mountain Lumber Manufacturers' Association, held recently at Nelson, B. C., officers were elected for the ensuing year and the secretary's report on the activities of the association was presented. In the report of Secretary I. R. Poole the following figures showing the lumber cut, shipped and the stock on hand at the end of the last four years were given:

	1912 Feet.	1913 Feet.	1914 Feet.	1915 Feet.
Lumber cut	420,000,000	386,000,000	235,000,000	145,000,000
Lumber shipped	488,000.000	335,000,000	210,000,000	253,000,000
Stock, Dec. 31.	188,000,000	218,000,000	243,000,000	135,000,000

In making a comparison of the above figures it was pointed out that there was a reduction in cut of 90,000,000 feet in 1915 as against timber cut in 1914, and an increase in the sales of about 43,000.000 feet, while the stocks were 108,000,000 feet less than at the same date in 1914. It was stated that the net value of the shipments of the mountain mills during 1915 amounted to $3,162,000, and that the figures of importation of lumber from the United States during the last year showed a decrease of 64,000,000 feet in comparison with those of 1914. This was accounted for by the low price of the mountain lumber.

Referring to market conditions during the last year the report said:

The year opened with the lumber industry continuing to lag and it was not until the crop on the prairie was assured that any great improvement was noticed. During August, September and October a strong demand for lumber developed, chiefly for the erection of granaries and other buildings for the caring for the great crop. This had the effect of greatly steadying the declining market.

At the present time, however, prices are far below the figures obtained in the more favorable years. The net returns for 1915 show an average of $3 lower than the prices of 1914. Business, too, has moderated during the last two months as compared with the previous three months, but owing to the real and permanent improvement in general business conditions in the country as a whole it is reasoable to expect a fairly active demand for the next few months.

The future is brighter than it has been for some years, but there is nothing to warrant manufacturers increasing their output or the erection of new mills, as there is now ample producing capacity to care for the demands of the near future. The great need of the lumber business is a staple market and a reasonable volume of production.

Reference was made to the work of the forestry branch of the Provincial Government, which last year began an active advertising and market extension campaign. An office was opened in Regina and a commissioner appointed for the purpose of keeping the district in touch with the consumer and to encourage the use of British Columbia lumber. In this connection a unanimous vote of thanks was passed by the members to the minister of lands and the members of the forestry branch at Victoria for the unceasing work that had been directed toward the establishing of a better market for British Columbia lumber on the prairies.

The following officers were elected:

President—C. D. McNab.

Vice president—A. J. Lammars.

Secretary-treasurer—I. R. Poole.

Executive committee—H. H. Ross, E. L. Staples, W. Mark DeCew and L. D. Rogers.

Ever since the war broke out members of the Forest Service of British Columbia have been leaving on furlough for the bigger job overseas, and they are still doing so. Out of the regular or permanent staff, which in the summer of 1914 before the war numbered about 170 (including female clerks and stenographers), almost one-third have enlisted to date. In addition over 20 members of the temporary or summer staff of guards, patrolmen, etc., are known to have enlisted, and it is very probable that as many more have joined of whom no information is now available.

New Toronto Wholesalers, J. P. Johnson & Son

J. P. Johnson, Toronto, Ont.

A. K. Johnson, Toronto, Ont.

J. P. Johnson and Son is the name of a newly formed wholesale lumber firm which has opened offices at room 1203 Traders Bank Bldg., Toronto. The members of the firm are Mr. J. P. Johnson and Mr. A. K. Johnson, both formerly belonging to the firm of Campbell and Johnson, Traders Bank Bldg., Toronto.

Mr. J. P. Johnson is one of the best known wholesale lumbermen in Ontario. He was born in 1864 at Picton, Prince Edward County, Ontario, on December 11th. His early days were not unlike the early days of all normal young Canadians. He attended public and high school ,and when his education was completed, commenced his business career with his father, Mr. J. S. Johnson in the retail lumber and coal business at Picton. From that time on, Mr. Johnson has been connected continuously with the lumber business. In fact from the time he was eight years old, he has been absorbing information and experience in connection with lumber. He was 16 years of age when he commenced to earn money in his father's business and he devoted his time to this employment for a period of four years, until his father sold his business to the Rathbun Company. Then he set out to earn a livelihood elsewhere and secured employment with the well known firm of J. K. Post & Company, Oswego, N. Y., wholesale lumber dealers. With this company he had charge of the inspection of eastern shipments and thus obtained an intimate knowledge of a wide variety of stocks.

After four or five years of inspection work, Mr. Johnson went on the road and quickly proved himself a natural born salesman. Subsequently he was engaged for about seven years in the wholesale hardwood business. Then he went to Toronto and has continued in the lumber business there, up to the present time. In Toronto, he was engaged with the Victoria Harbor Lumber Company for six years, acting as travelling salesman and becoming one of the most efficient and widely respected men upon the road. In January 1907, Mr. Johnson became a member of the firm of the Campbell and Johnson, whom he represented upon the road until the present year when he made arrangements for starting in business on his own account with his son Mr. A. K. Johnson.

Mr. A. K. Johnson was born in Brighton, Ont., in 1890 and his home has been in Toronto for the past eighteen years. He was educated in Toronto, and previous to associating himself with the firm of Campbell ad Johnson he was employed by the Canadian General Electric Company for four years, travelling for them in connection with their branch of illuminating engineering.

In order to become familiar with the requirements of the retail lumber trade Mr. A. K. Johnson spent several months in the employ of a Toronto firm of retailers. He has also spent considerable time in employment at various mills in the north country so as to gain experience in connection with the production end of the lumber business. In Toronto he has devoted much of his time to calling upon the city trade. He has also called occasionally on the eastern and western Ontario trade. Mr. A. K. Johnson has many of the characteristics and qualifications of his father and we feel certain that he will soon make for himself as fine a reputation as a lumber salesman as his father has made before him.

A fine large office calendar has been sent out by the Atlas Lumber and Manufacturing Company, Cincinnati, Ohio, to their trade friends. The calendar bears an enlarged photograph showing the company's plants and yards.

Selling White Cedar Shingles in Ontario

A. H. Gilham, Toronto, Ont.

We are pleased to publish herewith a portrait of Mr. A. H. Gilham, who has recently been appointed Western representative for the Canadian White Cedar Shingle Association, and who is now at Work in Ontario telling the trade about the good qualities of the Eastern Canadian shingles. Mr. Gilham, whose business address is 78 Pearson Ave., Toronto, has, during the past twelve years been connected with the furniture business, representing the Andrew Malcolm Furniture Company, makers of high grade furniture, Kincardine, Ont. Before going into the furniture business Mr. Gilham had an extensive business experience as a traveller throughout Western Canada from Vancouver to Winnipeg. His first connection with the lumber business was with the Moore Lumber Company of Detroit, Mich.

Being a man of wide experience as a commercial traveller, and having such an excellent line of goods to handle as the products of the Canadian White Cedar Shingle Association, we feel sure that Mr. Gilham will quickly make an important place for himself among the trade of Ontario. The appointment of a western representative, with headquarters at Toronto, is in line with a decision recently reached by the Association to work the Ontario market far more closely than they have in the past. They expect to place extensive quantities of their shingles in Ontario in future.

Lieut. Joseph Power Back from the Front

After going through the trials and hardships of trench warfare in France and Flanders for nine months, Lieut. Jos. Power, son of Mr. William Power, M. P., Quebec, P. Q., returned home recently suffering from neurasthenia. While apparently in good health otherwise, Lieut. Power's nerves are shattered and, after spending over a month in hospital in France and England with a severe attack of trench fever, he was granted two months' leave. While in the trenches Lieut. Joseph Power frequently met his younger brother, Lieut. Charles (Chubby) Power, of the 3rd Battalion who relieved him in the trenches on many occasions. Chubby Power is now in hospital in England. He is suffering from eighteen shrapnel wounds all over his body, but the most serious are in his legs. In a letter which was received from Chubby recently, he states that he is improving rapidly.

W. Y. Lloyd, formerly with The Quincy Adams Lumber Company, has opened an office as a wholesale lumber dealer at 51 Yonge Street, Toronto.

A dispatch from Boston, Mass., states that an offer of five cents apiece for cast-off railway ties has been received by the Boston & Maine Railroad from the British Government. Formerly the railroad burned all its old ties, but orders have now been sent throughout the system directing that they be saved. Half a million ties are needed for use in constructing trenches in Frances.

Prosperity Signals—Full Steam Ahead

Toronto Customs receipts in December amounted to $2,128,000. Previous record, $1,929,000.

Canadian "Savings Deposits" in November, $714,219,000. Previous record $710,336,000.

First Dominion War Loan, $50,000,000. Over-subscribed by $55,000,000.

Western wheat crop, 304,200,000 bushels. . Previous record, 200,000,000 bushels.

Canadian exports in November, $94,436,000. Previous record for any month, $60,402.000. (Nov., 1914, $46,242,000; 1913, $59,079,000).

December bank clearings at Winnipeg $261,568,000. Previous record, $245,962,000.

C. P. R. net earnings in October, $6,579,434. Previous record for any month. $5.602,858

Dominion Government revenue for November, $17,072,456, the largest total for one month in the country's history.

Lieut. Percy Harper Wade Now at the Front

Lieut. Percy Harper Wade, Quebec, P.Q.

Lieut. Percy Harper Wade, of the Quebec timber shipping house of The Harper Wade Export Company, is one of the many members of the Canadian lumber business now on active service at the front in the cause of humanity, liberty and justice. Born in 1887, educated in the High School Quebec, and having served an apprenticeship at New Liverpool Shipping Cove and in the office of The McArthur Export Company, Limited, he became a member of the firm in 1911. His commission as Lieutenant in the Queen's Own Canadian Hussars dates from 1907, he having entered that force as a trooper. On the formation of the Fifth Mounted Rifles for overseas service he joined that body as First Lieutenant in B Squadron, and drilled at Sherbrooke and Valcartier. When it was decided to send the Fifth forward for trench duty, instead of cavalry service, in common with the other officers and men he responded to the call, and is now somewhere in France. His father, Edward Harper Wade, is the senior Quebec timber exporting merchant, and we trust that after the final and decisive refeat of the Germans, his son will rejoin him in the old business.

Toronto Customs Revenue Increased

	1914	1915
January	$1,487,270	$1,144,225
February	1,532,960	1,387,040
March	1,740.522	1,574,855
April	1,584,895	1,502,797
May	1,462,769	1,485,243
June	1,387,787	1,517,623
July	1,449,422	1,487,829
August	1,684,122	1,611,606
September	1,113,865	1,464,342
October	1,086,944	1,668,334
November	928,407	1,929,513
December	1,017,096	2.128,050
	$16,476,059	$18,901,457

Increase for year $2,425,398
Increase over Dec., 1914 1,110,954

During January 1916 the revenue made a new high record of $2,427,872. During January 1915 the revenue was $1,144,225. The previous monthly record was that of December 1915, namely $2,128,050.

Annual Meeting of Forest Engineers

The annual meeting of the Canadian Society of Forest Engineers was held recently in Ottawa. Mr. R. H. Campbell entertained the members of the Society at dinner after which the business meeting was called to order by the President, Mr. Clyde Leavitt. The guests of the evening were Mr. Robson Black, Secretary of the Canadian Forestry Association and Messrs. Bates and Kynoch of the Dominion Forest Products Laboratories at McGill University. Mr. G. A. Gutches, Director of the New York State Ranger School at Wanakena was one of the American members of the Society present.

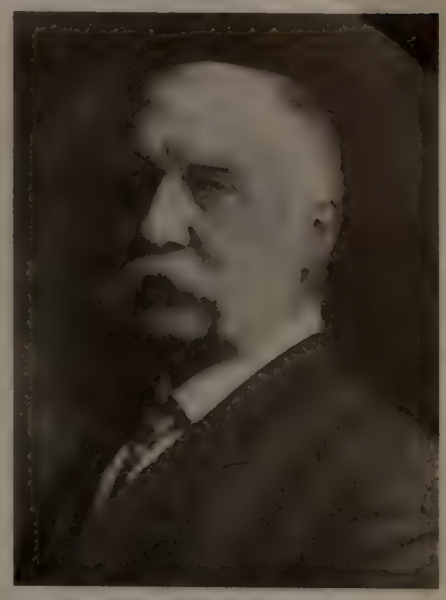
The Secretary's report showed the Society to be in a growing and flourishing condition, eighteen new members have been added in the past year, Quebec and Maritime Provinces showing the greatest number of new members. The total membership is now eighty-seven.

It was decided to issue a monthly news letter to the members and to publish a history of the Society. A new caliper for measuring trees, the invention of one of the members was shown. Mr. R. H. Campbell was elected Chairman of the Ontario Executive.

An informal discussion on the Forestry Situation in New Brunswick, was the feature of the evening, expert opinions being given as to what the needs of the Province were and how they could be carried out in the most practical and economical manner.

It was reported that about fifteen per cent. of the Society's membership was either at the front or had enlisted.

Sudden Death of Robert Macfarlane, Montreal



The Late Robert Macfarlane, Montreal

By the sudden death on February 5th of Mr. Robert Macfarlane, president of R. Macfarlane and Company, Limited, Montreal has lost one of its oldest lumbermen. Mr. Macfarlane died from heart failure, due to excitement. With two employees he ascended a ladder to see whether a chimney fire on premises adjoining those of the firm was likely to spread; the exertion and excitement proved too much for him, and he collapsed. He was brought into the offices, and on medical aid being summoned it was found that he had passed away.

Mr. Macfarlane was a native of Montreal—he was born in 1842—and was educated at the Glasgow Academy, Glasgow, Scotland. For 42 years he was engaged in the lumber, sash and door, mouldings and hardwood flooring business. This was established in 1874, and during the earlier years Mr. Macfarlane worked exceedingly hard to make the venture a success. The business was started on a site at the corner of St. James and Richmond Streets, and has been continued there ever since. The premises comprise commodious offices and saw and planing mills. The business expanded steadily and the equipment was gradually increased. The firm is now one of the largest of its kind in the city. In 1905 the firm was converted into a limited liability company, with Mr. Macfarlane as president.

During the past three years Mr. Macfarlane took only a small share in the active direction of affairs, this being undertaken by Mr. Fred S. Macfarlane, the only son, who is vice-president and managing director.

The late Mr. Macfarlane was a man of very quiet disposition, taking little or no part in public activity; a hard worker especially during the early portion of his business career; and exceedingly well liked by business friends and employees.

An Interesting Legal Decision

An interesting law suit regarding the responsibility for losses sustained by loggers on account of the foundering of a tug on which they were travelling to their camp, has just been concluded in the supreme court of B. C. Action was brought in this case by a number of loggers against the Terry Logging Company, the claims amounting to $1,222, covering the loss of their effects and wages. When it foundered the tug was towing a large gasoline launch, and the evidence brought out was that the loss of the tug resulted from the frequent breaking away of the gasoline launch. All the loggers and the cerw were saved, having taken refuge in the gasoline launch which was able to out-ride the gale. The plaintiffs claim that the defendents were liable for an error of judgment on the part of the captain in not turning back to port when requested by the loggers to do so after the launch had broken away for the first time. Chief Justice Hunter dismissed the suit on the ground that the plaintiffs had no claim as passengers as the vessel was not registered for carrying passengers and the men were not paying fares. They were getting free transportation to their logging camp on the tug that was carrying supplies.

A Good Word for Canadian Red Cedar

Editor Canada Lumberman: Buffalo, N. Y., Feb. 3rd.

Business has not really started up in this territory for the New Year, but every indication promises a fair business and firm prices.

I had a very nice visit from your representative. When here we got talking about Canadian red cedar from British Columbia. I showed him a piece of 1¼ in. cedar planed on one side, about 45 inches wide. 4 ft. long, that had been in our office for nearly 8 years, under all sorts of conditions and it had not warped, split or checked a particle, all of which proves to me, that you people ought to take into consideration the real worth of cedar.

They are now using gum for gun stock, and I believe this cedar is so far superior to it, that there is no comparison between the two woods.—M. M. Wall, Buffalo Hardwood Lumber Co.

Structural Qualities of British Columbia Fir

By H. R. MacMillan

An address upon "The Structural Qualities of British Columbia Fir" was delivered recently by Mr. H. R. MacMillan, Special Timber Trade Commissioner for Canada, before the South African Society of Civil Engineers, at Cape Town, South Africa. After referring to South Africa's timber supply problem in general, Mr. MacMillan continued in part, as follows:—

The investigation of the properties of Douglas fir now being carried on by the Government of Canada, has not yet been completed, but the published results of many valuable investigations on the same timber by the United States Government enable the writer to lay before the Society data concerning the strength of the timber. The results given for strength tests are taken from Bulletin 88 of the United States Forest Service. The Government of Canada is at the present time carrying on in the National Forest Products Laboratory at the McGill University a series of investigations into the strength of Douglas fir timbers, the results of which will soon be published.

Douglas fir has ben exported to this country for many years under the name of Oregon Pine. The timber is neither a pine nor a true fir, but is the sole important representative of the genus "Pseudotsuga" the specific name being "taxifolia."

The South African civil engineer, who has seen one construction material after another advance in price, or decrease in quality, because of the imminent exhaustion of the supply, will be especially interested to know that in Western Canada alone, the accessible virgin stands of this timber are sufficient for at least seventy-five years' supply of the market at the present rate of consumption.

Four important points upon which engineers will desire to be informed are:—

1. Strength of Douglas Fir.
2. Durability and known service in important works and railroads.
3. Defects or characteristics to be considered.
4. Comparative cost.

Strength

Strength tests carried out on green Douglas fir specimens 2 inches x 2 inches x 30 inches, free from any defect, gave the following results:—

	Pounds per sq. in.
Bending:	
Fiber stress at elastic limit	5,500
Modulus of rupture	8,400
Modulus of elasticity	1,600,000
Compression parallel to grain:	
Crushing strength at elastic limit	3,600
Crushing strength modulus of elasticity	4.100
Shearing	770

Air seasoning to a point where the moisture content is 15 per cent. increases the above strength values by about 35 per cent.

Tests carried out on bridge stringers 8 inches x 16 inches x 16 feet gave the following average stresses:—

Selects:			
Green	4,346	6,753	1,654,000
Air-dry	4,690	7,070	1,644,000
Merchantable:			
Green	3,895	5,878	1,481,000
Air-dry	4,625	6,472	1,567,000
Seconds:			
Green	3,538	5,188	1.328,000
Air-dry	3,740	4,551	1,280,000
All Grades:			
Green	4,000	6,000	1,510,000
Air-dry	4,467	6,327	1,540,000

The grades used were those under which Douglas fir structural timbers are exported from the Pacific Coast of Canada and are given in detail here.

"Selects—Shall be sound, strong lumber, good grain, well sawed. Will allow in sizes 6 inches x 6 inches and less, knots not to exceed 1 inch in diameter; sap on corner one-fourth the width and one-fourth the thickness; small pitch seams not exceeding 6 inches in length. In sizes over 6 inches x 6 inches, knots not to exceed 2 inches in diameter, varying according to the size of the piece; sap on corner not to exceed 2 inches on both face and edge; pitch seams not to exceed 6 inches in length. Defects in all cases to be considered in connection with the size of the piece and its general quality."

"Merchantable.—This grade shall consist of sound, strong lumber, free from shakes, large, loose, or rotten knots, and defects that materially impair its strength; well manufactured and suitable for good substantial constructional purposes. Will allow occasional variations in sawing or occasional scant thickness, sound knots, pitch seams, and sap in corners, one-third the width and one-half the thickness. Defects in all cases to be considered in connectio with the sie of the piece and its general quality."

"Seconds.—This grade shall consist of lumber having defects which exclude it from grading as merchantable. Will allow knots and defects which render it unfit for good substantial constructional purposes, but suitable for an inferior class of work."

The grade almost exclusively imported into South Africa is "Merchantable." This grade, while suitable for all timber construction work, should not be depended upon for higher class construction, such as railway truck and carriage building. The grades adapted for this purpose are the "Selects" defined above and the "Clears" which include only the highest quality of timber and are defined as follows,—"Sound lumber well sawn, one side and two edges free from knots and other defects."

Ten to twenty per cent. of the lumber output of the Douglas fir region will grade "Clears" and "Selects." These two grades are used for shipbuilding, railway truck and carriage building, joinery, flooring and such high-class purposes, where pitchpine is now used extensively in South Africa. No pitchpine is used within 1,500 miles of the Douglas fir region of Canada or the United States, its place for all purposes having been taken by Douglas fir. Douglas fir, however, is now shipped into the pitch-pine producing region for the uses indicated above.

These strength values, together with the comparative lightness of weight of the timber, 33 lbs. per cubic foot, air-dry, the fact that it may be procured in any size, large or small, and the comparative ease with which it may be worked, render it eminently suitable for structural purposes.

Douglas fir may be secured in sizes possible to no other timber. The trees reach a butt diameter of ten feet and a height of 300 feet A flagpole recently presented by the British Columbia Government to the Royal Gardens at Kew was, when cut, 250 feet long and 30 inches in diameter at the top, without a defect. Timbers for harbor works, dredges, derricks, and such uses have been sawn in sizes reaching 60 inches square and running into 20 feet lengths for 24 inches x 24 inches sticks. The greater portion of the timber is however manufactured into the smaller sizes suited for immediate use, such as 1 inch, 1½ inches, 2 inches, 3 inches and 4 inches thicknesses, 4 inches to 16 inches widths and 12 feet to 30 feet lengths. The sizes commonly cut for studding and joints in Canada are 2 inches x 4 inches, 2 inches x 6 inches and 2 inches x 8 inches. These sizes are sold at the same or less prices per thousand feet superficial than the 3 inches x 9 inches which is commonly imported to South Africa and resawn after arrival. The exporting mills of Canada will upon order saw timber to any possible size.

Durability

The durability of Douglas fir may not be described in the same exact terms as its strength. Unfortunately, though it has been exploited for over half a century, no complete records have been kept of the length of service that it has rendered in different uses under varying conditions.

The durability has been affected not only by the conditions of soil, moisture, light and heat, under which the timber was used, but also by the degree to which the timber was seasoned before being used. Thoroughly air-dried timber, of course, resists decay for a longer period than timber put to use while still green.

The development of the Douglas fir region in Canada is of so recent a date, and the changes have been so rapid, involving the demolition of buildings after a few years' use, to make way for better, that it is difficult to obtain many reliable records of old buildings of the Hudson's Bay Company, built half a century ago. Douglas fir timbers were used in these buildings for sills, posts, stringers and are yet sound and in good condition. The annual precipitation, where the buildings stand, is 27 inches, all in the form of rain.

The oldest sawmills in the country were heavily framed with Douglas fir timbers 12 inches x 12 inches to 16 inches x 16 inches. Several sawmills are still in existence, varying in age from 25 to 40 years, in which the Douglas fir timbers are sound and have not been

renewed. The conditions of service have been difficult as the mills all stand in or on the edge of the water, are subject to enormous strains through the handling of 8 to 12 ton logs and the running of heavy machines at high speed. The precipitation in the sawmill district is 60 to 70 inches per year, in the form of rain.

A very important use of Douglas fir in Western Canada is for railroad and highway bridge and trestle construction. Local variations in climate, foundation, and stress, greatly affect the life of such structures. No proper records have been kept of the life of timber structures under varying conditions. Experience shows however, that with no preservative treatment, Douglas fir highway bridges have a life of 15 to 18 years. One case is on record of a highway bridge of Douglas fir constructed 36 years ago and still in use. The life of an untreated Douglas fir railroad bridge is 12 to 15 years.

A good instance of the durability of Douglas fir is afforded by the flagpole which until recently stood in the Royal Gardens at Kew. This pole, of one stick of timber, was over 150 feet high. It was cut on Vancouver Island, British Columbia, in 1860, was erected at Kew in 1862 and stood until 1914, when it was cut down because of decay at the base. The timber which will stand 52 years in the climate of London, exposed to the stresses felt by a flagpole over 150 feet high, can be said to be fairly durable.

Douglas fir railroad sleepers are used in extremely large quantities by Canadian and American railroads, the consumption having risen so high as 15,000,000 sleepers per year in 1907. By far the greater quantity are used untreated and often very imperfectly seasoned. Under such conditions, with an axle load reaching 50,000 pounds, the life varies from 8 years on mountain tracks under a severe climate presenting great variations of heat and frost and moisture, to 15 years in comparatively level tracks in the prairie.

Douglas fir sleepers are now being creosoted both for use by Canadian railroads and by English, Continental, and Indian railroads. The usual specification treatment by creosote under a boiling and pressure process. the temperature not exceeding 220 degrees F. in order that the strength of the wood may not be injured. The treatments found most satisfactory have been 8 lbs. and 10 lbs. of creosote per cubic foot, which gives a penetration sufficient to protect wood against white ants, teredos, or decay.

The creosoting plant now engaged in the export trade in the Douglas fir region of Western Canada possesses a capacity of between 500,000 and 600,000 sleepers per year. The impregnation of the timber is carried on in two steel cylinders, each 100 feet long, 7 feet 6 inches in diameter, fully equipped with steam vacuum and pressure pumps and heating plant which makes it possible to maintain the timber and the creosote in the treating cylinders at any desired temperature and pressure.

British creosote is used. The purchaser may specify any desired grade of creosote, method of treatment or absorption per cubic foot. Should the purchaser desire it, the British Columbia Government is willing to arrange an expert inspection of the timber and the creosote before creosoting, of the process of creosoting and of the average penetration and absorption of oil per cubic foot in order that the specifications may be faithfully observed and the interests of the purchaser protected. Such inspection has been arranged for on behalf of the Bengal and North Western Railway and the Railway Board of the Government of India.

Creosoted Douglas fir sleepers have been used by the Great Western Railroad of England for twelve years and have again given excellent satisfaction. Since the outbreak of war and the consequent increase in price of Swedish sleepers, the Great Western Railroad has filled all its requirements by the use of creosoted Douglas fir.

The increase in the price of Jarrah in India has led to the use of creosoted Douglas fir, both by the Indian Railway Board and the Bengal and North Western Railway. About 2,000,000 of these sleepers have been used in India during the past three years and up to the present, where the creosoting has been carefully conducted, the sleepers have resisted both the white ants and decay.

The writer has not learned what is the life of the creosoted Baltic sleepers used in South Africa, but would expect that creosoted Douglas fir sleepers would give a longer service than Baltic. because the timber is harder and would resist mechanical wear to a greater degree.

Douglas fir piling is used almost exclusively on the Pacific Coast of Canada in railroad, harbor, and wharf works. The life in teredo infested water is six months to three years unless creosoted. There is now in the office of the Chief Forester at Victoria, British Columbia, a section of an 8 inches x 8 inches creosoted Douglas fir pile, driven in the wharf at Chemainus Harbor, Vancouver Island, in 1897 and taken up in March 1915. Uncresoted Douglas fir piles in the same wharf must be renewed in from 8 months to 3 years, being in that time destroyed by teredos. The creosoted pile referred to, though only three or four feet from uncreosoted piles which were constantly renewed because of teredo attacks, showed no sign of teredo work and was as sound as the day it was driven. All piling except the most temporary is now creosoted before being used. The top of a creosoted pile is usually fitted with a ring, and the upper 8 to 10 feet is sometimes also wound with 15 to 20 turns of wire to prevent the splitting of the pile in driving. Should the pile split, the other layer of creosoted wood is opened and teredos are enabled to enter the uncreosoted interior. Creosoted Douglas fir piling is now used extensively in British harbor works. The piling and similar heavy timber used in the construction of the Panama Canal was Douglas Fir.

This timber is now considered one of the most satisfactory in North America for mining purposes. The life in various mines of course varies widely, both because of the pressure which in some cases crushes the timber in a few days and because of the conditions conducive to the development of fungi which in some mines limit the life of timber to a few months. Douglas fir will however, if not subjected to a crushing strain, usually give a life in a permanent situation in a mine of 5 to 8 years even if not given a preservative. Where a longer life is desired the timber is usually treated with creosote, a 3 per cent. solution of zinc chloride, or carbolineum. The creosote treatment is now the most general.

A class of timbers subjected to much the same severe conditions as mine timbers, are the snowshed timbers used to such an extent to protect the mountain railroads from heavy snowfall, snow slides or rock slides. The timbers in the snowsheds are frequently subject to great pressure, are always damp and very liable to fungus attack. Snowshed timbers painted with carbolineum have given a life of twelve years in the Canadian Rockies and are still in sound serviceable condition.

Wooden freight cars are manufactured in large quantities in Canada, both for home use and for export. The chief timber used in their construction is Douglas fir, for carsills, framing, flooring, siding, and roofing.

Tests of carsills, 5 inches by 8 inches by 180 inches give the following strength values:—

Number of tests.	Rings per inch.	Proportion of summer wood.	Moisture content.	Weight per cubic foot.		Fibre stress at elastic limit.	Modulus of rupture.	Modulus of elasticity.
				Green weight.	Oven dry weight.			
	No.	Per cent.	Per cent.	Lbs. per cu. ft.	Lbs. per cu. ft.	Lbs. per sq. in.	Lbs. per sq. in.	1,000 lbs per sq. in.
Average, 41	13.2	42	30.0	36.7	28:2	3,833	5,371	1,561

No trouble has been found with the timber either because of lack of strength or length of durability in the severe Canadian climate. It is now accepted for this purpose by the Great Western Railroad of England, the Paris-Lyons-Mediterranean and State Railroads of France. It has been found cheaper, lighter and quite as durable as pitchpine.

Characteristics to be Considered

The great size of the Douglas fir trees places this timber in an enviable position for freedom from defects. No timber is however absolutely free from defects and all timber varies in quality with certain factors. A knowledge of the importance to attach to various characteristics of the timber must lead to its wider use.

The strength of Douglas fir varies directly with its dry weight; the heavier the wood the greater is its strength.

The strength of Douglas fir does not vary with the rate of growth to such an extent as is commonly supposed. It may be stated however that as a rule timber which averages less than 8 annual rings to the inch is below the average in strength, that the strongest timbers are usually found to average between 12 in 16 annual rings to the inch and that the timber which averages over 16 rings to the inch is again below the average in strength.

The two defects of Douglas fir to be considered most seriously in grading the timber for structural purposes are knots and cross grain. The size and position of the knots and the condition of the wood around them are to be taken into consideration. The presence of knots affects the strength of the timber in compression parallel to the grain as follows:—

Knots over 1½ inches diameter ..... 22 per cent.
Knots ½ inch to 1½ inches diameter ..... 14 per cent.
Knots under ½ inch diameter ..... 6 per cent.

The decrease in compression strength at the elastic limit is:—

Knots over 1½ inches diameter ..... 22 per cent.
Knots ½ inch to 1½ inches diameter ..... 13 per cent.
Knots under ½ inch ..... 5 per cent.

The presence of knots in beams affects chiefly the modulus of rupture.

The fibre stress at the elastic limit and the modulus of elasticity are less influenced by knots than by the quality of the wood.

The conclusions to be drawn from the investigations into the strength of Douglas fir are that,—

(a) Sound knots of one inch in diameter or less which do not cause a marked disturbance in the grain of the timber should not be regarded as defects in structural timber.

(b) Sound knots greater than one inch in diameter should not be regarded as defects when they occur on the vertical faces of the beam and at a distance from the edge equal to one quarter the height of the timber.

(c) Knots and cross grains which interrupt the continuity of the grain within two inches of the edge should not be admitted except in the lowest grade.

(d) Diagonal grain, due to sawing, if of a greater slant than 1 in 45 should not be allowed in the higher grades.

The availability of Douglas fir for South African construction purposes must depend upon the price. The amount of accessible timber in the Douglas fir region, the great number of mills manufacturing it (over 4,000), the entire absence of any working arrangement among the mills to restrict output to demand has and must continue to operate to bring about low selling prices. The price of the structual grades of timber is now F. A. S. (free alongside ship) about five pence to eight pence a cubic foot, depending upon the sizes ordered. These prices may be expected to continue with little or no increase, for many years.

As the facilities for creosoting timbers on a large scale for use in different parts of the country, do not exist in South Africa, creosoted timber would need to be imported in that form. Creosoted timber, for railway sleepers or piling varies according to the price of creosote and the character of the treatment specified, but on the average in normal times might be expected to cost 1s. 4d. per cubic foot F. A. S.

The prices ex. ships slings African port for various classes of timber would be, on a normal freight rate of 60 shillings a thousand feet superficial or board measurement (12 board feet to the cubic foot).

Sizes 10 inches by 10 inches to 14 inches by 20 feet to 40 feet .....1s. 2½d per cubic foot.
Creosoted timbers, above sizes.....2s. 1d. per cubic foot.
Large sizes .....about 1s. 6d. per cubic foot.
Uncreosoted sleepers 7 feet by 10 inches by 5 inches ..... 2s. 10d. each.
Creosoted sleepers, 7 feet by 10 inches by 5 inches ..... 4s. 11d. each.
Carsills and car flooring.....1s. 8d. per cubic foot.

These prices are wholesale. To them must be added the handling cost at the unloading port, the profit of the timber importer and the cost of delivering the timber to the point of consumption. Even with these added charges it will probably be found in South Africa that Douglas fir will for years be one of the cheapest construction materials, not only so far as initial cost is concerned, but also when cost per year's service is reckoned.

Forest Protection in Canada

The Commission of Conservation has just issued a report on "Forest Protection in Canada, 1913-1914," which contains much information respecting the work of the provincial forest services and of the federal departments intrusted with the care of our forests. Forest fire protection is assuming a large place in public attention. It is obvious that, if Canada is to continue as a wood-producing country, she must conserve her resources of this natural product. The report treats exhaustively of the fire protection of forest lands along railway rights-of-way. Through co-operative action, great headway has been made in securing the reduction of forest losses through fires traceable to railway causes. The forests of British Columbia and on Dominion lands in the West have been dealt with in reports containing the results of special studies conducted by Dr. C. D. Howe and Mr. J. H. White. The Trent watershed in Ontario, has also received especial attention, in a report of an investigation by Dr. C. D. Howe in the townships of Burleigh and Methuen. This district is important in that, while of very little value as an agricultural area, it is being repeatedly overrun by forest fires and the little remaining merchantable timber destroyed. It is suggested that the area be placed under the control of the Dominion Forestry Branch for protection from fires and for reforestation.

B. C's. Flagpole Reaches Kew Gardens Safely

The 215 foot Douglas Fir flagpole recently shipped from British Columbia to Kew Gardens, London, Eng., has reached its destination safely. A London despatch referring to its arrival says:—"Once the pride of a British Columbia forest, a 215 foot flagstaff now lies in the Thames off Kew Gardens. The clerk at Kew wrote out a receipt for 215 feet of flagpole, on a two-inch piece of paper—"Received in good condition, one log." The adventures of the pole are by no means at an end. The Garden authorities are now faced with the big task of raising it across the ha-ha, the moat which bounds the river-front of the Gardens and then dragging it a quarter-mile to the mound where the old flag pole stood for so many years.

B. C. Outlook Exceptionally Bright

Editor Canada Lumberman: Vancouver, B. C.

In connection with the lumber situation at the Coast, we have this year a most unusual situation. The stock of lumber in the hands of the mills in the mountain district of B. C. and at the coast, is at least 200,000,000 feet less than a year ago and the stocks of lumber in Northern Alberta and Saskatchewan spruce mills, we understand, are short between 60.000,000 and 75,000,0000 feet. Coupled with this is the fact that stocks in the hands of the retail dealers in the Canadian North West are probably lower than at any time in the past 8 years. This is accounted for by reason of the tendency on the part of the retailer to order just such quantities as they have actually sold, or have definite enquiries for, so as to ensure the stock being promptly moved out of their yard.

A year ago this time, stocks of lumber were between 250,000,000 and 300,000,000 feet more than at present and the country had just gone through a partial crop failure and everything was very uncertain, in fact the view did not have a ray of hope in sight. To-day, the Canadian North West by reason of the bountiful crop harvested during the past year is in materially better shape and the prospects for an increased retail trade are very bright.

We are optimistic as to the Canadian North West trade. We think all signs point towards increased consumption of lumber and with a reduced visible supply to meet this situation, we look forward to the future with considerable hope.

During the past three weeks the lumber production on the Pacific Coast, including the states of Oregon and Washington as well as B. C., has been curtailed 75 per cent. to 90 per cent. by comparison with normal. This was brought about by the exceptionally severe cold snap and snow storms which have rendered operations impossible. The mills have light stocks and at present are quite heavily booked up, particularly the mills catering to the rail trade.

The supply of logs in the water is exhausted. A year ago this time there were in B. C. waters not less than 200,000,000 feet of logs. To-day, we question whether there are 10,000,000 feet available for sawing. Owing to the heavy snow-fall logging operations are greatly curtailed and at more than 75 per cent. of the camps operations are impossible. Therefore there is very small likelihood of the camps being able to supply even the normal requirements of logs for the next three months.

The cost of manufacturing lumber will be heavily increased. There is no doubt that labor conditions in B. C., particularly common labor, will be very bad. There is at present a shortage, and the industry is practically tied up on account of severe weather. Practically all lines of milling supplies have advanced from 10 per cent. to 300 per cent. Some items like high speed steel are almost impossible to obtain at any price. All of these conditions point toward increased cost of manufacture which inevitably must make higher prices for our product.

With regard to the Eastern Canada trade: this looks very much better from the coast millman's standpoint. The substantial increase in the cost of yellow pine offers the coast mills an opportunity of competing with yellow pine in Eastern Canada.

With regard to the export situation; just now the mills are not heavily booked, but most of the export mills have sufficient orders on hand to take care of their cut for the next 2 or 3 months. We know that this is the situation with our own company and several others at the coast.

It is rumored that the Panama Canal will be opened to vessels of 27 foot draft during the month of February or at least at the first of March. If this report is true and the canal is operating, the present shortage of tonnage will be. at least partially, relieved. The British and French Governments will undoubtedly send some of their tonnage to the coast for lumber. They cannot afford to lose the time necessary to go around Cape Horn. The difference in time in favor of the canal is so great that we have every reason to hope that our export business for 1916 will be greater than during 1915. While we have all complained of the shortage of export business during the past year, yet when the figures are made up we find that B. C. exported over 60,000,000 feet which is a substantial increase over the year 1914 and only 20,000,000 feet short of the best year we ever had here, which was 1909. Our prospects for business this year are certainly better than they were for 1915.

In summarising the situation I would say that every indication points toward better times ahead for the lumber manufacturers. It will require a big increase in the volume of business and in the average selling price at the mill, before the business will be on a satisfactory basis.—Canadian Western Lumber Co. Ltd., H. J. Mackin, Assistant Manager.

A colored photograph representing "Moonlight on Georgian Bay" decorates an attractive calender for 1916 sent out by the McGibbon Lumber Company, Penetanguishene, Ont. The picture is a very striking one which will appeal to all who have been fortunate enough to enjoy the delights of summer time in Northern Ontario.

Lumber Receipts at Tonawanda

Of the 1915 receipts of Lumber at the Tonawandas, a total of 45,000,000 feet came from Canada as compared with 47,500,000 feet brought down from Canada in 1914. Of the remainder of the 1915 receipts, 111,000,000 feet came from the Duluth-Superior district.

Port	Feet
Duluth-Superior	111,605,800
Two Harbors	4,981,600
Escanaba	1,810,100
Manistique	10,510,300
Manistee	1,751,000
Bayfield	3,293,400
Ashland	3,568,100
Menominee	3,961,800
Washburn	6,110,100
Cheboygan	2,330,200
Misc. United States ports	16,625,700
Cutler	4,479,360
Little Current	14,569,756
Blind River	3,641,425
Spanish Mills	18,484,810
Thessalon	2,151,401
Misc. Canadian ports	2,184,058
Total	212,058,300

The receipts by months for the years 1914 and 1915 follow:

Month	1914	1915
May	28,641,700	23,722,200
June	29,531,100	31,838,400
July	32,139,700	26,801,900
August	22,738,000	26,853,600
September	25,662,800	41,357,700
October	25,496,800	33,805,900
November	16,486,800	22,305,700
December	3,272,900	5,372,900
Total	183,969,100	212,058,300

The complete report of the Tonawanda ports for 1915 follows: Lumber, 212,058,300 feet; lath, 3,614,120 pieces; posts, 127,380; baled wood pulp, 14,951 tons.

The lumber receipts at the Tonawandas by seasons since 1870 are as follows:

1870	105,765,100	1893	430,249,000
1871	110,741,100	1894	406,538,000
1872	109,895,900	1895	421,374,500
1873	104,998,900	1896	489,675,500
1874	144,754,000	1897	601,375,450
1875	155,384,805	1898	479,066,136
1876	207,782,227	1899	541,576,959
1877	221,897,000	1900	409,728,377
1878	206,655,122	1901	451,596,240
1879	250,699,043		12345666
1880	324,370,814	1903	458,555,122
1881	415,070,000	1904	414,806,949
1882	433,241,913	1905	465,139,600
1883	398,871,400	1906	443,449,226
1884	493,628,223	1907	332,499,512
1885	498,631,400	1908	247,556,889
1886	505,425,000	1909	322,337,930
1887	501,237,850	1910	335,901,664
1888	569,522,200	1911	311,778,484
1889	676,017,200	1912	325,209,544
1890	718,650,900	1913	300,304,787
1891	505,512,000	1914	183,969,100
1892	498,005,000	1915	212,058,300

South African Requirements for Box Shooks

Mr. H. R. MacMillan, Special Trade Commissioner, has addressed to the Department inquiries received from South African firms for box shooks. The requirements of one company, engaging in the oil and fat industry, for the soap and candle boxes listed herewith amount to about 15,000,000 board feet per year. Although this firm, which is one of the largest box-using industries in South Africa, have been obtaining their supplies from Sweden, they are now desirous of securing quotations (c. i. f. Durban) from Canada. Persons making quotations should forward by the same mail, a sample of the spruce timber from which the boxes are to be made as the company wish to be assured that Canadian spruce will compare favorably with the variety formerly imported from Sweden.

Quotations are desired per 100 boxes for each box listed. The total quantity of boxes required amounts to 8,000,000 feet distributed practically equally over the total number of boxes listed. The delivery should be made at Durban in June, 1916, and quotations should be made for the delivery of the full quantity of boxes to be distributed over the six months following June, 1916, or for the whole shipment to be sent forward in one, two or three shipments following June, 1916. Specifications and information regarding prices can be secured from the Department of Trade and Commerce.

Box Shooks Required in Canning Industry

Mr. MacMillan has also forwarded an inquiry from a large canning company in Cape Town for box shooks to be shipped to arrive in South Africa in May or June, 1916:—

Box No. 14—

T. and B.—500 bdls. each, 20 pieces.....18⅜ x 17⅝ x 7-16
Sides—500 bdls. each 20 pieces.....18⅜ x 7⅞ x 9-16
Ends—1,000 bdls. each 10 pieces.....16½ x 7⅞ x 15-16

These boxes in normal times cost 1s. 3d. each, delivered at Cape Town, but in October, 1915, they cost 1s. 5d. The present prices are still higher.

Box No. 15—

T. and B.—1,500 bdls. each 20 pieces..23 11-16x15 13-16x7-16
Sides—1,500 bdls. each 20 pieces.....23 11-16x8½x9-16
Ends—3,000 bdls. each 10 pieces.....14 11-16x8½x15-16

A sample of this box is being forwarded. In normal times it cost 1s. 5d. delivered at Cape Town. In October, 1915, it cost 1s. 7d.; the price is now higher, owing to the increased freight.

These boxes should be shipped dry, and be made of white spruce, not painted, and where tops, sides, bottoms or ends are made of more than one piece, should be tongued and grooved. The tops and bottoms, sides and ends, should be bundled separately and labelled.

Quotations are desired c. i. f. Cape Town for 5,000 of No. 14, and 20,000 of box No. 15.

These boxes are used in the lobster canning industry and if acceptable will lead to the development of valuable trade.

Attention is also called to the requirements of a South African firm making inquiry for box shooks, as indicated in Trade Inquiry No. 65, appearing in the Weekly Bulletin. It is stated that 10,000 boxes are required for biscuit packing, 5,000 of which are to be as follows: 26 inches long, 15¼ inches wide, 15 inches high; the remaining 5,000 to measure 22 inches in length, 13 inches in height and 17 inches in width. Outside measurements are those given. The sides, tops and bottoms are to be ⅜ inch thick and ends ½ inch thick. Cleats are to be ⅝ inch by 2 inch and inside of box ½ inch shorter than height. The present price of this box is 2s 6d. in Durban.

The following are specifications of fruit boxes required by the same firm. The shooks are to be in bundles of 100, and about 1,000 of each size are asked for:—

	Inches
No. 1	15 x 9 x 2
" 2	18 x 12 x 2¼
" 3	18 x 12 x 2¾
" 4	14 x 12 x 3
" 5	24 x 12 x 3
" 6	18 x 12 x 5
" 7	26 x 12 x 7
" 8	26 x 12 x 12
" 9	18¾ x 9½ x 4½
" 10	21½ x 8 x 5

Sides, tops and bottoms—⅜-in. thick.
Ends—½-in. thick.

Specifications for orange boxes, about 1,000 of each size being wanted, are as follows:—

18 x 12 x 1¾
18 x 12 x 2
18 x 12 x 2½
18 x 12 x 3
18 x 12 x 3½
18 x 12 x 4
18 x 12 x 5
18 x 12 x 6
24 x 12 x 6
26 x 12½x 12½

Sides, to sand bottoms—⅜-in. thick.
Ends—½-in. thick.
Quotations on all boxes should be c. i. f. Durban.

The names and addresses of the firms making the inquiries referred to above may be obtained on application to the Department of Trade and Commerce, Ottawa. (Refer File A-526.)

Mr. P. Z. Caverhill, Deputy District Forester in the Vancouver Forest District, has accepted the position of Chief Forester for New Brunswick. Mr. Caverhill is a native of that Province, a graduate of the University of New Brunswick, and has had a wide experience and been a valued officer both in the Dominion and British Columbia Forest Services.

Forestry Association Holds Annual

Addresses delivered tell of practical work in co-operative fire patrol

The Annual Meeting of The Canadian Forestry Association was held at Ottawa on January 20th and was well attended. One of the most interesting events of the meeting was an address by S. L. deCarteret, President of The St. Maurice Forest Protective Association, who outlined the work of the association. He described how determined action on the part of a group of Quebec limit holders had succeeded in cutting down the loss from forest fires to an almost negligible degree. In the course of his address, Mr. deCarteret brought out many remarkable facts supporting the argument for co-operative effort by the lessees of limits. Indeed, the speaker proved conclusively that so far as results are concerned, no government system has yet reached the same class of efficiency. Since the association came into existence over 800 fires were extinguished; over 80 per cent. of which were put out by the rangers themselves, without outside assistance or extra expense. In the same period sixty-three thousand fire notices and signs have been posted, and twenty-two thousand leaflets and booklets distributed. No less than twelve thousand square miles of timber lands are comprised in the territory over which the St. Maurice inspectors and rangers hold sway. This area is divided into six divisions each in charge of an inspector, these divisions being further subdivided into thirty-two districts or patrols, seventeen of which are patrolled by men in canoes, seven by men on horseback, three by men on foot, one by man in lookout station, and four railway patrols by men in motor cars. During the past season eighteen special rangers were put on the drives with a construction crew. Mr. deCarteret emphasized the high importance of close supervision of the rangers and their work so that the maximum value may be obtained from the season's services of each man.

The cost of maintaining the protective services of the St. Maurice system, which, with the Lower Ottawa Forest Protective Association are the only two organized thus far in Quebec, is met by assessment based on the acreage holdings of the members.

The educational work carried on by the large body of rangers is particularly directed towards the settlers in the new districts who, through careless burning of their cleared areas, have set on fire very large bodies of timber. The educational work coupled with vigorous prosecutions, has reduced the number of settler's fires to a striking extent year after year, so that this cause threatens finally to eliminate itself.

Mr. DeCarteret strongly advocated the duplication of the St. Maurice system by the limit holders of the Upper Ottawa, and there are good prospects of this step being taken in the not distant future.

That present methods of gathering the forest-crop in Canada are extremely wasteful has long been admitted by lumbermen and forest engineers alike. How this waste can be largely eliminated was the subject of an address by Hon. W. R. Brown, President of the New Hampshire Forestry Commission and Managing Director of The Brown Corporation of La Tuque, Quebec; Mr. Brown is also Assistant Treasurer of the Berlin Mills Company of Berlin Mills, N. H., the largest corporation of its kind in the world. The points of the paper, therefore, were the result of practical experience.

Mr. Brown instanced a tract of forest where both hardwoods and softwoods were represented. A company having use only for the softwoods, might not find enough in the tract to make logging a paying venture. Their problem immediately would be to find a manufacturer who could use the rock maple for shoe lasts, a jobber to cut white ash for axe handles, a tannery to take the hemlock bark, and soda or excelsior mills to use the poplar wood.

As an instance of cutting down waste on another woods operation, the speaker said that dynamite was now used on rocks and obstructions in a river before driving commences, instead of on the logs during the process of a drive. This avoided a large breakage. Again, at the mills, narrow band saws are now being used in place of the wide circular saw, thus saving many cords of wood in a day's operations. In the up-to-date saw mill all spruce, fir and hemlock waste in sawing are converted into chips, and the remaining waste is diverted into the boilers as fuel.

Mr. Brown spoke in detail of the up-to-date, economical methods of apportioning each wood to its best and most convenient use—cedar going to shingles and fence posts, chips to the sulphite plant, etc. The use of wood fibre for thousands of purposes was only in its infancy in America; it was now employed successfully for underground conduits.

The journey of the tree from the forest to the consumer now produced such widely different articles as chloroform and cloth, water pipe and lard, and yet the possibilities inherent in the ingredients of woods had hardly been scratched.

Mr. R. H. Campbell, Dominion Director of Forestry, spoke on "Forestry and the Future," applied on broad lines to the present situation in Canada and in Europe. He showed that much of the military and industrial power and "preparedness" which has so long enabled Germany to hold out against the allies was due to her organization whereby she turned all her resources to the best account, and particularly her forests. Canada was determined to exert all strength possible to aid in the winning of the war and in developing the Empire afterwards, and one of the ways in which she could do this was by a thorough and systematic "mobilization" of her forests instead of the haphazard exploitation that had taken place in the past. He knocked on the head the old idea that a forest country could never be highly developed industrially, by showing that Belgium, with a population of 652 per square mile (as against Canada's 2 per mile) with highly intensified agriculture and industry had in recent years developed her forests until they covered 18 per cent of her land area. In different parts of Canada, as in the Trent Valley, some deforested areas were proving no good for agriculture and would degenerate into deserts if not again covered with forests. For the moment there was plenty of timber in Canada, but much of our forest growth consisted of young trees, and if these were not protected our future supply would be greatly curtailed. "Preparedness and Production" were two words of which Canadians now knew the meaning and one of the best ways for increasing both was by a systematic co-operative effort among federal, provincial and municipal authorities to protect our forests, and by the application of science to use all forest products to the best advantage. It was for this reason that the Forest Products Laboratories of Canada had been established by the Department of the Interior. Germany was claiming that she could get on without gun-cotton by using wood fibre. Whether that were so or not, acetone, one of the materials required in making cordite, was a product of the distillation of hardwood. This showed just one of the ways in which Canada could assist in the struggle by the better knowledge and fuller employment of her forest resources. Mr. Campbell's plea was that this higher development should be undertaken immediately for the strengthening of Canada and the Empire now and in the future.

Conservation Commission Meeting

Important addresses read and resolutions passed—Forest protection making progress

Many of the addresses delivered at the annual meeting of the Commission of Conservation, held on January 18th and 19th, as well as some of the discussions which followed these papers, were of considerable interest to lumbermen. The meeting was presided over by Senator Edwards of Ottawa, and another prominent lumberman, Mr. W. B. Snowball, of Chatham, N. B., also a member of the Commission, took part in the discussions.

Mr. Ellwood Wilson, forester for the Laurentide Pulp and Paper Co., spoke on "Fire Protection from the Timber Owner's Viewpoint." The laws of Quebec, he said provided certain penalties for timber owners who failed to protect their limits. These laws were now undergoing revision. Fire protection officers should have no other work, as preventing and putting out fires required special training. There were many burnt-over areas which were likely to be thrown back on the government and the problem of reforesting these would have to be dealt with. The area of Quebec, burnt over and producing no crop, meant a loss to the provincial government of $15,000,000 in 50 years. Railway fires, fortunately, were becoming a thing of the past, except on the National Transcontinental, which ought to set a good example.

It was quite possible that aeroplanes or hydro-aeroplanes would come to be used in fire patrol work, though, at the present time, the cost, $10,000 per machine, was prohibitive. However, as two men with aeroplanes could patrol an immense area, the scheme ought to be feasible. The speaker closed by pointing out that the conservation of our forests was a patriotic duty, that there were slackers in peace as well as in war, and among these must be included those who failed in their responsibility to protect the nation's resources.

Forest Protection Publicity

Mr. J. B. Harkin, Commissioner of Dominion Parks, gave an address on the means taken to protect the forests on our national parks. Of particular interest was his description of a portable gasolene fire-fighting apparatus, which has been invented for special use by the forest fire patrols. Its weight complete is 143 lbs., the engine is 6 h.p. and can deliver 20 gal. of water per minute through 1,500 ft. of hose. The cost, including the hose, is $375. Very interesting, also, was his account of the ingenious methods used to impress the public with the necessity of caution in handling fire. The secret of successful advertising, he said, was "affirmation and iteration." This principle had been adopted by the Parks Branch. They had persuaded match manufacturers to paste fire-warning notices on their match-boxes, ammunition makers to put them on boxes contain-

ing cartridges. Notices were likewise put on the inside of tents, on the blades of axes, in engine cabs and on hotel stationery and menu-cards. At the moving picture shows in the Parks, colored lantern slides showing forest fires were exhibited, with exortations to be careful. Brass plates bearing legends in the same sense were attached to buggies and fastened on the bridles of riding-horses. Thus it was impossible for any one to go into the Parks without being continually confronted by fire-warning notices.

An excellent address upon "Silvicultural Problems of Forest Reserves," was delivered by Dr. B. E. Fernow. The report of the committee on Forests was presented by Mr. Clyde Leavitt, chief forester. From these we hope to publish interesting extracts in a later issue.

Resolutions Adopted

The Committee on Forests passed the following resolutions:

1. The matter of regulating settlers' slash-burning operations should be taken up with the Governments of Ontario, Quebec and New Brunswick, along the lines discussed in the report of the Committee.

2. As in previous years, the extension of the Dominion forest reserve area should be urged upon the government. It is noted that no new forest reserves have been established since June, 1914, although the necessary classifications have been completed, showing that there are large additional areas of non-agricultural lands suitable chiefly for forest purposes.

3. The bringing of the field service of the Dominion Forestry Branch under civil service regulations is absolutely essential to even an approach toward efficient and economical fire protection on Dominion lands. If it should appear that the New Civil Service Bill is not to be considered at the present session of Parliament, a strong effort should be made to have the necessary action as to the Forestry Branch taken by Order-in-Council. It is understood that this can be done as rapidly under existing legislation as under the proposed new bill.

4. The Government of New Brunswick should be congratulated on the proposed early beginning of the forest survey and classification of Crown lands. The Commission of Conservation should cooperate in the technical aspects of this work to as great an extent as financial considerations will permit.

5. The Committee on Forests believe that the inventory of forest resources of the Dominion, so well begun in British Columbia and Saskatchewan, should be continued, without interruption, in other provinces, even should it become necessary, in order to conserve funds, to slightly delay the publication of the British Columbia and Saskatchewan reports.

6. The adoption of resolutions by the Commission has proved ineffective or only partially effective, in past years, in connection with a number of matters of great importance to the conservation of our forest resources. The Committee feel that, instead of recommending the adoption of further resolutions along these same lines, it will be preferable to devote stronger personal efforts toward accomplishing the desired results., on the basis of representations previously made.

New Brunswick Exports Greatly Increased

According to statistics prepared by the St. John Telegraph, the trans-Atlantic shipments of wood from St. John during 1915 were much greater than during 1914.

In the matter of spruce deals alone there was during 1915 an increased shipment of 54,000,000 feet, and this increase would have been larger had it not been for the great difficulties of making shipment. The following are the totals from the different local shippers with the comparative statement for the preceeding year:

	Sup. Feet. Spruce	Sup. Feet. Birch Plank
W. M. Mackay—		
1914	37,703,517	1,548,443
1915	47,728,337	990,327
J. E. Moore & Co.—		
1914	19,548,966	1,274,956
1915	32,141,787	490,041
Geo. McKean—		
1914	22,417,059	2,981,540
1915	35,682,457	1,342,663
Other shippers—		
1914	4,358,284	1,846,442
1915	23,933,602	1,510,678

Birch timber to the amount of 1,611 tons was shipped in 1915, compared with 1,411 tons in 1914.

The shipments from other New Brunswick ports were as follows:

Campbellton

Year.	No. of Vessels.	Tons.	Deals etc., Sup. Feet.
1914	20	27,828	37,370,851
1915	34	32,793	42,131,020

Dalhousie

Year.	No. of Vessels.	Tons.	Deals etc., Sup. Feet.
1914	36	38,601	12,000,000
1915	46	37,415	17,000,000

Bathurst

Year.	No. of Vessels.	Tons.	Deals etc., Sup. Feet.
1914	..	.....	.....
1915	10	7,172	10,779,943

Chatham

Year.	No. of Vessels.	Tons.	Deals etc., Sup. Feet.
1914	16	25,468	35,945,187
1915	63	38,594	46,156,057

Newcastle

Year.	No. of Vessels.	Tons.	Deals etc., Sup. Feet.
1914	19	17,667	26,126,424
1915	79	44,277	51,579,879

Richibucto

Year.	No. of Vessels.	Tons.	Deals etc., Sup. Feet.
1914	..	.....	.....
1915	6	1,459	2,029,658

Buctouche

Year.	No. of Vessels.	Tons.	Deals etc., Sup. Feet.
1914	1	204	253,354
1915	2	572	909,604

Sackville

Year.	No. of Vessels.	Tons.	Deals etc., Sup. Feet.
1914	1	296	392,198
1915	7	1,309	1,447,295

Albert

Year.	No. of Vessels.	Tons.	Deals etc., Sup. Feet.
1914	5	10,363	14,139,792
1915	7	8,901	13,377,139

Shediac

Year.	No. of Vessels.	Tons.	Deals etc., Sup. Feet.
1914	..	.....	.....
1915	3	.....	993,965

There has also been a large increase from the North Shore ports as well as from St. John as the above statement would indicate. A recapitulation of the shipments in 1915, compared with the last three years is as follows:

Year	Spruce Deals, etc., Sup. Feet.
1912	245,806,682
1913	270,963,621
1914	217,906,813
1915	325,890,743

Lumber Trade in the West Indies

The demand for lumber last year in the British West Indies was less than usual in all the islands except Trinidad. The value of the total import has been about £450,000 annually, and though the exact figures are not yet available it is probable that the falling off last year in the import will exceed £75,000. The unsettled condition of trade has affected lumber perhaps more than any other important item, building operations being generally suspended for the present. In the smaller islands the demand has not fallen off so appreciably as in the larger colonies, but has kept well up to the average. In Jamaica and Barbados the decline has been substantial, amounting to £50,000 in the former and £35,000 in the latter, most of which in Barbados was in shooks and staves. It is probable that Canadian pine and spruce suffered rather more than pitch-pine from the United States.

There has been a steady increase in prosperity in Trinidad, and this island has probably felt the effects of the war less than any other of the West Indies.

The requirements of British Guiana for white pine, spruce and pitch-pine value annually about £50,000.

Variation in Weight and Strength of Timber

By J. A. Newlin*

Timber is looked upon as an exceedingly variable material without any definite idea as to just what the term, exceedingly, implies. It is the purpose of this paper to point out the causes of variability in timber and to give a more definite idea as to the extent to which each cause influences the properties of wood.

In view of the fact that the causes of variation in weight are fewer and the resulting variations different than in the case of strength properties, the two will be considered separately and the variation in the weight of wood will be taken up first.

Variation in Weight of Wood

Any piece of wood selected promiscuously may contain anywhere from 4 per cent. moisture, as in some kiln-dried material, to two times as much moisture by weight as wood material, as in occasional pieces of white fir. In view of this fact it is necessary to divide wood into three groups as to moisture in order to effect a definite comparison. These groups represent a maximum amount of moisture as in green wood, wood with no moisture, or oven dry wood, and wood with an intermediate percentage of moisture present, or air dry wood.

The weight of green wood depends upon the weight of the wood substance itself, the moisture content, and the weight of other contained substances such as resin. The various species contain widely different amounts of moisture in the living tree; for example, white ash and black locust are always comparatively dry; black ash and the oaks have about twice as much moisture, and chestnut and buckeye have three times as much as the white ash; the white and red cedars are comparatively dry while cypress and white fir contain large amounts of moisture.

Position in the tree also affects moisture content. Most hardwood show a fairly uniform distribution of moisture throughout the tree and the variation in the hardwood species is comparatively small. The conifers, on the other hand, show a wide variation in moisture content. In the same tree, as a rule, a large difference in the percentage of moisture exists between the heart and sapwood and, in some instances, between the upper and lower parts of the tree. Longleaf pine and most other conifers have very low moisture contents in the heartwood and very high in the sapwood, causing young thrifty trees to run heavier than old overmature trees of the same species. Tamarack and cypress are exceptions, having fairly uniform moisture contents throughout the tree. Sugar pine and western larch, due to resinous material as well as water, are very heavy at the butt.

Variation of 5 per cent. above or below the average weight per cubic foot for a given species are to be expected in the case of species having a fairly uniform moisture content. This variation may, however, run as high as 20 per cent. occasionally. With species that do not have a uniform moisture content about 10 per cent. variation in the weight per cubic foot may be expected with occasional trees varying as much as 40 per cent. These figures apply when considering small amounts of the wood, such as timber from a single tree. In larger shipments, as would be expected, the average weight is much more likely to be nearer the average value for the species, although in the conifers, as was previously pointed out, the character of the stand would very materially influence the weight per cubic foot.

Air dry weight varies largely on account of the wide variation of moisture content implied by the term. Some species lose the moisture in one-tenth the time of others. Some material is airdried to reduce its shipping weight and is considered dry when it ceases to lose moisture fairly rapidly, while for some of the more exacting uses the material will be carefully dried for months or even years until it reaches as low a moisture content as possible under the conditions and moisture within the stick has become uniformly distributed. For example, in airdry telephone poles of cypress the moisture content may be over 40 per cent. of the oven-dry weight of the wood, while for high-class finish lumber of the same material it will probably be below 10 per cent. Thus it is seen that different conditions of airdrying may affect the weight of a species so that one class of material will be only about three-fourths as heavy as material of another class. However, for any given class of timber the figure is fairly uniform and the weight per cubic foot will have about the same percentage variations as in the green hardwoods.

The weight per cubic foot of absolutely dry, or ovendry material, varies somewhat less in percentage than the weight of either green or airdry timber. The timber from any given tree will one-half the time fall within 4 per cent. of the average value with occasional values as much as 16 per cent. above or below the average. These variations are about the average for most species. The longleaf pine and Douglas fir, however, show variations about one and one-half times as large as those given.

The strength, hardness, stiffness, and shock resisting ability of a given piece of timber are dependent upon the density, grade, moisture content, nature of loading, and species.

Variation in density, or over-dry weight per cubic foot, is one of the chief causes of variations in the mechanical properties of wood. In fact, the relation between density and strength is so definitely known that the density of a wood may well be taken as a criterion of its strength properties. It is found that as a rule all strength properties increase with the density.

Strength and stiffness as a beam or post increase with about the first power of the density.

Hardness and strength in compression perpendicular to the grain vary almost exactly with the square of the density. While the shock resisting properties vary by a slightly higher power.

It is hardly necessary to state that the grade of timber has a marked effect on the strength properties. Checks, knots, ring shakes, and other defects in general result in lower values in all the strength properties. Commercial timber will range all the way from sticks that will barely support their own weight as a beam to clear straight grained dry timber much stronger in proportion to its weight than structural steel. Difference in grade is responsible for a great deal of the variation in strength of the structural timbers.

Change in moisture content in the approximately green material affects the strength values above listed very little. This is because the moisture contained above the fiber saturation point, usually about 25 per cent. or 30 per cent. moisture, does not materially affect the mechanical properties of wood. Below this point, however, most of the strength values in small pieces increase rapidly with a decrease in moisture. Hence, in airdry material moisture content is a very important factor in its effect on strength values. In many instances the ultimate bending strength is more than doubled by a reduction in moisture from the fibre saturation point to 10 per cent. or 12 per cent. moisture, a condition representative of airdry material such as small timber stored inside. In impact bending it is found that an increase of about 8 per cent. in the ability of a specimen to absorb a shock and return to its original form is caused by a decrease of 1 per cent. in moisture when the moisture content is about 12 per cent. of the oven-dry weight. However, the total shock a specimen can absorb before complete breakage is found to be greater in the green or wet condition. In other words, a dry piece of timber will spring without being permanently distorted and return to its original position with a greater force than a green timber of the same material. But when failure starts, the dry timber fails much more quickly than the green. That is, the dry timber is more brash. Stiffness increases with the dryness but the change is by no means as marked as in the bending strength, a gain of only about 25 per cent. being effected by the drop from the fiber saturation point to 10 per cent. or 12 per cent. moisture.

Although the mechanical properties generally show a marked increase in strength with a decrease in moisture, in structural design allowance should be made for this increase only in rare instances, for the reason that it is a rather indefinite quality and in structural timbers the defects and checks resulting from seasoning will usually offset any gain in strength due to drying. In addition, most structural timbers are subject to moisture change and are likely at any time to become as wet as in the green state. Consequently strength values for the green material only should be used.

Two series of tests made under widely different conditions of loading are not comparable because of the variations in results on this account. The rapidity with which the load is applied and the duration of the load has a marked influence. For instance, it is found in impact bending where the load is applied almost instantaneously a stick will resist without apparent injury a force more than double the dead load which would ultimately cause failure. It has also been determined that a beam loaded over a period of several months will finally break under a load less than two-thirds that required to break it where the ultimate load is reached in a few minutes.

Tests on large pieces will ordinarily show lower strength values than those obtained from small specimens for the reason that the large pieces usually contain defects of one form or another in the region of failure whereas the small ones are clear.

The variation between species is very great when opposite extremes are taken. For example, the bending strength of black willow is about one-fourth that of black locust. But for woods ordinarily competing for the same structural purposes this difference is usually small and has been greatly overestimated, greater differences in strength properties usually existing within these species than between their averages. For instance, 25 per cent. of the timber from the true shortleaf pine (pinus echinata), an inferior timber, will average higher in strength value than the average longleaf pine (pinus palustris), one of the best structural timbers; and 25 per cent. of the latter will fall below the averages for the former. Thus it is seen that it is just as important, if not more so, to inspect the quality of wood in a given shipment as it is to determine the exact species.

In small clear specimens of the same species tested green under

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the same conditions, variations are likely accounted for by variations in density. Those properties which vary as the higher powers of the density we would expect to have greater variability than those which vary with the first power and that the variation above the average would be slightly greater than below. This we find to be the case. Strength and stiffness as a beam or post come under the latter head and it is found that in the conifers the probable variation from the average is about 12 per cent. That is, it is an even wager that these values for any single specimen will be either within or without 12 per cent. of the average for the species. In exceptional cases a piece may be as much as 48 per cent. above or below the average. In the oaks the probable variation is 15 per cent. and occasional pieces may go as high as 60 per cent. above or below the average.

Hardness and compression perpendicular to the grain, varying about as the square of the density, have a somewhat higher probable variation, the figures being 15 per cent. for the conifers and 17 per cent. for the oaks. Occasional specimens in either class, though, may be found to vary from the average for the species by four times these amounts.

In the case of shock resisting ability, which varies as a somewhat higher power than the square of the density, the probable variation is 18 per cent. for the conifers and 24 per cent. for the oaks with occasional pieces varying by as much as four times these amounts from the species average.

In case an average for any of these values is considered as in any given shipment it would, of course, in all probability be nearer the average for the species and the greater amount considered the closer the average would be expected to approach th true species average.

If small clear specimens of the same species and density and with the same conditions of testing are considered the variation will be found to be comparatively small. Under these conditions the probable variations given above will be reduced by about one-third, leaving a small part of the variation in timber unaccounted for.

Thus it is seen that the strength of timber of a given species with its defects, density, and moisture content known may be estimated with considerable accuracy. No attempt should be made to compare species upon data in which the conditions are not practically the same or where reliable data are not at hand for reducing values to a common basis. With timbers free from defects and of the same species and moisture content only one-fourth of them may be expected to fall more than 12 per cent. below the average in strength. Of this one-fourth, occasional timbers will have only one-half the average strength. It is the purpose of the density clause in the grading rules for structural timbers to eliminate the relatively small percentage of the timber in which the clear wood has only from one-half to two-thirds the average strength for the species.

Lower Ottawa Protection

The Lower Ottawa Forest Protective Association increased its area by 944,640 acres during 1915 and have now the patrolment of 8,504,320 acres. Within the above area there remain but one or two small limit holders who are not members of the Association.

The total area was divided into four divisions and 49 ranger districts . The patrolling was done with 58 rangers and 4 inspectors (or Chief Rangers). All rangers were equipped with canvas water buckets and fire fighting equipment was stored at convenient places in their districts. The patrolling was done partly on foot, canoe, or with horses, the nature of the district trails and roads being taken into consideration. 10,000 fire posters were used in placarding roads, trails, camping grounds, watering places, etc., and a large quantity of warning pamphlets were distributed among settlers located in vicinities bordering the limits.

During wet periods rangers were kept busy trail cutting, building fire places, lookout towers and ranger camps and construction of telephone lines. Two hundred and twenty miles of trail were cut and cleared during the season.

155 fires were extinguished during the season and of that number 113 were extinguished without extra labor, or in other words, put out before spreading. The fires originated as follows:—

Settlers 79, fishermen 15, berry pickers 8, squatters 8, lightning 6, drivers 4, hunters 4, woodsmen 2, indians 2, railways 2, surveyors 1, unknown 24.

The above figures show that 51 per cent. of all fires originated from settlers. This is a considerable decrease over the percentage of fires from that sources last year. The association's rangers supervised the burning of 322 slashes and permits given.

With the co-operation of the Provincial Government the association continued to prosecute settlers in the same manner as in the season of 1914 and convictions were secured in 40 cases and very few of the number were found in the vicinities where prosecutions took place last year.

Central British Columbia Forests

Timber resources which will bring in great revenue and profit when markets have been developed

The forests of Central and Northern British Columbia, especially in parts of the interior, are so far practically untapped, except for local uses, and their great extent and value are not widely known. This is largely due to the fact that up to the present, transportation facilities have been lacking and the timber has been, therefore, commercially inacessible. For this reason the lumber industry of British Columbia so far has been practically confined to the forests of the Southern coast and Southern interior. Conditions have been changed, however, Some of the best timber areas have been opened up by the completion of the Grand Trunk Pacific. Further large areas will be made accessible on the completion of the Pacific Great Eastern and the Canadian Northern. Undoubtedly in that part of the province a flourishing lumber industry will develop sooner or later—how rapidly depending, of course, on the markets.

Central British Columbia lies approximately between latitudes 51 degrees and 57 degrees, and takes in the whole width of the province. (Latitude 51 degrees is at the north end of Vancouver Island, and passes through Revelstoke or near it. Latitude 57 degrees is north of Fort Graham, on the Finlay River. In includes the forest districts of Kamloops, Lillooet, Prince Rupert, Hazelton, Fort George and Tete Jaune. In other words, it includes all of British Columbia at present under forest administration except the southern tier of forest districts.)

The total area of Central British Columbia is over 106 million acres, or nearly half the province. North of Central British Columbia there is an additional area of 70,000,000 acres. It lies between latitudes 57 degrees and 60 degrees—the northern boundary of the province—and may be called the real Northern British Columbia. It is nearly as large as Norway. Little is yet known of the timber resources of that part of British Columbia except that practically all of the country below timberline is wooded, and that there is in the aggregate a very large amount of timber there, especially pulp timber.

It is conservatively estimated that 80 million acres of the total 106 million acres is forested. Allowing 10 million acres—a liberal estimate—for potential agricultural land, there remains 70,000,000 acres of absolute forest land valuable only for growing timber, and in part for summer grazing. Probably at least 40,000,000 acres of this is capable of growing merchantable timber. The present stand is estimated to be at least 80 billion feet b. m., and is probably nearer 100 billion—or about one quarter the total stand of timber in the province.

The annual growth may be estimated at 100 board feet per year, or four billion feet b. m. per year on the 40,000,000 acres. This is not far short of the total cut of Canada at present. Reckoned as pulpwood, the total quantity is at least 200 million cords, and the annual growth 8 million cords. This latter figure is approximately twice the present yearly consumption of pulpwood in the United States.

Complete utilization of the present stand would yield the province forty million dollars in royalty alone. It would distribute in the neighborhood of a billion dollars in logging costs, represented by wages, supplies, etc.; and 75 to 90 per cent. of that would go directly to the community.

Complete utilization of the annual growth would each year yield two million dollars in royalty alone, and distribute around fifty million dollars in logging costs in the province.

Before there can be any permanent and important increased development of the lumber industry as a whole, however, new markets and bigger markets are needed. There is mill capacity in Southern British Columbia now to nearly double the present lumber production if the surplus could be sold, and unless markets are enlarged and a bigger demand created, any increase in lumber production by one section of the province—Central British Columbia, for example—would be made at the expense of other sections.

The development of bigger lumber markets is one of the most important tasks facing the timberholders, the lumbermen and the government of British Columbia today. It is a task which will require and deserves their best efforts, because on its successful accomplishment the commercial future of the province is dependent to a greater degree than is generally understood.

William Anderson, a pioneer lumberman of Ottawa died on February 1st, after a short illness. The late Mr. Anderson was in his sixty-seventh year. He was born in Almonte in 1847, and went to Ottawa when sixteen years of age. He was for forty years connected with J. R. Booth Lumber Company, during which time he was known as Mr. J. R. Booth's right hand man. He is survived by his widow, four sons and four daughters.

Set a Goal and Then Go To It

If any lumberman thinks he hasn't any "kid blood" left in him let him try this on himself and, if he puts up a sale limit and "goes to it" and wins out and if he doesn't send me the price of a hat for suggesting it to him, and causing him to make at least a thousand dollars more than he would have had he not tried it, I'll buy him a suit of clothes.

You will make a thousand, too, if you do just what I am going to tell you I intend doing and shall do it, too, if I live, but the trouble with lots of you fellows is you say, "Oh that Dutchman is crazy," and pass it up, and the Dutchman goes ahead and has the extra thousand at the end of the year and you look up some other good advice to read and not try. Listen—You laughed at me when I told you to act square with the bankers and charge interest on your old accounts—but I went ahead and charged it and I have credited up my discount and interest account with $12,000 since then and you have kept calamity howling about, "People not paying their debts." You tried to beat the banker, but you beat yourself, and the fellows that you helped to beat the banks out of the interest are buying from your competitors and knocking you to beat the band.

I am glad to see a whole lot of fellows are trying out these ideas and they write me once in awhile and thank me, while others take the idea and claim it as original, or tell people they started it. Well, I don't care, what I want to do is to remedy your conditions, and I don't hand out anything that I don't try out first myself either, and if I didn't dig up something good once in a while I guess the boss would fire me—but maybe he just forgot to, and this will remind him of it.

The "Doctor's" Big Sales Campaign

Now, I am going to tell you of the big sales campaign that I am putting on. There is going to be the hardest fought lumber battle in my district in 1916. Somebody is going to get out of the business or somebody is going to be pretty near punctured.

Well, to stimulate things I made only one resolution, which was, "Resolved, that I will stick to my friends in 1916," and I am going to do it. And as I interpret the Golden Rule they now have to stick to me—don't they?

I put in my window today a center-piece which reads as follows:

> We have set our
> 1916 sales at $90,000,
> and we need everyone
> of our friends to help
> us reach the goal.

I then signed it, as did my entire office force. People who know me know that I am going to do just what I say.

Now some of you "clams" who think you can in an underhand way put one over somebody, will say I am a fool for letting people know what amount I sell and tell them all my business, but while I may be a fool—it takes a fool for luck, don't you see.

How Much of Each and the Answer

Some said, "Why didn't you make it an even $100,000?" I told them I didn't think I could sell but $90,000 and would be satisfied with selling that much, but no less. I divided out the $90,000 sales as follows:

Lumber	$30,000
Cement	15,000
Millwork	10,000
Plaster	5,000
Builders' hardware	4,000
Fence wire	2,000
Lime	2,000
Varnish	1,000
Paint	6,000
Glass	1,000
Roofing	5,000
Lightning rods	1,000
Weather strips	1,000
Screens	1,000
Sacket board	2,000
Wall board	1,000
Lawn furniture	500
Ladders	500
Sewer pipe	2,000

Now, then, I can't tell you all I am going to do right now in this campaign for some of my competitors would be able to combat them too easily, and while I am going to keep the public posted as the campaign progresses, I just have to keep a few things under my hat to my best friends, but, if I win, all this will be forgiven.

This campaign is being entered into with the firm belief that it will be successful. It is one of jollification and cheerfulness; not of doubt or fear—it can't fail because we say it must succeed. We must "nail the pennant to the pole"—"we must bring home the bacon." My sales force are reading up and are going to take just as much interest in it as myself—even my eleven-year-old boy has pricked up his ears. "Old Friday," the faithful old truck goes chug-chug just a little clearer, and the old mare mule, though blind with age, tries to step up a little spryer and the bald face horse kicks up his heels a little higher when we take the harness off him in the evening.

People stop and read the announcement and wave their hand at me through the window—it's on—the campaign is on—we are off at daybreak today.

I have some pieces of finish lumber, moulding and dimension in the window with a card on saying, "We are going to sell $30,000 worth of this." A sack of cement saying, "We will sell $15,000 worth of this." The sack of plaster, the iron and prepared roofing, the weatherstrips, the panes of glass, the lightening rods, the lump of lime, the locks and nails. The cans of paint and varnish, sacket boards, wall boards, lawn chairs, ladders, etc., have each their card and telling how much of them is to be sold—and each is yelling to everyone to be sure to remember them during the year, so how can anyone help but remember them

All Will Co-operate.

Lots of work must be done and there must be co-operation by more than your clerks. You have to have the assistance of all firms that you buy from and all the people who buy from you. The first campaign must be worked out with your manufacturers and jobbers first, and that takes a little work too. I have written to all of the firms that I buy side-lines from. The lumber firms have not reached the point that they will help the retailer, but the lumber manufacturers' associations are going to put their shoulder to the wheel though and you bet we are glad to see them wake up. Before the year is over I will be able to tell you of the many helps that they are handing out to those who appreciate enough to help themselves by working with them, but the guys who are afraid their business will grow so that they will have to pay more tax or have to take out more fire insurance will still continue to live a quiet life.

I have received many letters from the firms that I buy from and about two wagonloads of advertising and you bet we are kept busy taking care of it.

It is certainly a good way to find out who will stick to you and who won't. I have received lots of letters of encouragement and some of discouragement. When they write me a discouraging letter I change the doctors on them. I hunt up some one in that line that will help push a good thing along. There are some firms who have been so nice to us that they just couldn't drive us away from them till we feel that they have made enough out of us to pay them for what they have done for us. They send samples, circulars and offer to do anything else that they can for us. Some offer to carry on a local advertising campaign for us.

The Fellows in Sunshine Row

The art of writing a letter is brought out very forcibly in this campaign as it is quite a diversion to read them. One firm will offer their help with a whole lot of strings tied to it and want you to guarantee them about $5 for every one they give you. Another will give so reluctantly that you are ashamed to take it because they put you in the light of a beggar. Another will make you feel that you "aren't right bright," and some fellow will refuse you outright.

Then you strike "sunshine row." These fellows either turn you down in such a nice way that you like them for it, or give what they can, and give it cheerfully, and the next one gives you a whole lot of good encouragement and anything else he has while the next one will fall oll over himself in trying to do something for you so you are well repaid for your trouble.

I received today a lot of samples to send out and when I signed up the express receipt I saw that there had been $4.25 prepaid on that one lot.

Well, I am going to get that money back to that fellow. I had one paint concern refuse to get me out the number of color cards that I asked them for, and I have been selling their brand of paint for thirteen years—no, I didn't quit them, but it surely made me feel bad. I just told them I had to have them for this campaign and to send them and charge them up to me; for it was cheaper for us to do this than to change brands of paint and spend about $500 in doing so—besides I knew that this firm was right at heart and only got a little close temporarily, but I could not forget their past favors and could not pass them up so suddenly. Now then, why don't some of you fellows who try out things of this kind let us know about them. You had better wake up or the catalog houses will spill you all over the earth and then it will be too late.

Don't be afraid your competitor will try them out on you—be an originator—never an imitator, but it is even better to be an imitator than do nothing.

I had to buy the first straight carload of wall-board today that

ever was sold in this town because I had to meet the catalog house price and now I want them to come to it, for I am fixed to make the price to get the business.

Set your goal and get your sales force enthused and sell 10 per cent. more than you would otherwise, and it will be all clean profit for the labor, rent and several other expense items will be no more and your profit will be the whole amount between the cost and selling price.

The Kiddies Will Help

My eleven-year-old boy put his picture in the paper this afternoon and announced that he and the whole bunch at the yard were going to help "Dad" sell the $90,000 worth of building material, and there are at least 2,000 other children—those whom I have been treating to candy for the last six years—who are going to support me in this campaign.

Don't some of you wish you could have a reserve of 2,000 volunteers to call on at any time besides your regulars? It's great; the love of the 2,000 and more little souls beats all the gold in Alaska. Gold can be stolen or lost, but the love of the kids is everlasting, and I am going to guard it sacredly.

That's why I say when I am want to do a thing, I am going to succeed for, when I play "Come Kiddies, Come," on my old barytone, there is no "hesitation" then.

I'll tell you later on how I succeed or why I failed, but don't wait for my report—think—act—and even if you fail it's no disgrace.—The Lumber Doctor in the St. Louis Lumberman.

Rules for Preventing Mill Fires

The following ten rules for the prevention of fires have been drawn up by The National Lumber Manufacturers Inter-Insurance Exchange:—

1. All casks and fire pails must be kept full at all times. Under no circumstances are fire pails permitted to be used for any other purpose.

2. Fire hose attached to standpipe must not be removed from its position, and must not be used for ordinary purposes.

3. All fire doors and shutters must be closed and fastened at night.

4. Greasy or oily rags and cotton waste must be deposited in "Oily Waste Cans" specially provided for that purpose, these cans to be taken to the boiler house and contents burned after each day's work.

5. Steam pipes must be kept clear of all combustible matter and must never be allowed to remain in contact with wood.

6. Line shafting must be kept clean. Dust and dirt must not be allowed to accumulate on bearings. When oiling the journals, all dirt and dust on shaftings and bearings should invariably be brushed off. A whisk broom may be used for this purpose.

7. Drip cups under bearings must be emptied regularly. Oil must not be allowed to drip on floor beneath bearings or the surrounding woodwork.

8. During operation and repairs all shavings and debris of all kinds to be removed from the building each night, and after repairs are completed all unused material to be removed from the building.

9. No smoking will be allowed on these premises.

10. All employees are cautioned to keep the premises clean.

Foremen and Superintendents are expected to see that these rules are faithfully observed. Employees neglecting any of these regulations or violating any of these rules are liable to instant dismissal.

Newfoundland's Trade in Pit Props During 1915

The Council of the Board of Trade of St. John's, Newfoundland, in its seventh annual report refers as follows to the trade in pit props:—

The Government permitted the export of Pit Props in 1915, and the cutting of this wood provided very necessary earning power last winter. Attention having been drawn to a report that has been laid on the table of the House of Commons, containing statements regarding Pit props from Newfoundland which were not in accordance with the facts, the Council forward to the Board of Trade, London, a representation setting forth the actual facts. The export of Pit props from the year ending Dec. 31st, 1915, is 69,454 cords, valued at $373,682. Our entrance into the timber trade of the United Kingdom has resulted in the expenditure of some $300,000 among our wage earners during the past year, and it is likely that as much as $500,000 will be similarly expended during 1916. The prices paid by buyers, however, have been too low to give our contracts any fair margin of profit, commensurate with the financial outaly and work involved, and the business has consequently failed to attract organized capital to any great extent. This position is in noticeable and regrettable contrast to features of the timber trade in Canada and in the United Kingdom. In Eastern Canada a flourishing condition exists among timber dealers, under the influence of war prices paid for lumber and kindred products, while in the United Kingdom timber generally, and Pit props particularly, have risen to prices previously unknown. The advantage appears to have gone altogether to the British shipping or importing interests, and the Newfoundland contractor is merely "marking time" in the Pit prop industry until better prices are paid.

Red Pine Deals Required in South Africa

A Durban firm, who are the largest lumber importers in South Africa, are desirous of making a small trial purchase of Canadian red pine deals, so states Mr. H. R. MacMillan, Special Trade Commissioner, in a communication to the Department of Trade & Commerce, Ottawa. The object of this purchase is to determine if these deals will be as satisfactory in the Durban market as Swedish deals. The shipment received about ten years ago was unsatisfactory and, since that time, this company has purchased no red Canadian deals. Red Canadian deals are, however, now readily accepted at Cape Town and should be quite as saleable in the Durban market.

This company wish to secure from a very reputable Canadian exporter, 10 standards of red deals, 3-inch by 9-inch, in the usual Canadian assortment of length, and equal in grade to Swedish No. 3. They also wish to secure 10 standards of red deals, 3-inch by 9-inch, assorted lengths, 20 feet and up. For this small shipment they are willing to pay £20 per standard c. i. f. Durban, and will accept up to the end of March loading.

The shipper may draw at sight upon the company for payment in full.

This trial order, though small, is of great importance in opening up the Durban and Johannesburg market, and the firm exporting should write to this company giving information as to the possibility of developing an export in red deals.

Canadians interested may obtain the name of the firm in question on application to the Department of Trade and Commerce, Ottawa. (Refer File No. A-1499.)

Prices of Broom Handles in Great Britain

With further reference to articles appearing in the Weekly Bulletin Nos. 609 and 619 of the Department of Trade and Commerce, on the market for broom handles in Great Britain, Mr. Harrison Watson, Trade Commissioner, London, writes the Department that the situation has recently been eased by the receipt of supplies from the United States and that prices have dropped considerably from the extreme figures current last spring.

The following are the prices quoted for broom handles at present, the figures as given being confirmed from two different sources:

50 in. x 1 in. 1st quality	13s. 0d. to 14s. 0d. per gross.
50 in. x 1 in. 2nd quality	10s. 6d. to 11s. 6d. "
50 in. x 1⅛ in. 1st quality	17s. 0d. to 18s. 0d. "
50 in. x 1⅛ in. 2nd quality	14s. 0d. to 16s. 0d. "
50 in. x 1¼ in. 1st quality	23s. 6d. "
48 in. x 1 in. 1st quality	11s. 0d. "
60 in. x 1¼ in. 1st quality	28s. 0d. "

These prices are all per gross c. i. f. London, Liverpool, Bristol, or other United Kingdom port.

Large quantities of broom handles are exported to Great Britain from Finland, Sweden and the United States. Although Swedish whitewood and redwood squares 1⅛-inch by 1⅛-inch by 51-inch, free from knots, are being imported at £14 7s. 6d. per standard c. i. f., since the outbreak of the war, Douglas fir has also been used and found satisfactory. The greater part of the broom handle supply, however, is imported ready manufactured. The varieties imported are spruce, basswood, maple or beech. Spruce and basswood are preferred because of their light weight. Broom handles must be smooth. The only complaint against Canadian broom handles imported up to the present time has been that they were not finished sufficiently smooth, and that consequently they had to be graded as 2 and 3.

Restigouche and Miramichi Cuts Reduced

The lumber cut on the Restigouche and Miramichi rivers, New Brunswick, will be about seventy-five per cent. of what they cut last year, according to recent reports. Small operators in the southern part of the province will cut about twenty-five per cent. of what they cut last year, but those on the upper St. John waters will take out about fifty to sixty per cent. of last year's cut.

The Waterous Engine Works Company Ltd., Brantford, Ont., have sent out a fine large office calendar to their numerous friends and customers. The calendar pad is a large one with bold figures which stand out well from a distance. The calendar bears a large illustration of the company's plant and a number of small illustrations of their important products.

Spruce Imports into United Kingdom

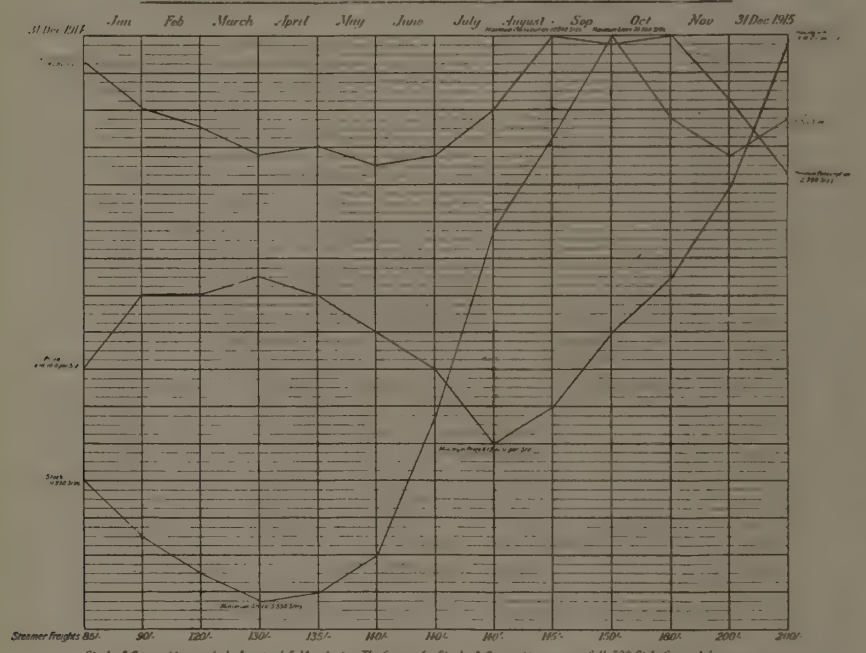
The following table prepared by Smith & Tyrer, Ltd.. Liverpool, Eng., shows the total estimated import of spruce into the United Kingdom during 1913, 1914 and 1915, and during the months of December in these years:—

From—	Dec. 1915 Stds.	Year 1915 Stds.	Dec. 1914 Stds.	Year 1914 Stds.	Dec. 1913 Stds.	Year 1913 Stds.
Nova Scotia	2,900	88,070	2,860	70,290	940	59,360
Province of Quebec	3.580	60,330	1,770	29,860	1,890	46,670
St. John	1,930	68,550	3,090	39,110	2,250	37,680
Other N. B. Pts.	3,250	78,390	1,030	66,620	Nil	85,830
Total Stds.	11,660	295,340	8,750	205.880	5,080	229,540

In addition to the above there is a quantity of Spruce imported by the Government which has not been included in the official returns. Spruce deal statistics of stock, consumption price and freight rates from 1906 to 1915,as compiled by Smith and Tyrer, Ltd., are as follows:—

	STOCK		CONSUMPTION		PRICE		FREIGHT	
	Highest Standards	Lowest Standards	Highest Standards	Lowest Standards	Highest £ s d	Lowest £ s d	Highest	Lowest
1915	35,960	5,500	10,640	2,990	19 0 0	13 10 0	200/-	90/-
1914	25,270	11,950	10,930	4,470	14 10 0	8 10 0	80/-	35/-
1913	36,030	7,970	9,430	3,640	10 15 0	9 7 6	60/-	40/-
1912	27,320	8,210	11,400	4,500	10 15 0	8 7 6	70/-	45/-
1911	29,320	9,080	10,830	5,500	8 7 6	7 17 6	45/-	32/-
1910	31,520	11,840	11,750	5,000	8 7 6	8 0 0	37/6	30/-
1909	25,360	11,600	14,460	4,500	8 2 6	7 12 6	37/6	30/-
1908	31,640	9,700	11,250	5,100	7 15 0	7 7 6	37/6	27/6
1907	43,100	18,700	15,340	6,350	8 5 0	7 2 6	41/3	35/-
1906	41,390	8,070	11,620	5,540	8 5 0	7 7 6	——	——
Average for 10 years	32,691	10,322	11,765	4,759	10 8 3	8 10 3		

TABLE SHEWING THE FLUCTUATIONS IN PRICES, STOCKS AND CONSUMPTION OF SPRUCE DEALS AT LIVERPOOL & MANCHESTER DURING THE YEAR 1915.



Stocks & Consumption include Liverpool & Manchester. The figures for Stocks & Consumption rise or fall 500 Stds for each line
Prices rise or fall 2/6 per Std. for each line and are calculated on a basis of St. John deals 3ft 7in 3ft 9in up. Steamer Shipments

B. C. Exports to the U. S. Show Large Increase

Exports of lumber products from British Columbia to the United States for 1915 were valued at $7,711,210 as compared with $5,642,951 in 1914. The increases were in lumber, paper and shingles. The detailed figures were:

Lumber	$ 791,772	$1,711,498
Logs	480,927	895,344
Paper	1,619,095	1,015,030
Poles and piling	125,035	79,040
Pulp	235,971	203,620
Shingles	2,374,151	3,790,763
Shingle bolts	6,634	15,915
Miscellaneous	9,368	.....
Totals	$5,642,951	$7,711,210

Taking the aggregate exports from British Columbia to the United States, there was a big increase last year, the comparative figures being: 1914, $17,582,663; 1915, $31,655,810.

B. C's. Monthly Scaling Report

The timber statement for the month of December issued by the Minister of Lands for British Columbia shows that the total scale of sawlogs for the province amounted to 52,520,857 feet board measure, in addition to 361,698 lineal feet of piles and poles, and 19,854 cords of railway ties and shingle bolts. The sawlogs scaled in the various districts include: Vancouver, 37,279,596 feet; Cranbrook, 4,975,614 feet; Island, 3,821,219 feet; Nelson, 2,537,606 feet; Vernon, 1,699,641 feet; Kamloops, 988,467 feet, and Prince Rupert, 761,586 feet. In the Vancouver district there were scaled 148,694 lineal feet of poles and piles; in the Prince Rupert division, 117,110 lineal feet, and in the Nelson district 40,725 lineal feet. Of ties, shingle bolts, etc., scaled, the Vancouver district shows 11,472 cords; Cranbrook, 4,242 cords; Nelson, 2,108 cords, and Fort George, 1,814 cords. Timber sales recorded during the month under review cover an estimated total of 7,263,000 feet sawlogs, 22,920 lineal feet poles and piles, and 200 cords ties, etc., estimated to produce a revenue of $12,213.

A Bulletin on Silo and Barn Construction

The latest bulletin issued by the Forest Service of the Department of Lands of British Columbia deals with "silos and root cellars." This is published as bulletin number 9, and contains plans and descriptions for wooden silos and root cellars. Like the previous bulletins published by the Forest Service of B. C., this one is extremely practical and simple, giving definite instructions and illustrations which enable one to understand easily the chief points in connection with the construction of such buildings. Copies of this bulletin may be secured from the Forest Service of B. C., from the B. C. Lumber Commissioner, Excelsior Life Building, Toronto, or from the B. C. Lumber Commissioner, Regina, Sask.

Mr. Urgel Pauze, president of U. Pauze Sons and Company, Montreal, lumbermen and contractors, died at the Hotel Dieu, Montreal. on February 4, aged 77. He was a native of l'Epiphanie, P. Q., and had been in business for many years in Montreal. although of late he had taken a very small part in the affairs of the firm. The company are manufacturers of mill work, carpentry and joinery work, and have planing mills and a lumber yard in Montreal.

Mr. Frederick W. Harrison, ex-Mayor of Owen Sound, Ont., president of John Harrison and Sons Company, Limited, died on February 9th, after an illness of several months.

The annual meeting of the National Wholesale Lumber Dealers' Association will be held at Philadelphia in the Bellevue-Stratford Hotel on Wednesday and Thursday, March 15th and 16th.

Prospects Very Bright for 1916

Editor Canada Lumberman: Winnipeg, January 18th.

The volume of lumber business in 1915 came fully up to expectations—probably no one engaged in the trade permitted themselves to expect too much. It was generally accepted by manufacturers and wholesalers that there would be no building for the year in Winnipeg or any of the interior cities west, or in the Coast cities—and that therefore the amount of lumber used at these points would be a negligible quantity, and this proved to be the case. The demand from the smaller prairie points for farm building construction continued steadily until the abundant crop began to be harvested and the consequent demand for granary construction material in a hurry, taxed the resources of all the mills—Mountain, Coast, and Northern Spruce, resulting in broken stocks being left at all points, all sources being short on shiplap, six-inch bar strips, and certain sizes of dimension. The strong advance in price in the yellow pine belt occasioned by the large war orders given on account of the shorter ocean haul have forced eastern buyers accustomed to having their requirements filled from the south, to place their orders on the Pacific Coast on both sides of the international boundary line, and this, coupled with the shortage of stock, and the large number of mills closed down indefinitely, has caused a sharp advance in prices by the manufacturers of all classes of lumber. This advance, we think, will be maintained for some time at least. The city building will not be of great volume for 1916, but the country trade for farm construction shows every prospect of creating a steady demand, and on the whole, in our opinion, the prospects for 1916 are very bright.—H. S. Galbraith Company, Limited.

Looking for Substantial Improvement

Editor Canada Lumberman: Winnipeg, January 14th.

We look for a very substantial improvement in the volume of farm business during the first few months of the spring as compared with the same months of previous years. The fact that the farmers, through the sale of their crops, have been able to liquidate their liabilities to such a great extent, and many of them have money available for building operations, is bound to produce a larger volume of business than in ordinary years. The total volume of business in the west will, however, not come up to former years, for the reason that the cities will not be building and there will be no new towns to speak of opened up through railway extension.

The building of cities and of new towns has, in past years, been a tremendout factor in contributing to the total volume of the lumber business transacted. —Beaver Lumber Company, Limited.

Machinery and Equipment

What Manufacturers of Logging, Sawmill and Woodworking Appliances are Doing

Economy in the Handling of Stocks

Modern methods of handling lumber and shingles were demonstrated recently at the plant of the Windsor Lumber Company, of Windsor, Ont., where cars are being unloaded and the lumber conveyed to the separate piles, two men performing the service of four. The equipment used was that of the Mathews Patent Lumber Carriers who have perfected a type of steel ball-bearing roller that will convey by gravity upon a grade of four per cent., boards, flooring or siding in bundles, and timbers of any size in a straight line or about curves as required. They have been adopted by the leading lumber manufacturers throughout the Dominion and the users are enthusiastic with respect to the saving to the lumber dealer. The above cut represents shingles being conveyed upon the steel ball bearing rollers in British Columbia mills.

Modern Method of Conveying Shingles

The Canadian Mathews Gravity Carrier Company, 484 Richmond Street West, Toronto, Ont., are the manufacturers.

The "Kendall" Gang Circular

For a number of years the Wm. Hamilton Company, Limited, of Peterborough, Ont., have been manufacturing a machine known as the "Kendall" Gang Circular, a cut of which can be seen elsewhere in this issue, designed and patented by Mr. I. N. Kendall, the well-known consulting millwright, of Ottawa, Ont. This machine has been designed for the express purpose of manufacturing into more and better lumber small logs which it is not found profitable to put through the circular or band saws. It has indeed filled a long-felt want in this regard and from the number of well satisfied users of it in Canada today it is bound to command the attention of every wide-awake lumberman who is looking for a better and quicker way to turn his small logs into merchantable lumber.

The company have furnished us with the following description of these machines: they are made in three sizes to cut 8-in., 10-in., and 12-in. cants, and take saws 26, 32, and 36 ins. in diameter, of No. 10 and No. 9 gauge, and feed rolls from 30 in. to 48 in. in length. The kerf of these saws vary from 3/16 in. in pine to 7/32 in. in spruce, but the lumber comes out so smooth and so true to size that from 1/16 in. to 1/12 in. is enough to allow for finish, so that in the long run more lumber can be actually made out of a log on this machine than on a band saw where ⅛ in. over size is the customary allowance. The main requisite of these machines to ensure best results is ample power to run them. The power required varies from 85 to 125 h.p. The floor space occupied varies from 7 ft. by 9 ft. for the smallest machine, to 9 ft. by 10 ft. 6 in. for the largest, and the weights complete run from 10,000 lbs. to 18,000 lbs. each.

The saw mandrel is a hollow one through which is forced a stream of water and by means of holes drilled into the mandrel this water is sprayed onto the saws, keeping them comparatively cool. Each saw has a separate guide, which is easily accessible and readily adjustable, and the end bridge-tree is so constructed that it can be quickly removed or swung back out of place for removal of the saws. In fact, the whole battery of saws can be changed, the guides adjusted, and the bridge-tree put back into place in 10 to 12 minutes. This is the actual time in which it has been done. The press rolls are operated by frictions on the large machines, and by weights on the small machine, and both these and the feed rolls have a drive separate from the mandrel, so that, in case of any trouble the saws can be stopped and the cant backed out of the cut by means of this separate drive. Safety fingers hung just inside the first press roll absolutely prevent a cant from flying back off the saws, so that the machine is perfectly safe to the operator.

In regard to the capacity of these machines, as high as 2,500 10-in. cants have been put through the large machine in ten hours, while 1,800 cants is the average run. The machines are very heavy, strong and rigid, and the capacity can only be determined by the skill of the operator and the number of cants that can be slabbed ready for it. The lumber cut on these gangs comes out absolutely true to size from end to end, as it is impossible to put a cant through the battery of saws and have uneven lumber. One of their customers has cut as high as seven million feet in one season on this machine, and did not have a single bad board.

Among the users of these machines are the following well-known lumber companies:—

John Lumsden, Ottawa, Ont.
Rixon,Ainslie, Stoddart Company, Owen Sound, Ont.
Charlemagne & Lac Ouareau Lumber Company, Montreal, P.Q.
Gilmour & Hughson, Hull, P.Q.
Wm. Copping, Joliette, P.Q.
Shives Lumber Company, Campbellton, N.B.
Colonial Lumber Company, Pembroke, Ont.
Devon Lumber Company, Pine, Ont.
Saunders, Howell & Company, Norris Arm, Nfld.

Besides the machines described above, the Wm. Hamilton Company, Limited, manufacture a complete line of sawmill machinery for stationary band mills, including their well-known steam tension band mill, a large number of which are in use throughout Canada. They are the pioneers in the manufacture of sawmill machinery, being one of the oldest, if not the oldest manufacturers in this line in Canada today, and the experience gained throughout these years has been built into their machinery, as is evidenced by their large number of satisfied customers.

In addition to sawmill machinery, they manufacture a complete line of hydraulic power plant equipment, including the well-known "Samson" turbine waterwheels, steel penstocks, racks, feeder pipes, headgate hoists, stop log winches, and power house cranes.

In pulp mill machinery, they manufacture a line of centrifugal and triplex stuff pumps, also centrifugal screens and pulp grinders.

Opportunities for the Retailer

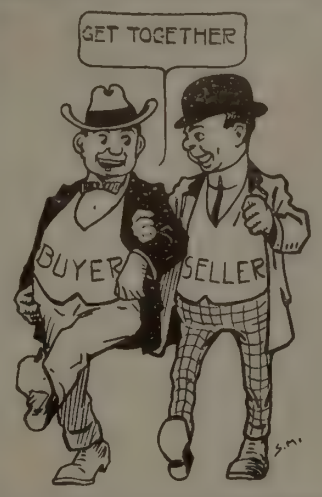
The live retail lumberman is now-a-days not confining himself to the old line of lumber and shingles only, but is adding many auxiliary lines and gathering in trade that formerly was legitimately his, but went past his door to the hardwareman.

In another column of this issue the Metallic Roofing Co. of Canada, Limited, is offering the trade a line of trimmings which can be sold with the shingles and thus an extra profit secured. Other trades formerly sold most of these profitable trimmings but the man who sells the shingles has the drop on them all, as he gets the first chance. The well known line of Trimmings sold by this firm, "Ridge Cap" and "Valley" are in great favor with the building trades and sell themselves. The Metallic Roofing Co. have prepared a lumbermen's booklet and are making a special offer to retail lumbermen as an inducement to handle the profitable line, and it would pay our readers to get in touch with them.

Clark Brothers Company, of Olean, N. Y., manufacturers of sawmill machinery, announce that they have recently sold to the Brown Corporation, of La Tuque, Que., one of their big eight-foot, new model, double cutting band mills. This mill is to replace the circular saw that has been in operation at La Tuque for some years. They are also furnishing the F. & M. Company, of Escourt, P. Q., a seven-foot, new model double cutting band mill. This is for the new Fraser plant that will be started in the spring.

The Canadian Northern Railway are purchasing one million ties between Warroad, Minn., and Port Arthur, Ont., the bulk of the contracts being east of Fort Frances. The Fort Frances Pulp and Paper Co. are also taking out several thousand cords of pulpwood.

WANTED & FOR SALE DEPARTMENT



One Hundred Enquiries

may be made through the channels in which you ordinarily do business without finding a buyer or seller. The mistake may be made of overlooking the real market place.

The Buyer and Seller of Timber Lands, Lumber, Sawmill and Woodworking Machinery, etc., are brought together through the advertisements on this page. It is the quickest, surest, cheapest and most effective means of getting in touch with the right party.

Are you using this page for your wants? It will pay you to do so. Every day brings letters telling of big results from the Wanted and For Sale Department of the "Canada Lumberman."

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Wanted good sound Basswood logs, 12 in. and over in diameter. Quote best price F.O.B. cars. Apply Hay & Company, Limited, Woodstock, Ont. 3-6

WANTED—Four cars 1-in. No. 2 Common and Better Hard Maple. State when cut, lengths, widths, and price, with Toronto Freight rate. Box 286, Canada Lumberman, Toronto, Ont. 2-5

WANTED—A quantity of Hard Maple and Birch, both for immediate and future delivery. 1 inch and thicker. State quantity you have to offer, price and full particulars. Box 285, Canada Lumberman, Toronto, Ont. 2-5

WANTED—During summer will need—
Soft Maple
Hard Maple
Birch
Beech
Elm
Ash
Basswood

Can use all grades or whatever you cut at your mill. What have you to offer?
Box 284, Canada Lumberman, Toronto, Ont. 2-5

Hemlock Wanted

HEMLOCK

20 M. Ft. 2 x 8-12 S 1 edge
100 pcs. 2 x 10-12 S 1 edge
90 pcs. 2 x 10-14 S 1 edge
80 pcs. 2 x 10-16 S 1 edge
150 pcs. 2 x 4 -16 S 1 edge
100 pcs. 4 x 4 -12
100 pcs. 4 x 4 -14
100 pcs. 4 x 4 -16
40,000 pcs. 1 x 6 D 1 S and 2 edge
1,000 pcs. 1 x 10-16 D 1 S and 2 edge.
1,000 pcs. 1 x 12-16 D 1 S and 2 edge

The above bill to be F.O.B. Chatham. Address Box 377, Chatham, Ont., B. Blonde. 4-4

Hardwood Ashes

Will pay cash, f.o.b. cars, for good dry hardwood ashes. Write stating quantity you have and location. Box 312, Canada Lumberman, Toronto, Ont. 4-4

Grey Elm

Wanted 100,000 ft. of 1½ in. grey elm, No. 1 common and better, this lumber not to be edged, and can be loaded direct from the saw, but must be in 6 or 12 ft. lengths. Write for prices f.o.b. cars shipping point. Box 295, Canada Lumberman, Toronto, Ont. 3-6

Maple Squares

Wanted to buy 700,000 Maple squares, 1 in., 1¼ in., 1½ in., 1¾ in. and 2¼ in. Lengths 12 in. and up. A. K. Hansen & Co., St. Peter Street, Quebec City. 3-6

Wanted to Buy

450,000 ft. 2 in., 2½ in., 3 in. and 4 in. log run Birch. Terms 75 per cent. cash on shipment, balance on arrival. Apply P. O. Box 643, Montreal, Que. 3-6

Wanted

All kinds and thicknesses of hardwood and softwood lumber. Give full description of same, together with price. Box 328, Canada Lumberman, Toronto, Ont. 4-t.f.

Basswood Wanted

Wanted 200,000 feet of 1-inch White winter cut Basswood to grade No. 1 Common and Better, to be plump 1-in. thick when dry. State price F. O. B. cars shipping point. Address, Box 308, Canada Lumberman, Toronto, Ont. 4-t.f.

Logs Wanted

Several cars Rock Elm logs. Quote price to St. Marys Wood Specialty Company, Limited, St. Marys, Ont. 4-4

Stock Wanted

1½ in. to 4 in. Soft Elm, Basswood and Black Ash. Box 320, Canada Lumberman, Toronto, Ont. 4-4

Wanted

Two cars No. 2 Hemlock, sized in widths in 2 x 8 and 10 - 10 ft. to 16 ft. Part 1 car 1-in. dressed.

Two cars Cedar Posts, dry, peeled, sound, 3½ to 4½ top; 8 ft.; for cash. Apply Box 195 Jordan, Ont.

Lumber Wanted

We are in the market for a quantity of Soft Elm, Hard Maple and Birch, dry stock, for immediate shipment. Will also contract for stock for future delivery from 1-in. to 4-in. in thickness. State quantity, prices and full particulars. The London Lumber Company, Limited, London, Ont. 4-4

Spruce Wanted

Wanted a block of 1-in. and 2-in. dry or winter cut Spruce. The Elgie & Jarvis Lumber Company, Limited, 18 Toronto Street, Toronto, Ont. 4-4

Spruce Pulpwood Wanted

Spruce Pulpwood wanted of good size, merchantable quality, four-foot peeled preferred, on cars shipping point. Box 323 Canada Lumberman, Toronto, Ont. 4-7

For Sale–Lumber

For Sale

White Pine and Hardwood, estimated 300,000 feet, will cut to order. G. A. Patrick & Son, Delaware Saw Mills R. R. 2, Lambeth, Ont. 1-6

Poplar For Sale

For sale two cars 1-in. Poplar cut March, 1915. Enquire by letter to Knight Bros. & McKinnon, Limited, Box 569 Cobalt, Ont. 4-4

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
c Montreal, Que.

For Sale–Machinery

FOR SALE—Second hand Bull Lathe, 60-in. swing, 84-in. bed. $150.00 cash; also a lot of Rubber Belting, 6 in. to 16 in., at Low Prices.

MOORINGS MACHINE SHOP,
1-4 40 Pearl Street, Toronto.

Boilers For Sale

Two horizontal return tubular boilers, 66 in. diameter by 15 ft. long, with 58 4-in. tubes. Box 309, Canada Lumberman, Toronto, Ont. 4-4

WOODWORKING MACHINERY FOR SALE—1 48-in. Berlin double-drum sander; 1 No. 3 Crescent Universal saw table; 1 Fay & Egan 12-spindle dovetailer; 1 40-in. MacGregor-Gourlay Band Resaw; 1 10-in. Berlin 4-side moulder; 2 30-in. Whitney pattern smoothing planers; 1 24-in. MacGregor-Gourlay Planer, Matcher and Moulder; 1 No. 235 Wysong & Miles Post Boring Machine; 1 MacGregor-Gourlay 2-spindle shaper. H. W. PETRIE, LIMITED, Toronto. 4-4

Engine For Sale

15 in. x 24 in. single cylinder Wheelock 115 H.P. in perfect condition. Box 310, Canada Lumberman, Toronto, Ont. 4-4

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

Machinery For Sale

One McGregor Gourlay second hand Resaw, 54-in. wheels, carries 5-in. saws, machine in first-class condition, only used on light work. Located in Central British Columbia.

Two second hand McGregor Gourlay Q. Y. Planers and Matchers, one 9-in., one 15-in. wide, in good condition, ran every day till October, when fast feed Matcher was installed. Located in Saskatchewan. Box 275, Canada Lumberman, Toronto, Ont. 1-4

For Sale

Two 54 in. x 12 ft. Stationary Boilers, in use only 8 months, complete with full arch fronts, smoke box and stack, and all regular fixtures and fittings, working pressure 100 lbs.

WILLIAMS & WILSON, LTD.,
2-4 Montreal, Que.

Saw Mill Machinery For Sale

Second-hand Machinery for Complete Saw Mill, all practically new, in excellent condition, including Bullwheel, Steam Kicker, Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8-ft. Waterous Bandmill, 5-saw Slab Slasher, 48-in. Edger, Trimmer, also Independent Lath-mill, and Filing Room outfit. Power Plant complete. Offers accepted for all or any part. On view at the Waterous Engine Works Company, Brantford, Ont. t.f.

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

Wanted position as band saw filer, long experience and good references. Box 300, Canada Lumberman, Toronto, Ont. 3-7

WANTED to hear from lumbermen who anticipate needing a mill foreman this spring, by an experienced mechanic who can give results, open to engagement. Any capacity. Box 283, Canada Lumberman, Toronto, Ont. 2-5

Open for year round position April 1st to take full charge for company with large stock of logs interests of the sawing, grading, estimating and inspection of all shipments. Married man with twenty years of experience as lumber inspector and manager. Box 305, Canada Lumberman, Toronto, Ont. 3-4

Position wanted as band saw filer, double or single cut. Twelve years' experience, first class references. Box 317, Canada Lumberman, Toronto, Ont. 4-8

Wanted position by experienced lumberman, holding qualification papers for scaler in Quebec and New Brunswick. Last position, yard foreman. Box 314, Canada Lumberman, Toronto, Ont. 4-5

First class double cut band or circular sawyer wants position for the coming season, band preferred. Accustomed to left hand rig; habits sober. Can supply first class references. Box 319, Canada Lumberman, Toronto, Ont. 4-5

A young married man, 32 years of age, will be open for a position on or before March the first. Fifteen years' experience as inspector, scaler and estimator; will consider any other capacity; will go anywhere. Box 281, Canada Lumberman, Toronto, Ont. 2-4

Position wanted as Manager or Secretary-Treasurer of Lumber and Woodworking business. Thoroughly experienced in Lumber, Factory and Office routine. Good organizer and have record for producing best results. A1 credentials. 15 years with one large Ontario company; at present engaged. Box 318, Canada Lumberman, Toronto, Ont. 4-5

BAND SAWYER, five years' experience, references will speak for ability and habits.

FILER, six years' experience, references; no proposition too large.

FOREMAN, thoroughly understand organizing a plant for quantity and quality, a good education and practical man.

A line to the undersigned box number will put you in touch with one or all of these men. Box 304, Canada Lumberman, Toronto, Ont. 3-4

Wanted—Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

Wanted lumber salesman for Western Ontario. State age, salary and experience. Box 324, Canada Lumberman, Toronto, Ont. 4-4

Wanted first class band saw filer for season of 1916. Apply giving experience and reference to Box 321, Canada Lumberman, Toronto, Ont. 4-5

Wanted filer for circular mill in Ontario cutting hardwood, man who can do mill repairs. Must be abstainer. Steady job to good man. State wages. Box 316, Canada Lumberman, Toronto, Ont. 4-4

Business Chances

Wanted

A sawmill to run by contract by experienced men. Box 330, Canada Lumberman, Toronto, Ont. 4-4

Wanted

A Lath Mill to run by contract. Can give first class references. Box 329, Canada Lumberman, Toronto, Ont. 4-4

Factory Wanted

Wanted to rent substantial factory in Western Ontario. Prefer woodworking plant. Give particulars.

E. C. Bradley Lumber Company,
3-4 Cincinnati, Ohio.

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

For Sale

Exceptional opportunity to acquire a going Lumber Business, Steam Saw Mill, situated on a never-failing stream, good Railway and other facilities; 75 per cent. of the timber large white pine. Plant operated last season. Owner obliged to sell on account of ill health. Box 325, Canada Lumberman, Toronto, Ont. 4-5

Partner Wauted

Successful Northern Ontario wholesale lumber dealer wants partner with fifteen thousand capital, as salesman in Southern Ontario; success assured. Apply Box 331, Canada Lumberman, Toronto, Ont. 4-4

Timber Investment

The owner of Twelve British Columbia surveyed perpetual Timber Licenses, comprising 6,944 acres, located along a large drivable river and containing from ninety to one hundred million feet of choice Fir, Spruce, Cedar, Hemlock and White Pine, including 30,000 to 40,000 large Cedar Poles; will give good title for Thirty-five thousand dollars ($35,000), or to anyone willing to provide Government dues of $1,304 yearly, will give proportionate interest until conditions improve and a more profitable sale can be made.

No commissions will be paid.

For full information address timber owner, Box 1550,
4-4 Victoria, B.C.

Miscellaneous

30 Replies

are often received to "Wanted" and "For Sale" ads. on this page. Even 50 replies are not an uncommon return from the investment of the small amount a condensed ad. costs. And isn't that good business—to get right into close touch with so many people interested in what you have to buy or sell? For you can be sure their transactions with you will not end when they have closed the business your single ad. announced.

Cedar Oil and Its Uses

Cedar oil is used in connection with the microscope as an immersion medium for oil immersion lenses, and its value for this purpose lies in the fact that its refractive index, or the degree to which light is bent in entering it from the air or other transparent mediums, is nearly the same as the white optical glass from which microscope slides and covers are made. The small section of tissue or other microscopic object is usually mounted in Canada balsam—the balsam obtained from the bits of the bark of the ordinary balsam fir, which, while soft in its natural state, dries to a tough resin of a transparent yellowish tinge and with a refractive index also nearly the same as glass. The object is covered with a small disc or square of very thin glass, the balsam in which it is mounted also acting as a cement to hold the glass covering in place.

In viewing the object a drop of cedar oil is placed upon it and the high power oil immersion lens is lowered into this drop of oil and focused upon the object. In theory, therefore, the cedar oil and the glass cover of the object, together with such thickness of the balsam mounting medium as intervenes, all become a part of the lens system of the microscope and the optical system may therefore be corrected for a constant condition and is not affected by the errors that would be introduced by successive passage through air and through the varying thickness of glass in the cover.

The volume of consumption, however, of both Canada balsam and of cedar oil, which are both products of the forest, is extremely small in this field. Crude cedar oil is used together with sawdust in some sweeping compounds, merely to impart an agreeable odor, and this is really its only use in the polishing oils that are used with oil mops upon hardwood floors.—American Lumberman.

Union Lumber Co.
Limited

Dry Norway Lath

No. 1 6/4 x 3/8 x 4'
No. 2 6/4 x 3/8 x 4'
No. 3 6/4 x 3/8 x 4'
32"

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

For Sale or Lease

As a going concern—Situate at Sault Ste. Marie, Ont.

Up-to-date Saw Mill, Shingle, Lath and Picket Mill

DAILY CAPACITY		
	Lumber	120 M
	Shingles	12 M
	Lath	30 M
	Pickets	12 M

High level land tram to piling ground. Mill served by railway with 3 spur sidings. Approximately 160 acres available for booming logs adjacent to Mill, together with convenient dockage facilities.

For further particulars write

Algoma Steel Corporation, Limited
SAULT STE. MARIE, ONT.

Review of Current Trade Conditions

Ontario

The local trade in Ontario continues seasonably quiet. The cessation of orders for shell boxes has been a serious matter to the whole trade. During the production of shell boxes there was a brisk movement of spruce and several lines of hardwoods, but now these lines, in common with all others, are quiet. There is a certain amount of improvement in the demand for industrial purposes, although it is difficult to put one's finger upon any one spot. Building operations continue very quiet and it is not yet possible to form any idea of what the situation will be in the spring. It is not well, however, to count upon anything in the way of definite building activity during the coming spring. Some reports have recently appeared to the effect that the Imperial Munitions Board will again be placing orders for shells and shell boxes before long. The whole shell situation, however, is so uncertain and it is so impossible at present to obtain an authoritative statement regarding the policy of the Munitions Board that one can only indulge in guess work as to the shell box situation.

In the export trade to the United States conditions are much more encouraging. There is a good demand across the line for nearly all kinds of Ontario lumber. If it were not for this particular bright spot in the trade, conditions in Ontario would be far from good. Industrial activity and prosperity continue to broaden in the United States and the cities along the borders of the great lakes are feeling it as much as any others. This is making a good demand for the chief lines exported from Ontario.

Eastern Canada

The local trade at Montreal continues quiet, but trade with the United States continues on a fairly active scale. Prices for the United States stock are satisfactory. The shell box business at Montreal is quiet at present, but there are rumors of new orders which are likely to be placed during the present month. Some enquiries for shell box lumber have reached Montreal from Ontario firms. The outlook for trade throughout Quebec province is not especially good, but it is expected that improvement will take place during the spring. It is probable that this year's trade in the province will be at least as good as last year's. In the country districts, good prices for the agricultural products of last year are likely to cause a fair amount of trade in lumber.

The foreign lumber market for St. John stocks has continued quiet during the past fortnight, although a certain amount of stocks are being moved all the time by the Admiralty. Charters continue to advance in price. Recent reports are of charters at 265 shillings to the west coast of England and Ireland, and additional considerations for the vessel owners. The United States market continues strong and with a tendency towards higher prices. There are quite a number of enquiries out for shell box lumber, but stocks are scarce. Lath continue firm. Cuts for 1916 have been sold at a little higher than for 1915. Shingles are unchanged. Local trade is quiet as building operations are very light.

The eastern spruce market at Boston is very firm. Random orders are plentiful. Full car load lots are quoted at:—2x3, $21; 2x4, $22; 2x5, 2x6 and 2x7, $21 to $22; 2x8, $24.50 to $25; 2x10, $25.50 to $26; 2x12, $26.50 to $27. For quick delivery or assorted cars at least 50c more is asked. Improvement is reported in the demand for spruce boards and quotations are strengthening. The best matched spruce boards, 10, 12, 14 and 16 ft. are bringing $25. The hardwood market at Boston continues steady and the demand is good. Furniture and piano case firms are showing a tendency to increase their stocks. A little more interest is reported in basswood which is bringing $43 to $45 for 1 in. firsts and seconds. Birch is very active with 1 in. firsts and 2nds in red bringing $53 to $55 and in sap $45 to $47. Hemlock is not over active at Boston, but there is a better demand than there was earlier in the winter and quotations have improved. Shingles are rathr quiet at Boston on account of the unseasonable weather. Manufacturers, however, expect the market to strengthen and some of them have revised their prices upward. White cedar extras are bringing $3.50 delivered in Boston and clears $2.90 to $3. Red cedars are firmer, best extra clears bringing $3.63, even $3.68 and $3.75. There is a moderate demand for lath, but quotations are uncertain.

United States

It seems to be impossible to over-estimate the extent of the trade revival which has spread throughout the United States during recent months. Although this improvement was originally the result of the demand for war material, it is no longer dependent upon war orders. Industrial centres in all parts of the country are active, and the domestic demand is playing a very large part in the general industrial improvement. The steel industry continues at the highest possible rate of production. Every old furnace and mill that can be made to do service is in motion and extensive construction work is being done. Steel prices continue to advance and contracts are being made for delivery as far ahead as the first half of 1917. Other influences have been noted in previous reports, chief among these is the enormous crop yield which has brought the highest prices that have prevailed in many years. The most encouraging situation in connection with the lumber business is that in connection with the railroads. The normal requirements of the railroads have been estimated to average about 200,000 new cars per year. During 1915 orders placed for cars amounted to less than 108,000 cars, the majority of these orders being placed during the last half of the year. Railroads are continuing to report substantial increaess in gross and net earnings. All of the car builders in the country report heavy orders on hand. The constantly increasing cost of steel is making the railroads turn over to wood for the construction of their cars.

Yellow pine manufacturers continue very hopeful about the outlook. The heavy demands by railroads have broken up assortments so badly that many mills have been obliged to decline orders for certain sizes and lengths of stock. On the whole, stocks in mill yards are light. A recent enquiry is reported for 41,000,000 feet of yellow pine for one of the European governments, with transportation facilities guaranteed. Another enquiry is for 750,000 yellow pine ties, that seems to come from reliable sources. The extensive curtailment of production on the Pacific Coast has added strength to the southern yellow pine situation. Since our last issue another heavy snow storm has occurred, causing continued idleness at practically every mill and camp. Advances of from $1 to $3 per thousand feet are reported on Pacific woods.

Hemlock has recently attained a strong position in the lumber market. Stocks have been greatly depleted, prices have advanced, and the situation is more satisfactory now than it has been for some time.

Great Britain

Continued activity is reported in the spot market at London. Very little forward business is taking place, but purchasers are plentiful for such suitable stock as is available for immediate use. Values are very high and there is no sign of a decline, as freights for the opening of navigation seem likely to advance rather than to recede. Deliveries at London docks for the week ending January 15th amounted to 3,313 standards as compared with 3,970 standards during the corresponding week of 1915. At Foy, Morgan and Company's recent auction sale 1 x 4/7-10 to 16 ft. first Quebec pine brought £30 5s. A lot of 2 x 11 unsorted Quebec red pine 12 x 22 ft. brought £27 10s. while 2 x 8-12 to 24 ft. brought £25 and 2 x 5-12 to 24 ft. brought £22 15s. Red pine 3 x 9-12 to 16 ft. from Montreal brought £26 15s.

The c. i. f. market for spruce at Liverpool is now confined to small parcels on consignments and they indicate that the position is firmer than ever. From all appearances owners are more inclined to hold than to sell. Shippers are offering for later shipments on a base of 200s freight, which, from all accounts, is the minimum at which tonnage will be available either steam or sail. Place has been reported to have been secured by liners at 215s. The spot market at Liverpool continues firm in all lines. The demand for consumption is strong and many large consumers admit that their stocks will not carry them for more than two or three months. Most of these will continue to deplete their stocks until they are forced to buy. Most of the importers are carrying much smaller stocks than usual, and are likely to have trouble in replenishing, on account of the scarcity of tonnage. C. i. f. birch prices are very firm. F. o. b. prices have increased. Shippers are very firm for logs, planks or boards. The spot maket for birch is firm and stocks are strongly held with a slight improvement in the demand. Values should rise rapidly. Present stocks are ample in most regards, but there is a shortage of the favorite sizes.

At Manchester, the timber trade is feeling the effect of the war more and more each week. Steamship owners who carry timber from Norway and Sweden are declining to entertain timber at any price. Spruce deals continue to advance. Scantlings are held at

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

£22 per stadard ex quay, with other sizes in proportion, and the prospects are for repeated advances. There is a fair amount of flooring and spruce on the quay, but most of it is sold, and when it is cleared away the pinch will be felt by those who have been afraid to buy.

At Glasgow, spruce continues to be the brightest spot in the market, the demand being well maintained even in the face of rapidly advancing prices. Consignments coming forward are quite insufficient to meet the demand. There is no knowing what the future prices of spruce may be. A few sales are reported in 3rd and 4th quality yellow pine deals at very firm prices, but there is no movement to report in better grades of deals and sidings.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Trade Still Quiet at Montreal

Montreal, February 10th (Special to the Canadian Lumberman): Trade in lumber is still on the slow side. The local market is the weak spot, as business with the United States is keeping up very well, considering the time of the year, and prices are satisfactory. Some of the firms making shell boxes are still closed and others are not very busy. There is a prospect that further orders will be given out by the Ottawá Committee during the present month. Ontario firms making boxes have been making inquiries here as to suitable lumber.

Although the outlook for the immediate future is not particularly good, there is reason to believe that business will soon pick up, and that the demand from the Province of Quebec will be at least equal to that of 1915. The country districts were not affected to any extent by the conditions which affected Montreal, and with high prices for agricultural products there is a likelihood of a fair trade in lumber.

The building permits for last month totalled $174,160 as against $203,261 in the corresponding period last year.

The sulphite pulp market continues strong, with a prospect of further advances. The embargo by Sweden on pulp going to Great Britain is the dominating feature, and this has resulted in additional inquiries coming to this side. The conditions in Norway and Sweden all make for higher prices. Ground wood is in moderate demand.

St. John Trade Quiet—Charter Rates Still Advancing

St. John, N.B., February 10th; (Special to the Canada Lumberman):—There is practically nothing new to report on the local or foreign lumber market during the last two weeks. The Admiralty are moving a certain amount of stock all the time, as they are about the only ones who have any tonnage at their command. Boat after boat which has been chartered to load here has been requisitioned for army supplies. Charters are being made today for coast of England and Ireland at 265 shillings, with the boats getting half freight in advance and many other perquisites. This tremendous rate of freight has a dampening effect on all buyers of deals, as they do not know where the rates will stop and are therefore afraid to gamble. About all the cuts of deals at St. John have been disposed of and some two or three mills have sold ahead their English deals for 1916, at prices slightly in advance of 1915.

The American market continues steady at a base price of $26 Boston points, and it does not look now as if there would be any decrease in price or demand. Many inquiries are on the market for shell box lumber, which is largely 1¼ in., but it is hard to find any persons who have dry stocks of this size.

Laths remain firm and cuts of laths for 1916 have been disposed of at a little higher than 1915.

Shingles remain unchanged, although if the long lumber market in British Columbia is any criterion of the shingle market, we shall no doubt have an advance in our shingle prices as Western shingles are our greatest competitors, and it is understood that not nearly so many logs are being cut this year as last. A further advance of $3 per thousand took place in B. C. for lumber today. If any market needs reviving it is our shingle market.

Locally, we are marking time, as no work is offering and it looks unlikely that we will have any building craze this year, unless the war should suddenly end, when it is felt that people would regain confidence. Merchantable spruce boards, dry stock, are extremely scarce, as everything in the way of boards was bought up some time ago. These are mostly going to the allied governments, who are providing a good deal of tonnage.

Logging around the lower sections of the river is extremely difficult as we have not had over five inches of snow all winter and this only stayed a few days. We are now having more snow and it is hoped it will remain until the yards are cleared. On the upper St. John good weather prevails and the work of hauling logs to banks is going along in good shape. About 2½ feet of snow now covers the whole upper reaches of river. The cut will be normal.

The Freight Problems for 1916

In view of the great importance of the freight situation in connection with shipments of lumber from Canada to Great Britain, reference to this matter in a recent issue of the Timber Trades Journal of London, Eng., dealing chiefly with shipments from the White Sea, and the Baltic, is of interest. In its issue of January 22nd the Timber Trades Journal says:—"Improbable as it may seem, the question—Is it possible for the freight market in 1916 to follow the same course as last year?—is now being seriously considered. Will the first fixtures eventually prove to be cheap charters owing to a steadily advancing freight market, as the season progresses? With regard to the White Sea, the selling season not having generally commenced, less attention has been given to the question than in the case of the Baltic, but, as we mentioned last week, 200s. is stated to have been paid from Archangel to London. As to Sweden, negotiations have been in train in various quarters, and a few fixtures are reported. As far as owners are at all agreed at present, it is in the detemination not to charter ahead except at a considerable advance on the highest rates of last year, and we hear of 120s. and rather more having been paid in one or two instances to London, and 140s. to the South Coast. No one can safely prophesy, but if we assume little change in the international situation except that the war will be waged on a larger and more extensive scale, it is clear that the tonnage requirements of the belligerent Governments will be enormous, and the neutral boats left for private chartering will thus have the market at their mercy. The position must be faced; steamer room will be very precious while the war lasts, and we should say that, as in 1915, merchants will have no cause to regret any fixtures that they may make early in the season."

In another article in the same issue the following appears:—"Canadian deal shippers are reported to have chartered a steamer for two voyages next season to West Britain, East Ireland range at 200s. per standard, and the same rate has since been freely offered for further cargoes, but so far it does not appear to have been again accepted.

"For pitchpine 450s. has been paid from the Gulf of Mexico to West Coast of U. K., for a boat of handy size but backward position, and this could be repeated; but, for the River Plate, on account of the great increase in outward rates thence, charterers who were last week quoting 400s., dropped their offers to 375s., although there seems little or no chance of their expectations of cheaper freight on that account being realised. To West Italy 500s. continues to be offered, and no doubt could be exceeded, but owners do not appear to consider this employment so attractive as grain for the same voyage at current rates.

"The rate of freight for sailers from the Gulf pitchpine ports to West Britain has made a further big jump, 390s. having now been paid against 400s. demanded by owners of other available vessels, this sharp rise in the basis of rate being attributable to the improving demand for this class of carriers and the dwindling supply.

Big Export Year for Genoa Mills

In the exportation of lumber during 1915 the Genoa Bay mills established a new record for Vancouver Island. During that year well over 14,000,000 board measurement feet of lumber were shipped from the Vancouver Island lumber mills at Genoa Bay to Europe, New York, South Africa, California and Mexico. This large total would doubtless have been exceeded during the last twelve months but for the lack of tonnage on the Pacific. Large orders have been placed, but the ships have not been available to deliver the cargoes. Many shipments were also held up by the Panama Canal slides. New York was the largest buyer during 1915, with Europe second, and South Africa a close third. From Genoa Bay to New York there was shipped a total of 5,097,097 feet, to Europe 2,898,718 feet and to South Africa 2,379,857 feet. One cargo of 2,275,090 feet was shipped to Toronto, Ont., by the steamer Bessie Dollar, this being the second shipment of a 25,000,000 feet order.

"Everything in Canvas"

Contractors to the Army and Navy of the British Empire

DURING the past few years our manufacturing facilities have increased fourfold. The amalgamation of the Woods Company, with the Smart Bag Co. into which it is now known as Smart-Woods, Limited, offers for your approval the products of one of the strongest and most reliable manufacturing corporations in the whole of Canada.

AS a result of this amalgamation, not only have our manufacturing facilities been wonderfully increased, but we are now in a much better and greater position to offer you all lines previously stocked, as well as many others that come direct from our recently added factories.

In addition we may say, "Our foreign trade has increased by leaps and bounds—both European and American—and we are prepared to enter into competition in every civilized portion of the globe."

Smart-Woods' Special Surveyor's Tent. Write for Catalogue.

WE are now open for competition in every thing that is possible to be made out of canvas, as well as all lines of Lumbermen's and Contractor's Supplies, such as Blankets, Clothing, etc., etc., it being one of our greatest pleasures to quote prices at any time. Our wonderful large stocks of raw material and increased number of factories, (Ottawa, Toronto, Montreal, Winnipeg, Renfrew and Welland), enable the execution of largest orders on shortest possible notice.

Samples and quotations will be furnished at any time and every possible expediency rendered to hasten shipments as soon after ordering as possible.

Smart-Woods LIMITED

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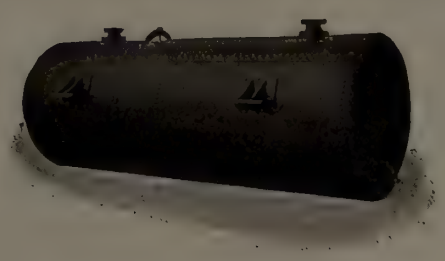

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for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

Sherbrooke Montreal Cobalt So. Porcupine St. Catharines Toronto Vancouver Nelson

An Outline of B. C's. Chief Industry

Timber Licenses and Leases Explained—Advertising Campaign—Ocean Tonnage Greatly Needed

By Hon. W. R. Ross*

Many vague estimates of the extent of British Columbia's forests have been put forward in past years. Because we need reliable information in order to manage our forests intelligently I began a forest survey in 1912. A very considerable area has already been covered by the cruisers engaged in this survey. The figures obtained give us something definite to go upon. Besides the eight and one-third million acres under timber license, a million acres under old timber leases, a million acres of deeded timberland, three quarters of a million acres held under railway grants—besides these alienations we find that the Crown Timber Reserve, created in 1907, is very considerable. For instance, in entering the results of various forest surveys on the maps last year there were one million acres of reserve timberland dealt with, apart from very large areas containing lesser stands of timber and pulpwood. Hence, the estimate of 350 billion feet of merchantable timber now awaiting cutting in the Province is being called into question as it becomes more and more probable that the effective total will reach 400 billion.

B. C.'s Wood Assets

Take the Coast forests—say a solid third is Douglas Fir, which taken all around is the finest all round wood in the world; over one-fifth is Cedar—British Columbia is pre-eminently the Cedar region of America, thanks to the Coast rainfall. Then think of our immense stand of Western Hemlock. The world is now beginning to realize what Western Hemlock is. Our pulp and paper mills have done great things with it already, but the big uses of this wood are only just beginning. Western Hemlock is destined to take the place of Eastern White Pine for very many purposes, and at no distant date. Then take our fine interior forests. Seven thousand out of 13,600 square miles of timber licenses are East of the Cascades Mountains, so you see our interior country is pretty strongly represented in the timber asset.

The financial world naturally takes a particular interest in the question of tenure. Crown grant timber, of course, is just deeded timber—there is nothing to explain about that. Then the old leases are simple enough—rentals of 10 or 15 cents per acre per annum and a royalty on cut logs of 50 cents are the terms in most cases up to the years 1921 to 1925, during which period the bulk of these leases will come up for renewal for 21 years ahead, obtaining whatever rates of rental and royalty are then provided by statute. The timber license tenure is rather more complicated, however.

The Problem of Tenure

The original problem was extremely complicated. An immense timber resource was idle and unproductive, contributing next to nothing to the development of the Province. We permitted the staking of timberlands—anyone could stake cutting rights over a square mile of timber by paying $140 a year rental and paying a certain stumpage (we call it royalty) on such logs as he might actually cut. That was a good proposition for the lumberman who wanted timber for a mill and did not want to sink capital in buying stumpage ahead. But there were strings on this concession in the public interest. Neither the annual rental (which is a sort of interest charge) nor the royalty on cut logs was fixed. They could be changed at any time to meet any rise in timber values that might occur. So the public was well protected. On the other hand it was left to the changing opinion of successive legislatures—(ours are elected every four years)—to decide what rental or royalty should be charged. That uncertainty gave British Columbia timber licenses a weak standing as securities, and made the financing of the lumber business difficult in consequence.

Rentals for Long Period

For a time no solution of this problem could be found. In the end, with the co-operation of the parties affected, a basic principle was worked out, and then we passed the Timber Royalty Act of 1914. That gave security of tenure to the licencee—fixed a rental for forty-five years ahead and a royalty on a sliding scale. If the wholesale selling price of lumber throughout the Province goes up above a certain figure the royalty goes up. If it goes below that figure there is a definite royalty charge to correspond. The people of this Province and the lumbering industry are, therefore, partners in the timber. The terms of the partnership are straightly defined. There is no more room for uncertainty, as is the case with timber or timberlands in the Western States for example, where taxation may increase several hundred per cent. in a few short years. The timber license of British Columbia is henceforward an absolute safe security.

The development of the lumber business of British Columbia is a matter of transportation. The Province has developed a fine system of railway transportation inland; so far we have not done the same seawards. There has been chronic congestion at the Coast, a lack of sea going tonnage that has been stifling our export lumber trade. Remove that and the rest follows—expansion in the lumbering business, foreign markets, activity in every form of commerce.

No Lack of Plant

A mill capacity of 2½ billion feet—we shall soon increase that when we have ocean transportation to take up the business offerings from all over the world that we are obliged to turn down to-day. An actual output, in these hard war times, valued at twenty-nine million dollars, a thousand million shingles shipped to market in the year; the new pulp and paper industry producing three million dollars a year already; some of the largest plants in the world for saw and paper mills—these are a few points that show our lumbermens' activity. Let us once secure ocean transportation and, make no mistake there will be doings in the lumbering business, and a rise in the value of British Columbia stumpage. And this Government is running an advertising campaign directed at the Prairie, Eastern and foreign consumer of lumber that is going to make an appreciable difference to the demand for our forest products. We are out to do our level best to secure prosperity through a prosperous lumbering industry based on a wealth of timber resources.

* Reproduced from the Canadian Forestry Journal.

Sawing Frozen Timber

A chisel tooth saw, up to the time the frost comes, may work in an entirely satisfactory manner then suddenly refuse to do anything. The sawyer, in trying to make it go by changing the adjustment of the guides and the "line" of the saw is liable to strain the blade, force it over the collars, and put it in such shape that a trip to the factory is necessary. By following the few simple suggestions contained in this article, this expense, delay and annoyance may be avoided.

First: To cut frozen timber successfully the shanks or holders, should be new or practically so, and should be of the swaged or flanged pattern. Therefore, before starting to cut frozen timber, see that the holders are in good shape, sharp on the inner edges, otherwise put in a new set of swaged holders.

In cutting frozen timber a fine saw dust is formed, which, not being properly clambered by worn holders passes down the side of the saw, freezes to the log, forcing the saw out of the cut, thus preventing good work. New swaged holders keep the cut clear of this fine saw dust, permit the saw to run cool and cut a true line. The insertion of a new set of holders also slightly stiffens the tension of the saw.

Second: Use narrower bits than usual. When a 9-32-inch point is used in the regular work, bits ¼-inch wide on the cutting edge will often suffice and do better work.

Sometimes it is possible to use bits which have been discarded by filing them carefully so they will have good sharp corners. The fact that these worn bits are shorter than when new, will be found advantageous.

It is absolutely necessary to keep the corners of the bits sharp and square on the cutting edge to sever the fibres of the wood thoroughly, thus avoiding the rough, stringy surface often occurring in some kinds of timber when the fibres are torn.

Where the corners of the bit are in such condition that they rub back of the extreme cutting edge, good work can not be expected. Therefore keep the corners sharp and widest and the shanks fully swaged and do this before attempting to saw when the timber is frozen.

When inserting new shanks and new bits always oil the sockets. —Disston Crucible.

Opportunities for Railway Ties in South Africa

Mr. W. J. Egan, Trade Commissioner, Cape Town, has forwarded to the Department of Trade and Commerce, Ottawa, specifications and tender form in connection with the supply of sleepers for South African railways. The following are the dimensions and number of sleepers required in a tender which closed on Jan. 31st:—

Dimensions.	Number Required.
7 ft. x 10 in. x 5 in.	65,000
6 ft. 6 in. x 9 in. x 4½ in.	32,500
7 ft. x 10 in. x 5 in.	20,000
7 ft. x 10 in. x 5 in.	20,000
7 ft. x 10 in. x 5 in.	195,000
6 ft. 6 in. x 9 in. x 4½ in.	97,500

Although jarrah or other hardwood is called for the chief engineer in charge of the construction of South African railways and harbors has intimated that when exporters of railway ties from Canada furnish certificates from engineers who have used the creosoted Canadian tie, to the effect that the Canadian tie has given satisfaction, an order will be placed for a trial shipment of same to the South African market.

PRATT & WHITNEY CO.
OF CANADA, LIMITED

SMALL TOOLS

Taps — Dies — Reamers — Cutters — Drills
MADE IN CANADA
As good as money can buy—Guaranteed absolutely!

Head Office and Works, *DUNDAS, ONT.*

SALES OFFICES:
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KLIM

SPELL IT BACKWARDS
The Lumberman's Milk
In Powder Form

Klim is pure—cheaper than fresh liquid milk. One-third the cost of condensed milk. No freights on useless water—keeps in any temperature—no waste.
Packed for camp use especially in 10 pound tins $2.00 each, the pound makes one gallon. Case lots, special price.
Write for samples, etc.

Canadian Milk Products Ltd., Toronto
Plants:—Belmont, Ont., Brownsville, Ont. Head Office:—Mail Building

New **RAILS** Relaying
12 to 80 pounds per yard.

LOGGING CARS

Jno. J. Gartshore
58 Front St. West, Toronto

Do You Want a Salesman?

¶ Every live lumber salesman in Canada reads the Canada Lumberman and Woodworker.

¶ You can get the man you want through a small advertisement in the "Wanted and For Sale" department of this paper.

Canada Lumberman & Woodworker
Toronto, Ontario
Montreal Office, 119 Board of Trade Bldg.

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

It Takes Mighty Good Chain to Give the Service you Demand

Few conditions are so severe—or will so thoroughly test the real worth of chain as logging and conveyor work.

AJAX Loading Chain

has successfully met every condition and test—it has been pronounced by ninety per cent. of all the lumbermen in the country as being the best—they use it.

If you are still in the minority—one of the ten per cent.—won't you try to prove this for yourself? Try it once—you'll buy it always.

SOLD BY YOUR JOBBER
MADE BY

Standard Chain Company
Pittsburgh, Pa., U.S.A.

Montreal
Alexander Gibb, St. Nicholas Bldg.

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Bissett and Webb

The EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS-DIEU-RIEN
MONTREAL - Canada
Head Office at Montreal.

SPRUCE rough or dressed

1" No. 2 and Better Birch, 1914 cut
also Basswood, Hemlock and Pine

Saw Mills at MONT LAURIER.
Dressing Mills at ST. JEROME.

Herman H. Hettler Lumber Co.
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Manufacturers of

WHITE PINE and RED PINE
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EXCELLENT PLANING MILL FACILITIES

Special Attention Given to Prompt Delivery

Everything in Spruce

Dressed and in the Rough

Campbell, MacLaurin Lumber Co.
Limited
Board of Trade Building, MONTREAL

Low Prices will be named on the following
WHITE PINE
FOR **IMMEDIATE SHIPMENT**

65,000 feet 1 x 5, 10/16 ft. Mill Run Box out.
15,000 feet 1 x 9, 12/16 ft. Mill Run Box out.
26,000 feet 1 x 10, 12/16 ft. Mill Run.
30,000 feet 1 x 10, 12/16 ft. Mill Run Box out.
70,000 feet 1¼ x 4 and up, 6/11 ft. Mill Run Box out.
55,000 feet 1 x 4-7, 12/16 ft. Box.
90,000 feet 1 x 4-6, 10/16 ft. Mill Cull.
} DRY STOCK

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
Eastern Townships Bank Building, MONTREAL, Quebec

EDGINGS

Ontario

A small fire occurred recently at the planing mill of Mickle, Dyment & Son, Gravenhurst, Ont., causing about $1,500 damage.

The Canadian Western Timber and Fuel Company, Limited, has been incorporated with head office at Fort Frances, Ont., and capital stock of $40,000.

The township of Bentinck, Ont., are calling for tenders for 12,000 feet of cedar flooring in 14-ft. lengths. The township Reeve is Mr. Geo. Brown, Bentinck Township, Bentinck, Ont.

The frame of Councillor Henderson's new sawmill at Acton, Ont., has been raised and enclosed. The new building is fifteen feet longer than the old one. The machinery will be installed in time for the spring sawing.

The Colonial Lumber Company's steel burner at Pembroke, Ont., fell over recently, causing considerable loss to the company. It is to be rebuilt at once, and the company hope to have it ready for use when the mill opens in the spring.

The Rainy River Electric Light & Power Company, Rainy River, Ont., intend to erect a sawmill in the spring. They have not yet decided as to the size of the plant. Mr. W. H. Green is manager of the company.

The Cockburn Concrete & Lumber Company, Dundas, Ont., has started work on a new planing mill and set of offices on Colborne Street. The company intends to move its lumber business from King Street to the site.

The old Barr & Morris sawmill at Pembroke, Ont., has been dismantled of its mill machinery, which has been sold to Harry Richards, of Dacre, Ont., who is rebuilding his mill, which was destroyed by fire a few months ago.

The Eldridge Lumber Company Ltd., has been incorporated with head office at Toronto, Ont., and capital stock of $40.000 to carry on business as manufacturers and dealers in wood and lumber and all products of the forest. Those interested are Wm. H. Irving, H. H. Davis and J. R. Rumball.

The Ontario Paper Company Ltd.. Thorold, Ont., have awarded a contract for the erection of a sulphite mill at Thorold. The equipment will include two digesters 15 x 49, furnished by the Chicago Bridge & Iron Works, Bridgeburg, Ont. The plant will have a capacity of 50 tons of sulphite per day and will be of steel, concrete and brick construction. Work will start early next spring. The manager of the company is Warren Curtis, Jr.

Mr. A. G. McIntyre, formerly manager of the Bathurst Lumber Company's pulp mill at Bathurst, N. B., reports that he is not as yet in a position to make public the names of the parties interested in the new bleached sulphite mill to be erected in Ontario, with whom he is now associated. He adds the following information: Mr. J. H. Thickens, who was formerly general superintendent of the Bathurst plant, has been appointed manager. Mr. A. A. MacDiarmid, chief engineer, has accepted a similar position with Mr. McIntyre's new interests, as has Mr. A. G. Hinzke, superintendent of the sulphite mill, and Mr. J. G. Mayo, assistant to the manager. All of these men will be connected with the new company, which will build a 75-ton bleached sulphite mill in Northern Ontario. Mr. T. R. H. Murphy, formerly with Joseph H. Wallace & Company, New York, is associated with the new company as civil engineer, Mr. Geo. H. West as electrical engineer and Mr. A. W. Block as assistant sulphite engineer. The offices of the new company will be at 706-709 Traders Bank Building, Toronto, where plans are now under way for hydro development. The new company controls about 1,000 miles of spruce timberland, of good quality pulpwood, and water power developments of about 20,000 horsepower.

Eastern Canada

Capt. E. Kinnie, Riverside, N. B., has sold his planing mill and woodworking plant to Hall Lea, of Moncton, New Brunswick.

The sawmill belonging to Joseph Boule, Loretteville, P. Q., was recently destroyed by fire, the loss amounting to $6,000. There was no insurance. The owner will rebuild and will be in the market for general sawmill machinery.

E. N. Hebert, Limited, have been incorporated at Montreal to manufacture timber, lumber, logs, pulpwood, etc. The incorporators include R. Chenebert, P. Canmartin, P. Gregory, A. Tracy and J. Robitaille. The authorized capital of the company is $20,000.

The Harmsworth paper plant at Grand Falls, Newfoundland, which supplies the newspapers owned by Lord Northcliffe, of England, was the scene of a fire on February 2nd which destroyed thousands of cords of barked wood. The probable loss was estimated at $100,000.

The Miner Lumber Company, Limited, has been incorporated with head office at Montreal, P. Q., and capital stock of $50,000, to carry on business as manufacturers and dealers in all kinds of lumber and timber, etc. Those interested are R. H. Miner, J. K. Quackenboss, J. O. Pelland and E. G. Place, all of Montreal.

The sawmill of the Richards Manufacturing Company at Kedgwick, N.B., on the I. N. R. was totally destroyed by fire on February 2nd. The mill has been operating for some years, and this season was working night and day, giving employment to over a hundred men. The loss is partly covered by insurance. Plans are already under way to rebuild a larger and more up-to-date mill. None of the manufactured lumber was destroyed.

For the 17 months to November 30 the earnings of the Wayagamack Pulp and Paper Company totalled $584,373, the net profits being $286,873. An increase of $145,000 in logs and pulpwood is the chief change in current assets. In his report the president, Mr. J. N. Greenshields, K. C., stated that the capacity of the company's plant had been brought up to 150 tons a day, by the expenditure of $317,334 on capital account, and that the entire plant was in a high state of efficiency, $103,335 having been expended on maintenance and renewals. Mr. Greenshields also stated that the company had on hand

large export contracts for shipment to England, Australia and South Africa. These were taken at good advances over last year's prices, and the result is expected to be shown favorably in next year's balance sheet.

Since the extension of the Chaudiere branch of the Quebec Central Railway, lumbering operations have increased greatly at St. Camille, Daaquam and English Lake. A large amount of pulpwood, railway ties, square birch logs, and telegraph poles have already been taken out of the woods for immediate shipment. Mr. B. C. Howard, of Sherbrooke, has erected a large sawmill at English Lake. The Murray and Gregory Company have also a sawmill under construction, in connection with their business on the same lake. These two mills are expected to cut many millions of feet of lumber this coming season.

Western Canada

H. Butterfield, Squamish, B. C., is contemplating the erection of a shingle mill on the pillchuck River.

The Albert Lumber & Supply Company, Limited, has been incorporated with head office at Calgary, Alta.

Grest Bros. Lumber Company, Limited, have been incorporated with head office at Watrous, Sask., and capital stock of $50,000.

D. D. Currie & Company, Limited, have been incorporated with head office at Saskatoon, Sask., and capital stock of $20,000, as dealers in lumber, etc.

The Penticton Lumber Company, Penticton, B. C., report that they have filled orders for delivery to prairie points of 250 cars of lumber during 1916. The mill will employ between thirty and forty men.

The Crow's Nest Lumber Company, Wardner, B. C., have a large crew at work overhauling the mill getting ready for an early resumption of sawing. The company will build a large brick pump house. The planing mill has started up again after a few days' idleness for repairs.

The Western Canada Lime Company, Limited, has been incorporated with head office at New Westminster, B. C., and capital stock of $100,000, to carry on the business of manufacturing wood in all its branches, and will operate a sawmill, shingle mill, box factory and barrel factory.

The Canadian Pacific Lumber Company, Port Moody, B. C., are overhauling their plant with a view to commencing operations in the spring. Their planing mill has already been put in operation. The company have on hand, in yard and sheds, about 5,000,000 feet of dry lumber.

The Hadden and McNair shingle mill at Cloverdale, B. C., report that they are doing a good trade cutting a special line of 24-inch shingles for the Pennsylvania market. The mill operates three machines, with a capacity of 15,000 each per day of ten hours. Steam power is used. The dry kiln has a capacity of 800,000 shingles. An auxiliary steam engine of eight horsepower drives a 35-light dynamo for lighting.

The Vancouver Creosoting Company is securing exemption from taxation and other encouragement from the North Vancouver District Council in connection with their plan for constructing a $150,000 plant. It is expected that the plant will be completed early in April. The plant is expected to employ 40 men at first and 100 men in the second year.

A new sawmill built by Mr. R. D. McLean on the Nicomeki River, near Cloverdale, B. C., has been completed and will begin operations as soon as the weather moderates. Electric power from the B. C. E. R. will be used, a 75 horsepower motor having been installed. Up-to-date machinery forms the equipment of the mill, the capacity of which will be about 20,000 feet per day. The logging camps will be located one and a half miles up the Nicomeki River. The equipment includes a circular, with top saw, and a carriage to carry logs up to 40 feet.

A New Toronto Wholesale Lumber Firm

Hart & McDonagh, a new wholesale lumber firm, have opened offices in the Continental Life Building, Toronto. They will handle birch, basswood, elm, ash, maple, spruce, pine and hemlock, specializing in birch of which they have on hand large dry stocks. The large majority of the stock is being sawn 2½ in., 3 in. and 4 in. thickness, specially suitable for munition work and rifle butts. Mr. R. McDonagh the manager of the new concern is well known to the lumbering interests of the north country and has had a wide experience in the different branches of the trade. For eight years he was employed with the Trout Creek Lumber Co. of Powasson, one year as manager for James McBurney & Sons at Callender, and for four years with Edward Clark & Son, as buyer and inspector. For the last year prior to starting in business for himself he was with the J. H. Eyer Lumber Co.

Mr. Geo. P. Hart, the Secretary-Treasurer of the new firm was for five years with the Standard Bank. He is a partner of Stewart & Hart, railway contractors of Pembroke, Ont. The wide financial experience of Mr. Hart and the long and practical connections which Mr. McDonagh enjoys, augur well for the success of the new firm. The Canada Lumberman wishes them every success.

A newspaper despatch was recently given wide publicity in the Canadian press, to the effect that orders for 40 million dollars worth of lumber, timber, etc., were about to be placed in Canada, according to a statement made by a member of the British Purchasing Commission for the Allies. The report went on to state that the stocks were wanted for huts, trenches, railroads, etc., in the war areas of Belgium and France. The Department of Trade and Commerce cabled to the Canadian High Commissioner at London regarding this report and has received in reply a cable that no delegate on the Allies Purchasing Commission has any knowledge of these orders.

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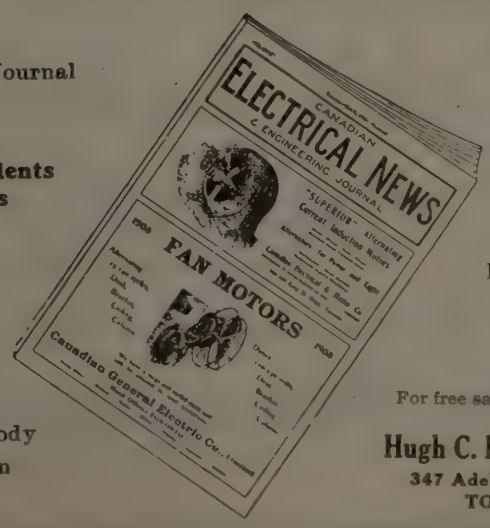

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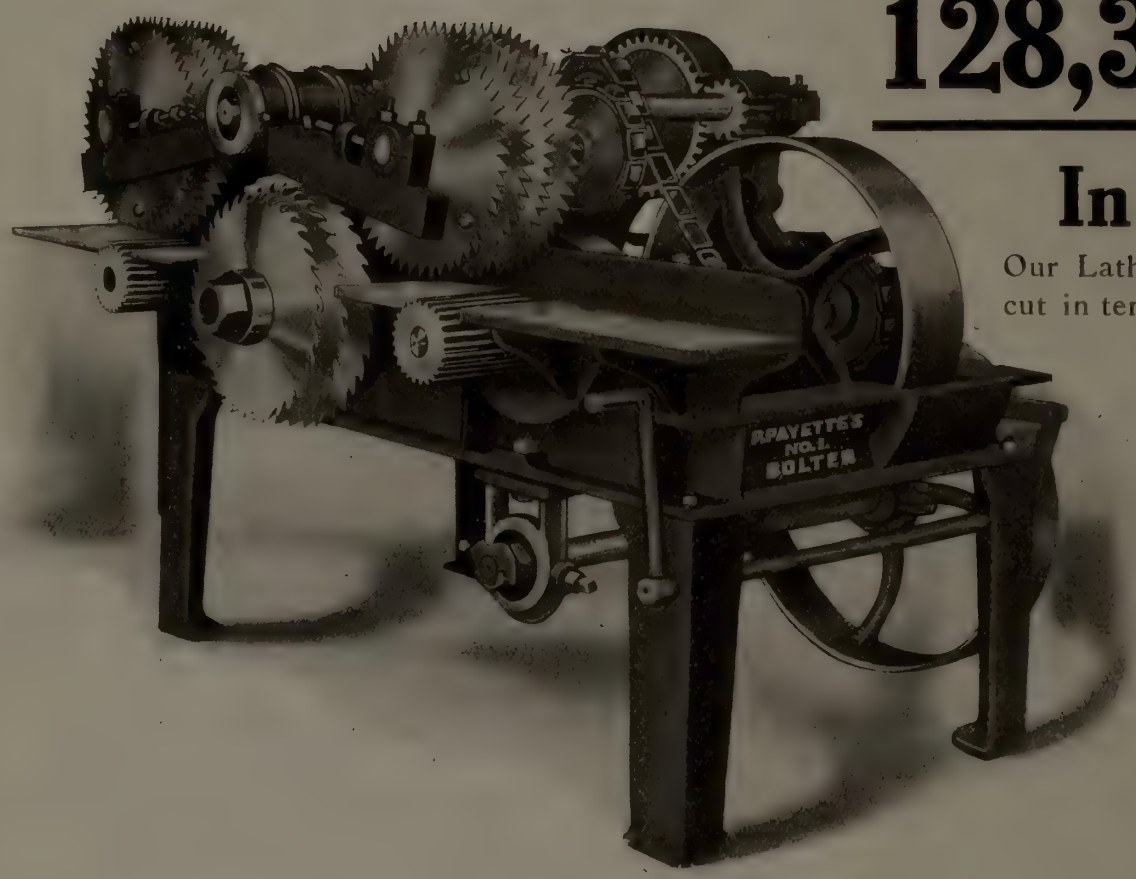

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Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

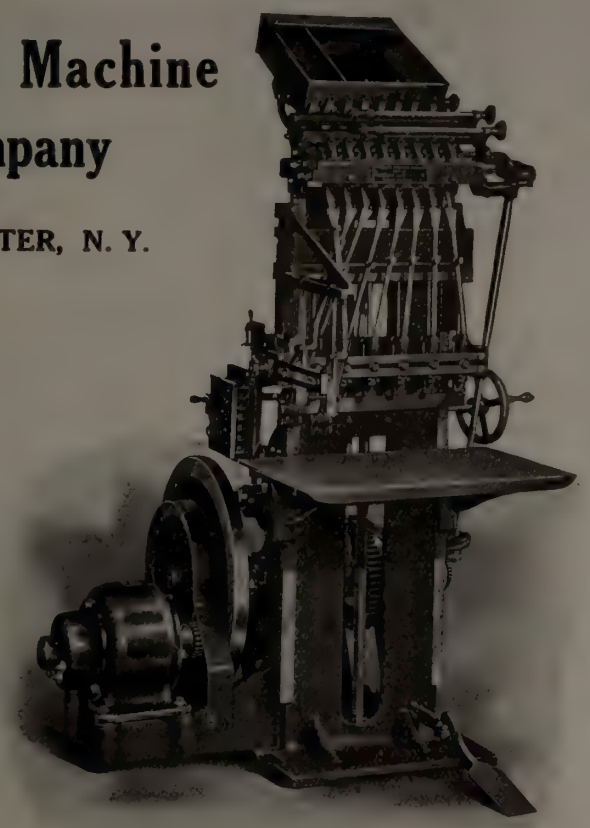
W. W. Cory,

Department of the Interior, Ottawa,
December 20th, 1912.

Deputy Minister.

Morgan Machine Company

ROCHESTER, N. Y.



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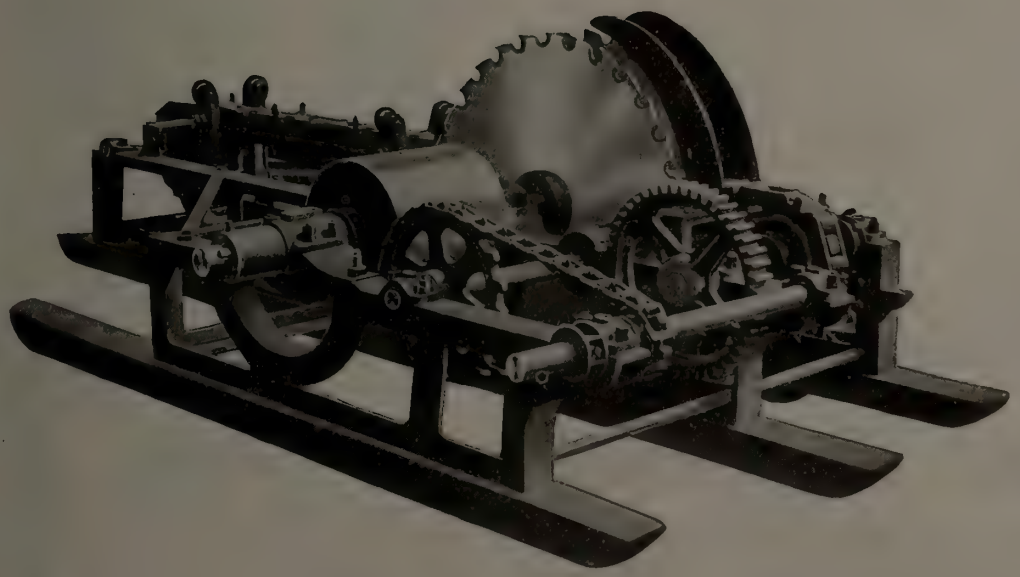

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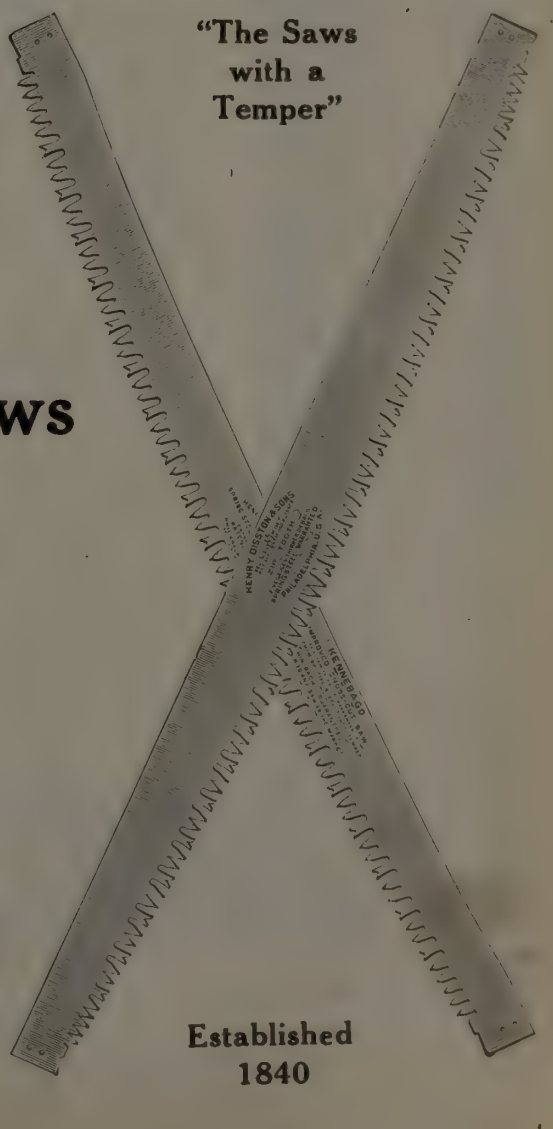

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5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common.	25 00	26 00
1 x 12 inch box and common..		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and c. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ...		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8-in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7 ,9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft. ...		16 00
2 x 4 to 12, 10 and 16 ft.		19 00
2 x 4 to 12-in., 12 and 14 ft. ...		19 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		33 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16, 16x18, 18x18, 20x20, up to 32 ft.		34 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.		34 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x20 up to 32 ft.		35 00
10x20, up to 32 ft.		35 50
6x18, 8 x 18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00

Timber in lengths over 32 feet take the following additions: 33 to 35 ft., 50c; 36 to 40 ft., $1; 41 to 45 ft., $3; 46 to 50 ft., $5; 51 to 55 ft., $7; 56 to 60 ft., $9; 61 to 65 ft., $12.50; 66 to 70 ft., $15; 71 to 75 ft., $18; 76 to 80 ft., $22.

Fir flooring, edge grain		35 00
No. 1 and 2 1-in. Fir rough ...		38 00
No. 1 and 2 clear 1¼, 1½ and 2-in. Fir rough		40 00
1½-in. No. 1 4-ft. pine lath..		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 25
XXX 6 butts to 2-in.		2 95
XXXX 6 to 23-16-in.		3 15
XXXXX		3 35

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1sts and 2nds, 4/4	39 00
Birch, No. 1 com. and bet., 4/4	30 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00
Birch, 1sts and 2nds, 10/4 and 12/4..	45 00
Birch, 1sts and 2nds, 16/4	50 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4..	30 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet...	28 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	28 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1sts and 2nds, 4/4	37 00
Hard maple, common and better, 4/4 .	28 00
Hard maple, 12/4 & 16/4, 1sts and 2nds.	46 00
Red oak, plain 1sts and 2nds, 4/4..	59 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	65 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain, 1sts and 2nds, 4/4.	59 00
White oak, plain, 1sts and 2nds, 1½ and 2-in.	65 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	75 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	85 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	88 00
White oak, ¼ cut No. 1 common	55 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up .....$	52 00	54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No.. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ..	29 00	30 00
Pine, No. 1 dressing shorts ..	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ..	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips ..	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips ..	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips ..	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	25 00	26 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in..	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	17 50	18 00
1"x3" to 6", 12'-16'	19 00	20 00
Pine mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine mill culls stock 1 x 12 ...	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	15 00	17 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1¼-in.	19 00	21 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
Mill culls, white pine, 1"x7" and up	20 00	21 00
Mill run Spruce:		
1"x4" and up, 6'-11'	17 00	18 00
1"x4" and up, 12'-16'	18 00	20 00
1"x9"-10" and up, 12'-16' ..	22 00	24 00
1¼"x7" 8-9" and up, 12'-16'	22 00	24 00
1¼"x10" and up, 12'-16'	22 00	24 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1¼-in. x 4-ft.	4 25	4 50
No. 2 White Pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles		
xxxx, 18-in.	3 00	3 00
Clear butt 18-in.	2 50	3 25
xx		1 75
White Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	80
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	70	75
According to average and quality, 30 to 35 feet	50	60

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	28
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up. $22 00		23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00

Birch Planks

1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in. ....$	54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00

Cuts and Better

4/4 x 8 and up No. 1 and better	55 00
6/4 x 8 and up No. 1 and better	65 00
8/4 x 8 and up No. 1 and better	65 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00

No. 1 Cuts

1 in., 8 in. and up wide	42 00
1¼ in., 8-in. and up wide	55 00
1½ in., 8-in. and up wide	57 00
2 in., 8-in. and up wide	60 00
2½ and 3 and 8-in. and up wide	75 00
4 in., 8-in. and up wide	85 00

No. 2 Cuts

1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	47 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in.	25 00
1 in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00

No. 1 Barn

1 inch	31 00	45 00
1¼, 1½ and 2-in.	36 00	45 00
2½ and 3-in.		45 00
4 inch		50 00

No. 2 Barn

1 inch	28 00	36 00
1¼, 1½ and 2-in.	30 00	36 00
2½ and 3-in.		38 00

No. 3 Barn

1 inch	21 00	28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00	25 00

Box

No. 1, 1, 1¼, 1½, 2-in.	22 00	25 00
No. 2, 1¼, 1½, 2-in.	19 00	23 00

Mill Culls

Mill run culls, 1-in.		19 00
1, 1¼, 1½ and 2-in.		20 00
No. 2	17 00	18 00

Lath

No. 1, 32-in. pine	1 75
No. 2, 48-in. pine	4 25
No. 1, 48-in. pine	4 75
No. 3, 48-in. pine	3 75

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	6 ft.	8 ft.	10 ft.	14x16 ft.
2 r 4, 6, 8	14 00	17 00	20 50	18 50
2 x 10	18 00	18 50	21 50	19 00
2 x 12	18 00	19 00	23 50	20 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	18 50
2 x 4-10-18-20	20 50
2 x 6, 8 to 16	18 50
2 x 8, 8 to 16	18 50
2x4-6 and 8-in.; 24,26,28, 30, 32 ft...	26 50
2 x 10 and 2 x 12; 8-16 ft.	24 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	25 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	27 50

No. 1 Common Boards

4 inch	19 00
6 inch	21 50
8, 10, 12 inch	23 50
Mixed widths	22 50

Flooring

4 or 6 inch No. 1	33 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00

Shiplap—Finished

6 inch	20 00
8, 10 and 12 inch	21 00

Siding

6 inch No. 1	33 00
6 inch No. 2	31 00
6 inch No. 3	21 50

Lath

No. 1 Cedar, pine, spruce (not mixed)	4 00
No. 1 Cedar, pine, spruce (mixed) ...	3 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	25 10
3 x 8 in.; 8 to 16 ft.	22 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	25 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	27 00

BRITISH COLUMBIA COAST FIR

Dimension S 1 S, and E.

2 x 4 in.; 6 and 8 ft.	17 50
2 x 4 in.; 12 x 14 ft.	18 50
2 x 4 in.; 10 x 16 ft.	19 50
2 x 4 in.; 18 x 20 ft.	20 50
2 x 4 in.; 22 x 24 ft.	21 50
2 x 4 in.; 26 x 32 ft.	23 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	20 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	22 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	23 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	25 00
2 x 14 in.; 10 to 16 ft.	25 00
2 x 14 in.; 18 and 20 ft.	27 00
2 x 14 in.; 22 and 24 ft.	28 00
2 x 14 in.; 26 to 32 ft.	30 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	21 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	22 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	23 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	24 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	26 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft. ...	24 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ...	24 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ...	25 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ...	25 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	32 00
Nos. 1 and 2, 1 x 4 in., E. G.	31 00
Nos. 1 and 2, 1 x 6 in., E. G.	29 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	23 00
No. 3, 1 x 4 in. or 6 in.	20 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	19 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ...	20 00
No. 2 Shiplap, 6 in.	19 00
No. 2 Shiplap, 8, 10 and 12 in.	20 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	19 00
Common Boards, 8 to 12 in.	20 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 75

LATH

Fir lath, 3/8 x 1 3/8 in. x 4 ft., bundled in 50's	4 00
Cedar lath 3/8 x 1 3/8 in. x 4 ft.	4 50

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4 ....$	94 00
Uppers 5/4 to 8/4	92 00
Uppers 10/4 to 12/4	97 00
Selects 4/4	84 00
Selects 5/4 to 8/4	82 00
Selects 10/4 to 12/4	92 00
Fine common 4/4	61 00
Fine Common 5/4	65 00
Fine common 6/4	65 00
Fine common 8/4	67 00
No. 1 Cuts 4/4	51 00
No. 1 Cuts 5/4	57 00
No. 1 Cuts 6/4	59 00
No. 1 Cuts 8/4	61 00
No. 2 Cuts 4/4	32 00
No. 2 Cuts 5/4	43 00
No. 2 Cuts 6/4	45 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	33 00
No. 3 Cuts 6/4	34 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	46 00
Dressing 5/4 x 10	51 00
Dressing 5/4 x 12	52 00
No. 1 Moulding 5/4	58 00
No. 1 Moulding 6/4	58 00

Continued on page 58)

Reduce your haulage cost with *National Motor Trucks*

The Motor Truck is an accepted method of transportation. Its use has been demonstrated in hundreds of businesses, and for hauling almost every commodity. Motor Trucks are essential to commercial activity—it only remains to select the right Truck to get maximum service at minimum cost.

NATIONAL MOTOR TRUCKS have established their worth through daily service under the most severe treatment—heavy loads, bad roads and adverse weather conditions.

One of the four NATIONAL Models—1,500 pounds, 2,000 pounds, 4,000 pounds and 7,000 pounds capacities, will fill the requirements of any transportation problem. NATIONAL Engineers will be glad to assist you in determining which Truck will best suit your needs.

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Montreal

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Petrograd, Russia

MADE IN CANADA

CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	58 00
No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	32 - 33	21 - 23	13 - 15
5/4 to 8/4	34 - 36	23 - 25	13 - 14
10/4 to 16/4	39 - 41	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	35 - 37	22 - 24	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	34 - 36	23 - 25	14 - 16
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	32 - 34	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

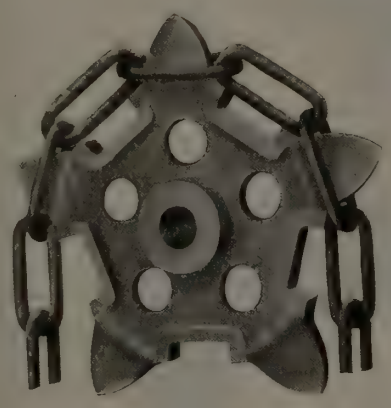
4/4	44 - 46	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	60 - 62	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in.	92 00	98 00
Selects, 1 to 2 inch	80 00	88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	70 00	72 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	36 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 00	34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	28 00	29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		23 50
Spruce, 8 in. and under dimen.		26 00
10 and 12 in. random lengths, 10 ft. and up	25 00	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	23 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	23 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	20 00	21 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	21 00	22 00
1⅝-in. spruce laths	4 15	4 25
1½-in. spruce laths	3 55	3 75

New Brunswick Cedar Shingles

Extras	3 30	3 40
Clears	2 75	2 90
Second clears	2 40	2 60
Clear whites	2 25	2 30
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.	3 45	3 50
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfection, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear		3 30

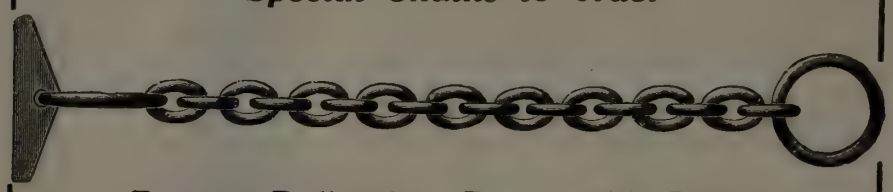


CHAINS

for the Lumbering Trade

Conveyor, Boom, Steel Loading Chains, etc.

Special Chains to order



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A Successful Dry Kiln

Here's what a manufacturer of pianos and organs says of a

Sturtevant Kiln:

Trade Mark

"We have two dry-kilns which are operated in this manner, one along side of the other; one in which we place the green lumber that is shipped us, what is usually called shipping dry. This stock is all steamed before the suction fan is placed on it. The other kiln we use for lumber that has been on stick on our yard for from one to two years, and on this we do not apply any steam, simply running it through in about ten days for immediate use. The green lumber, however, in the other kiln is steamed several days and is put through drying apparatus for about three weeks before it is taken out. We have never had any case hardening using this method, neither have we had any warping, in fact, we are perfectly satisfied with the results."

We can quote you dozens of cases where our Kilns are giving excellent service.

Talk it over with one of our drying engineers or get catalog 220-C.

B. F. Sturtevant Co. of Canada, Limited

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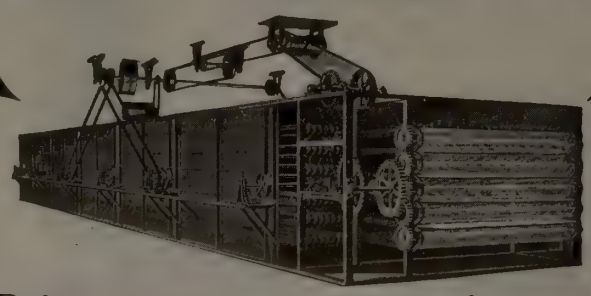

Dries enormous amount of veneer perfectly flat and pliable at minimum cost, without checks or splits

Send for catalog and list of users

The Philadelphia Textile Machinery Co., Philadelphia

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To make a success of advertising one must be prepared to stick to it, like a barnacle on a boat's bottom.

Canada Lumberman
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Superior in Design, Workmanship, Quality
High Carbon Steel Pins.
Patterns Full Weight—Full Strength

We are prepared to make prompt shipments of standard sizes from our own factory and warehouse in Toronto. Let us figure on your requirements.

This Trademark >——< *on every link.*

Write for Catalog No. 110D.

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Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

Style No. 777

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The Garlock Packing Co.
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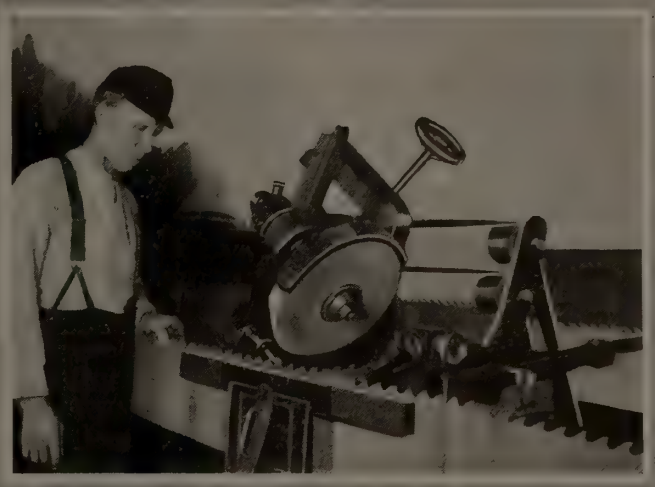
THE ROAD TO PERFECT SAW GUMMING



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Aloxite Wheels hold their shape, cut clean, cool and produce uniformly shaped teeth with the right gullets

Aloxite Wheels will not burn

Be sure to specify Aloxite Wheels for your saw gummers

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(Continued on page 64)

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The Machine you have been waiting for.

The Machine that will convert your small logs into more and better lumber, quicker than ever before.

The illustration shows the latest design of gang circular patented by Mr. I. N. Kendall, the well-known millwright, of Ottawa. This machine takes 16-26 in. diam., 10 gauge saws—will cut cants up to 8 inches in thickness, and we furnish with it 30 saw collars for any thickness of lumber desired. It has a hollow mandrel, water cooled saws; each saw has a separate guide; easily accessible and readily adjustable, and the bridge tree is so designed that it can be removed, the saws taken off and a new set put on in 10 or 12 minutes. Safety fingers hung just inside the front press roll prevent a cant flying back off the saws. Lumber cut on these machines is guaranteed to come out absolutely true from end to end.

We are the original manufacturers of these Machines

We have been manufacturing them for the past ten years, and the experience gained in those years is at your disposal. We make these machines in three sizes, as follows, using

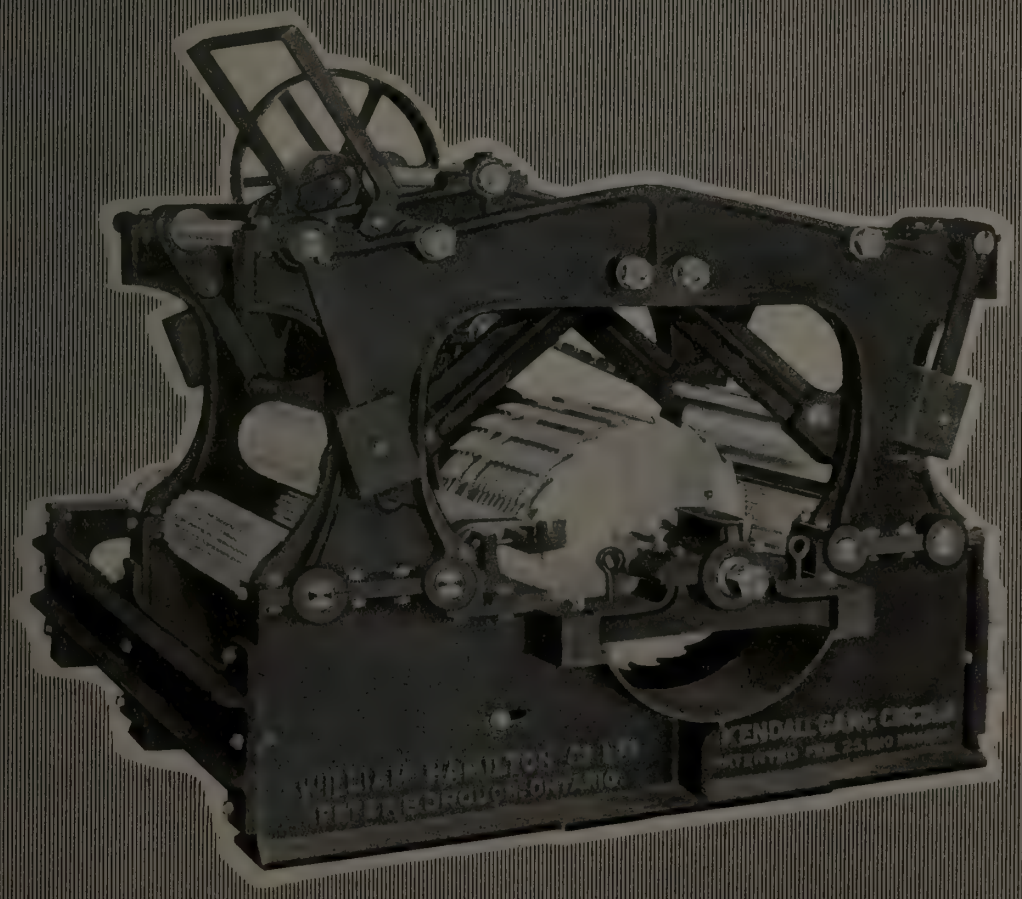
26-in. saws for 8-in. cants, as illustrated.
32-in. saws for 10-in. cants
36-in. saws for 12-in. cants.

May we send you a list of satisfied users?

We also make a complete line of twin circulars with chain or steam feed for slabbing logs for these machines.

William Hamilton Co., Limited

PETERBORO, ONTARIO



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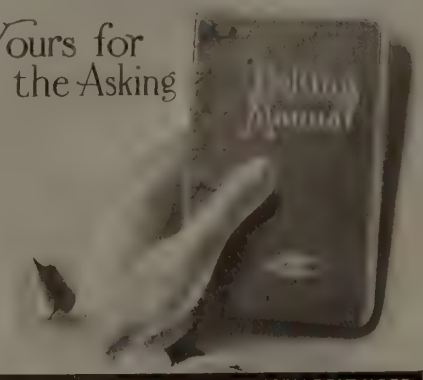

SHOULD BE IN THE HAND OF EVERY BELT USER

The "Belting Manual" gives in a nut-shell all the information you need about Belt Transmission.
It gets right down to rock bottom principles—every one of its 96 pages is a veritable nugget of invaluable information, suggestions and mechanical rules, tables etc.
In fact the "Belting Manual" is the most complete and authentic book of its kind—a book you cannot afford to be without. You will want to use it every day. Just one little hint may save you hundreds of dollars. Worth while?

Send for a copy and keep it handy for immediate reference.

The Graton & Knight Mfg. Company

Oak Leather Tanners and Belt Makers
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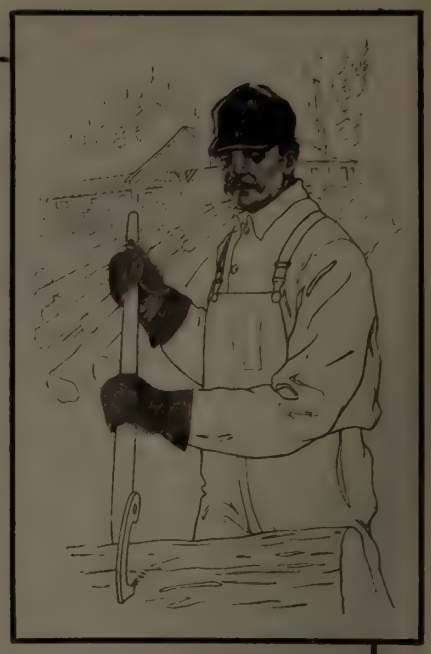
who know "ASBESTOL" insist on the diamond-shaped trademark here shown. It stands for the proven performance in work gloves.



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There is no need to go outside of the Canadian market in order to obtain the best logging locomotives. We have been specializing in this line for fifty years. You will find the design of our locomotives complete and the sturdy construction equal to every test of the severe service of logging operations.

Repair parts can always be had on the shortest notice.

This engine is 13½ ins. x 18 ins. and weighs 35 tons.

Grey Iron Castings—any size or shape—ordinary or intricate—made promptly. New foundry, splendidly equipped We would be pleased to quote on castings—singly or by contract. We also make drop forgings of all descriptions.

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For SAWMILLS, PLANING MILLS and LUMBER YARDS

Write for catalogue and prices.

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The designs of our Logging locomotives are the result of wide experience, extending over a period of 80 years.

The material used in their construction is thoroughly tested and is the best of its kind.

All details are accurately finished to standard gauges and are absolutely interchangeable on all locomotives of the same class and size.

This cuts out long delays at critical times of the work, as parts liable to wear can be kept on hand or shipped promptly from our works.

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CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

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a classified advertisement in the **Canada Lumberman and Woodworker** will find one for you.

If You are a Capable Man

no matter how small or how big your present position may be, an advertisement in **this paper** will put you in touch with every existing possibility.
The rates are most reasonable, write us.

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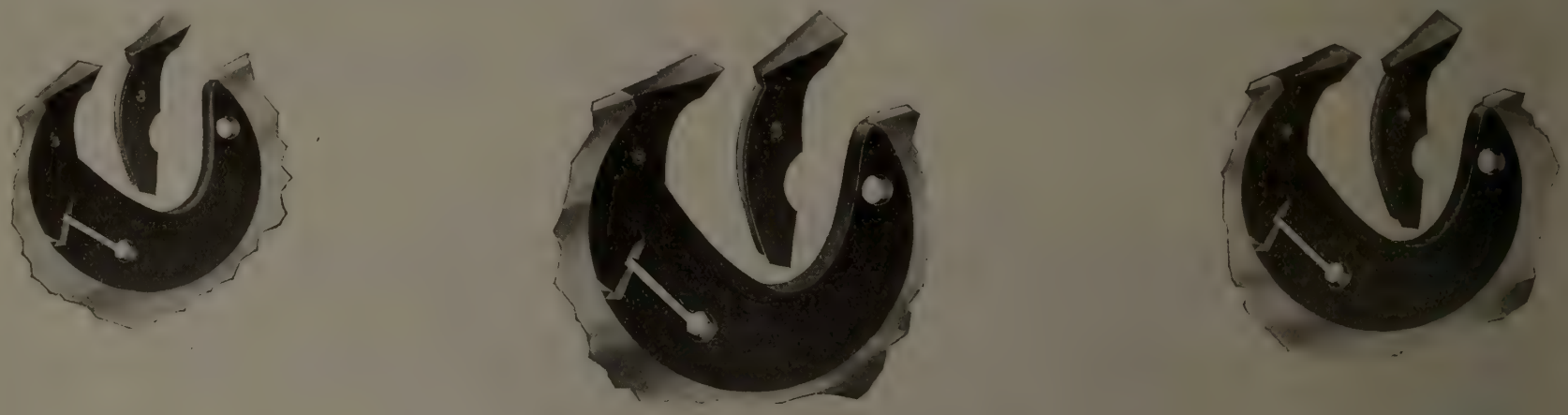

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INSERTED TOOTH SAWS, BITS and HOLDERS are reducing the expenses and increasing the output in thousands of Canadian Mills. The excellence of STERLING STEEL and our improved methods of manufacture make this possible.

Write for our free book "C. L." It gives details about our entire line of Saws for all purposes. Let your next order for Saws specify ATKINS. We'll make good.

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Makers of Sterling Saws

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A Salesman

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$2.00 a year

provided he was bright, energetic, up-to-date and a business-getter above the ordinary, would be a decided acquisition to your sales staff, would he not? And cheap too? And you would be mighty glad to enlist his services?

Well, listen!

While we cannot procure you a salesman of this type at such small remuneration, we can provide you with a sales-getter which answers fully to the above description.

The Contract Record
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The Machines That Make Plymouth

Necessity is indeed the mother of invention. Plymouth standards, for example, have demanded and inspired better cordage machinery.

Our spinning requirement is a yarn of uniform size and strength. No machine on the market would give this result so we designed and perfected one which would.

Today it takes nine large spinning rooms to house our equipment on this machine alone—the only type of spinner we use.

Similar high standards govern every other department in our mills. And in every one the particular problem in hand has been solved with equal success.

The means to this end has been a permanent engineering staff of our own, which designs, perfects and assembles all the special devices and special machines that these standards call for.

The result is an all-round equipment, which for size, completeness and capacity to turn out cordage of superior quality cannot be matched.

PLYMOUTH CORDAGE COMPANY
NORTH PLYMOUTH, MASS. WELLAND, ONT.

INDEPENDENT CORDAGE COMPANY
TORONTO, ONTARIO, CANADIAN SALES AGENTS

PLYMOUTH 1824

Steel Saw Carriage

The illustration shows our 3-block standard steel saw-mill carriage, the knees of which recede 44" from saw line. This carriage can be furnished in any number of head blocks or axles, also equipped with steam set works attached to either our No. 3 or No. 4 set.

The carriage is carefully designed throughout and is giving excellent service in mills all over Canada.

When you overhaul your mill

don't waste money on extensive repairs to machines whose days are done. You will save money both in your operating costs and in the improved quality of your lumber if you install new "Long saw mill machinery.

Let us talk to you before you start to overhaul

The E. Long Manufacturing

Company, Limited

Orillia - Ontario

Throw Out Those Old Valves!!

Don't tolerate kicking or leaking valves on your Steam Feed. Just as sure as your valves kick, your cutting capacity is going to take a drop. The Sawyer "feels" his work through his lever. A kicking valve scares him off his work; a leaking valve won't let him do his best. Both kinds are money losers for you.

WATEROUS VERTICAL STEAM FEED VALVES

Will neither kick nor leak.

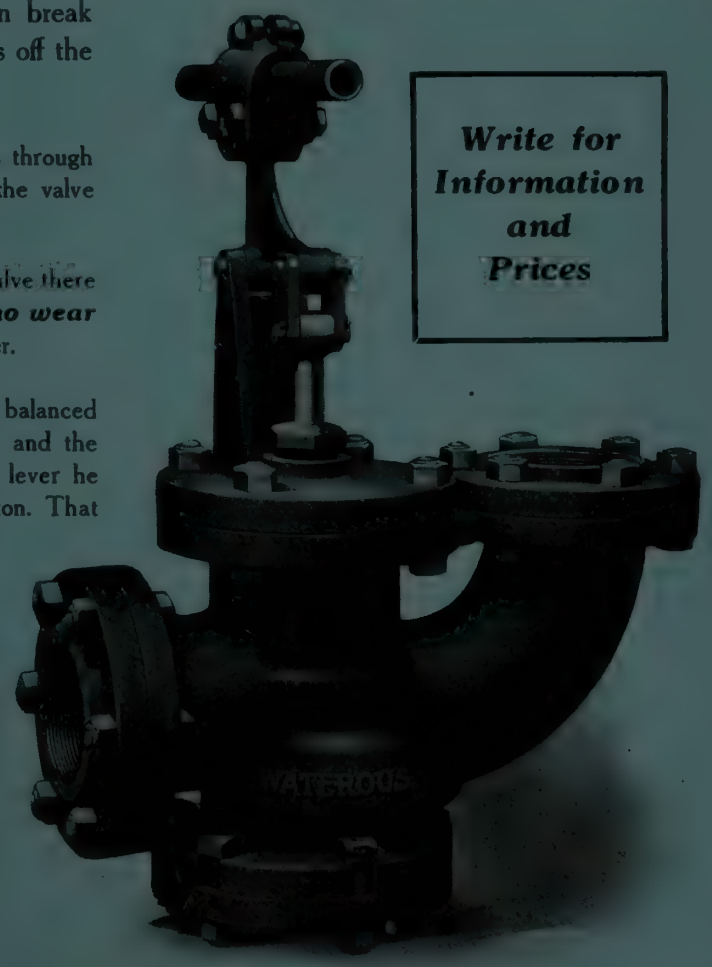
In the first place, the vertical position of this new valve allows perfect drainage into the exhaust port at the bottom. Should the connection break the valve drops of its own weight and shuts off the steam. That's a ***safety*** feature.

Then, the exhaust—mostly water—doesn't pass through the valve plug, but through the lower part of the valve chest. That's why the valve ***cannot kick.***

And—most important of all—with the vertical valve there is no weight on the valve seat and consequently ***no wear*** and ***no leakage.*** It's a ***real*** steam conserver.

Further, the **Waterous Vertical Valve** is balanced to work easy, there is no dead steam between it and the cylinder. Just as soon as the sawyer moves his lever he gets the full "punch" of the live steam on his piston. That makes a ***fast, quick-acting, satisfactory feed.***

If yours isn't that kind now, attach **Waterous Vertica Valves** and see what a difference they will make.



Write for Information and Prices

The Waterous Engine Works Co., Limited

BRANTFORD, CANADA

Agency—H. B. Gilmour, Vancouver, B.C. ***Branch***—Winnipeg, Man.

"FROST KING" METAL

$5,000,000.00
worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. **Price 30c per lb.**, Fort William and East; West of Fort William **35c per lb.**, delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

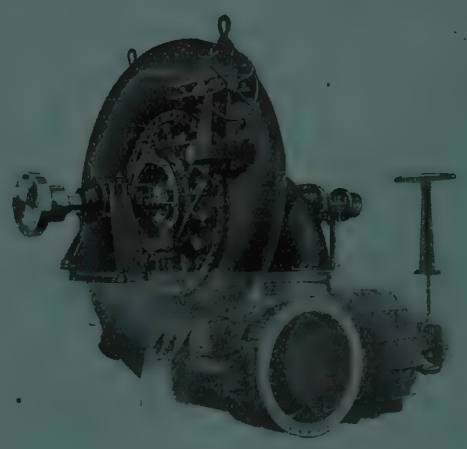
Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Smith Hydraulic Turbines

for driving the

Paper Mill and Pulp Grinder



This type of equipment specially designed for high head developements.

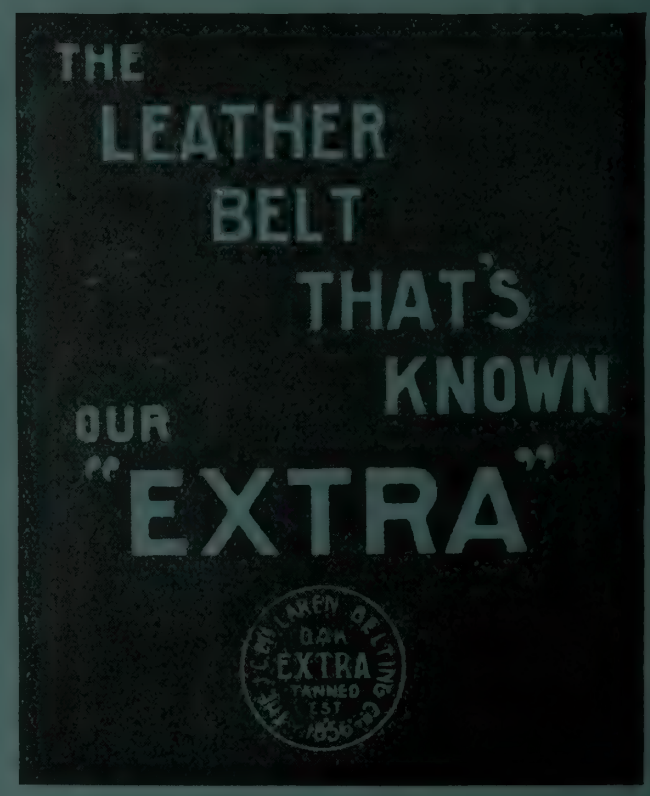
Our particular claim for these turbines is service, the kind of service that responds to the demand

Promptly and Efficiently

Write for Bulletin F

S. Morgan Smith Co., York, Pa.

H. B. VanEvery—CANADIAN REPRESENTATIVE
405 Power Bldg. - - - - Montreal, P. Q.

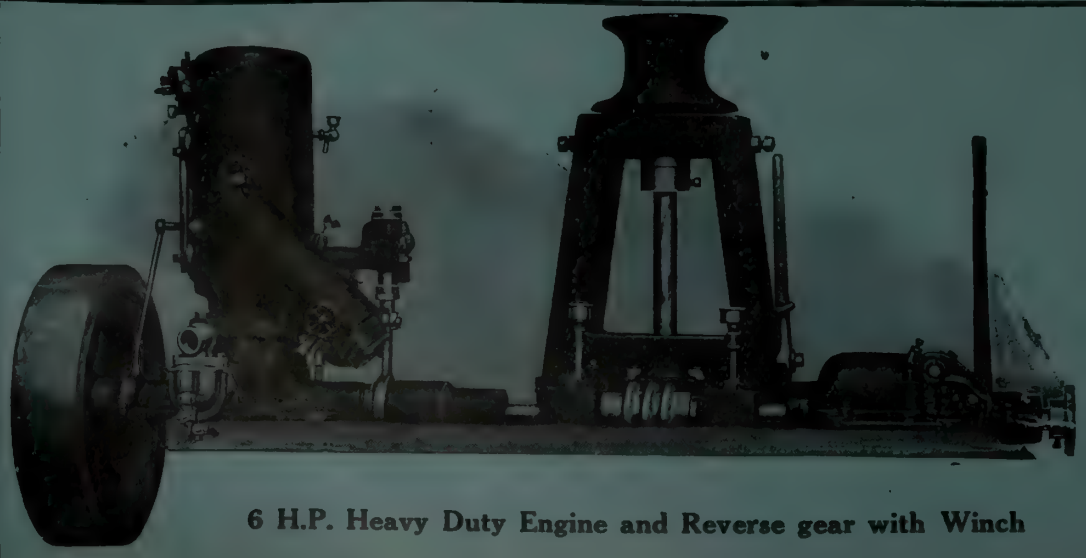


Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.

Limited

General Mill Supplies MONTREAL



6 H.P. Heavy Duty Engine and Reverse gear with Winch

River Driving Costs

will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

Adams Launch & Engine Co.

Penetang, Ont.

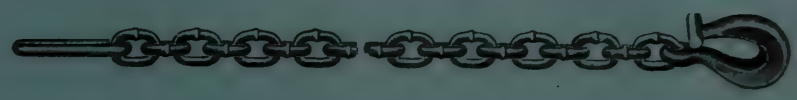
Vol. 36 Toronto, March 1, 1916 No. 5

Canada Lumberman & Wood Worker

WATER WHEELS GOVERNORS, PUMPS

Highest quality

Boving Hydraulic & Engineering Co.
LINDSAY, ONT. Limited



Made in all styles

Electric-Welded Boom Chain

We also specialize
Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

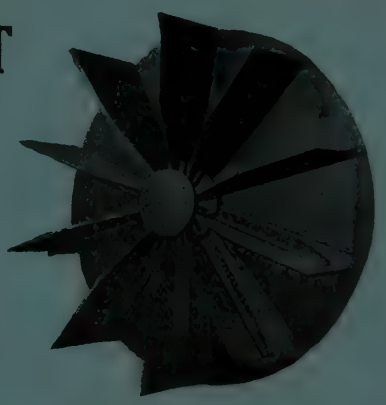
YOU CAN SAVE 15 to 50% POWER COST

in your exhaust systems for conveying and removing Shavings, Sawdust, Bark, etc., by using

Canadian Slow Speed Mill Exhausters

Facts are facts. Ask the users—and there are hundreds of them—what they think of the investment. Then you will use a "Canadian" on your next job.

Canadian Blower and Forge Co., Limited
BERLIN, ONTARIO
St John Montreal Toronto Winnipeg Vancouver



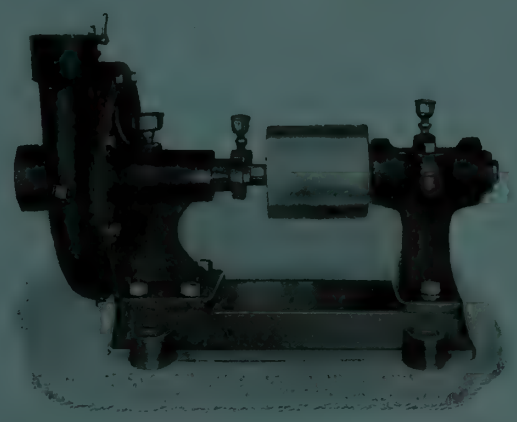
Blast Wheel for stringy material.

"TOWER" HAIR BELTING

Woven from Camel's Hair Yarn

Manufactured and guaranteed by

Turner Brothers Canada, Limited
MONTREAL



When next in the market for

PUMPS

let us figure on your needs.

The Smart-Turner Machine Co., Ltd.
Hamilton, Canada

J. M. T. VALVES

Globe Angle Check Safety

All parts proportionately accurate. Materials and workmanship of the highest grade. Guaranteed to give excellent service under conditions for which they are recommended.

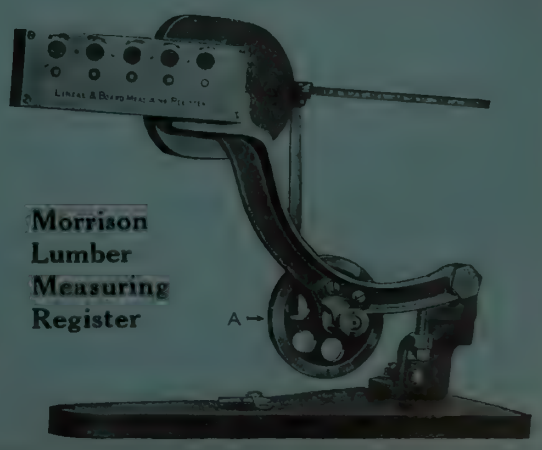
Price Lists on Request

Measure Every Order

The Morrison Lumber Register, as illustrated, is bolted to your planer, molder, etc. It records each stick as it is fed under the wheel of the register. It is absolutely accurate and dependable.

Write for explanatory literature.

The James Morrison Brass Mfg. Co., Ltd.
93-97 Adelaide St., West, TORONTO



Morrison Lumber Measuring Register

Alphabetical Index of Advertisers, Page 62 Classified Directory to Advertisements, Page 68

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AMPHIBIA BELTING

COSTS LESS PER DAY

Put Good Belting

on your

Good Machines

Your machines are expensive, and naturally you expect them to turn out the quality and quantity of work commensurate with their cost.

Then why harness them with belting which cannot begin to do them justice?

Use

"AMPHIBIA"

Planer Belting

and get the most work from your machines, in the quickest time, at the lowest cost per day of service.

Try a sample run of "AMPHIBIA" Planer and prove its merits.

"Leather like gold has no substitute."

Sadler & Haworth

Established 1876

Tanners and Manufacturers

For 40 Years Tanners and Manufacturers of the Best Leather Belts

MONTREAL, 511 William Street

TORONTO	ST. JOHN	WINNIPEG	VANCOUVER
38 Wellington St. E.	149 Prince William St.	Galt Building	107-111 Water St.

The FLEXIBLE WATERPROOF BELT

Geo. Gordon & Co., Limited

Cache Bay, Ontario

RED and WHITE PINE

Cross Arms, Shaped, Bored and Painted

3¼ x 4¼ x 3′ 6″	2000 pcs.
3¼ x 4¼ x 4′	1600 "
3¼ x 4¼ x 6′	2300 "

Cross Arm Material D 4 S

3¼ x 4¼ x 4′	12000 pcs.
3¼ x 4¼ x 6′	9000 "

All Selected Norway.

Dressing done on short notice. ***Send us your inquiries.***

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

QUALITY LUMBER

We have now resumed shipping from British Columbia after having been practically tied up for two months on account of severe weather conditions.

LET US QUOTE YOU UPON:

"T & G Quality Brand" Red Cedar Shingles
" " " Douglas Fir and Cedar
" " " Dressed Lumber and Bill Stuff
" " " Silo Stock and Mouldings

Ontario White Pine, Norway and Jack Pine, Spruce and Hemlock Lumber and Bill Stuff, Lath, Shingles, Posts, Ties.

WE WILL MAKE IT WORTH YOUR WHILE TO TRADE WITH US.

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852 Cambie Street
Vancouver

Terry & Gordon

Wholesale Lumber Merchants

Head Office
704 Confederation Life Bldg.
Toronto

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

HEMLOCK

CACHE BAY

48,000 ft. 2 x 6 No. 1 Hemlock, 10-12-18 ft.
40,000 ft. 1 x 4 and up No. 1 Hemlock, 10 to 16 ft.
300,000 ft. 2 x 4 and up No. 2 Hemlock, 42% 4", 20% 6", 16% 8", 16% 10", 6% 12"
37,000 ft. 1 x 4 and up No. 2 Hemlock, 60% 4", 21% 6", 17% 8", 2% 10"
60,000 2 x 8 14 ft. No. 1 Hemlock

LONGFORD

350,000 ft. 1 x 4 and up No. 2 Hemlock
350,000 ft. 2 x 4 No. 2 Hemlock
400,000 ft. 2 x 6 and up No. 2 Hemlock

The Long Lumber Company

HAMILTON, ONT.

You Won't Be Scared At Our Prices

Hocken's Hemlock

Same Good Quality, Prompt Shipment and Normal Price.

Hocken Lumber Company, Limited

Otter Lake Station, Ont.

NEW ZEBRA, WOOD, WESTERN UNION, and PRIVATE CODES USED.

Telephones:
1391 Long Distance.
400 Private Branch Exchange.

Cables:
"HILLAS," HULL

W. N. HILLAS & COMPANY

WOOD BROKERS

FOR EVERY CLASS OF TIMBER

***Head Office:* HULL, England**

To the Lumber Companies of Canada:

You have the Goods. Place your Lists with full particulars in our hands. We are in daily touch with all the Buyers in the United Kingdom.

PLEASE NOTE.—We pay cash against all documents, and take the whole of the Delcredere risk on Buyers.

Pine and Veneered Doors

Our pine and veneered doors for domestic and export trade are made on the principle of "Not how cheap, but how good."
Our guarantee of faultless workmanship and choice materials goes with every door.

SEND US YOUR ENQUIRIES

Benson & Bray, Ltd., Midland, Can.

Bartram Brothers

Cable Address, "Bartram"
Code, ABC 5th edition.

Ottawa, Canada

Limited

Stock on hand unsold. February 15, 1916

NORWAY MILL RUN

1 x 4/5 x 10-16	1,437,944
1 x 6 x 10-16	365,909
1 x 7/9 x 10-16	155,520
1 x 8 x 10-16	36,900
1¼ x 4 x 10-16	30,292
1¼ x 5 x 10-16	11,798
1¼ x 7 x 10-16	30,521
2 x 4 and up x 10-16	14,800
3 x 4 and up x 10-16	122,382
4 x 5 x 10-16	6,179

NORWAY CULLS

1¼ x 4/7 x 6-16	40,392
3 x 4 and up x 6-16	121,032

WHITE PINE GOOD

1 x 4 and up x 6-9	1,512
1 x 4 and up x 10-16	5,825

WHITE PINE MILL RUN

1 x 5 x 10-16	73,034
1 x 7/9/11/13 x 10-16	92,686
1 x 10 x 10-16	2,098
1 x 12 x 10-16	9,442
1¼ x 4 x 10-16	4,651
1¼ x 5 x 10-16	2,165
1¼ x 6 x 10-16	3,371
1¼ x 7 x 10-16	7,771
1½ x 4 and up x 10-14	150,000
2 x 4 and up x 10-16	4,311
3 x 4 and up x 10-16	118,850
4 x 5 x 10-16	1,562

WHITE PINE CULLS

1 x 4 and up x 6-16 No. 2	107,913
1¼ x 4/7 x 6-16 No. 1	5,987
2 x 4 and up x 6-16 No. 1	5,680
3 x 4 and up x 6-16 No. 1	49,153

MILL RUN LATH

1½ x 3/8 x 32 in. Norway	645M
1½ x 3/8 x 32 in. W. Pine	187M

MILL RUN SPRUCE

1 x 4 x 8/16	199,197
1 x 5 x 8/16	354,226
1 x 6 x 8/16	387,930
1¼ x 4 x 10/16	8,700
1¼ x 5 x 10/16	21,400
2 x 3 x 8/16	15,900
2 x 4 x 8/16	32,400
2 x 4 x 12	16,000
2 x 4 x 16	5,200
2 x 5 x 8/16	294,000
2 x 6 x 8/16	264,400
2 x 6 x 12	17,000
2 x 7 x 8/16	88,500
2 x 7 x 12	3,600
2 x 8 x 12	3,600
2 x 10 x 12	4,500
2 x 10 x 9-16	45,000
2 x 11 x 8/16	5,600
2 x 6 and up x 8/16	25,200
2 x 7 and up x 8/16	9,900
2 x 7 and 9 x 8/16	15,000
2 x 7 and 9 x 16	42,000
2 x 10 and up x 8/16	4,400
3 x 5 x 8-16	155,000
3 x 6 x 8-16	163,000
3 x 7 x 8-16	134-000
4 x 6 x 10-16	10,000

SPRUCE CULLS

1 in.	155,000
1¼ in.	14,500
2 in.	66,000
3 in.	400,000

We have large stocks of 3" spruce deals, scantlings, planks and boards for export.

"Most of the lines listed are dry"

EXPORTERS OF DEALS TO U. K. AND EUROPE

Watson & Todd Limited

WHOLESALERS

WHITE PINE NORWAY PINE
SPRUCE
All Sizes

OTTAWA
Also
Montreal and Liverpool, Eng.

The
Harris Tie & Timber Co.
Ottawa - Canada
Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

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Fredericton, N. B.

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Cabano, P. Q.
Fraser Lumber Co., Limited
Plaster Rock, N. B.
F & M Lumber Co., Limited
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MANUFACTURERS OF
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Rough and Finished
Shingles, Lath, Piano
Sounding Board Stock, etc.

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Wholesale Lumber Dealers
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Mills at
DESCHENES - - - QUEBEC
White Pine
Red Pine
Spruce
Lumber and Lath

River Ouelle Pulp & Lumber Co.
Manufacturers of
SPRUCE
Lumber Lath Pulpwood
Head Office and Mills at:
St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of
Quebec City
Also Mills at:
Crown Lake, Powerville, Riv. Manie
On Nat. Transcontinental Ry.

White Cedar Shingles

We offer for Immediate and Spring Shipment ***dry stock 1915 cut*** in all grades.

Our production is the largest in Canada.

Our Shingles are uniform in quality, being well manufactured and graded.

White Cedar Shingles are Good Shingles

Prices and Terms alike to all buyers

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JOHN McKERGOW, President — W. K. GRAFFTEY, Managing-Director

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Ottawa Office: 46 Elgin St. — Montreal Office: 759 Notre Dame St., W

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Grant & Campbell

Manufacturers of

SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

New Glasgow, N. S.

FOR SALE
HARDWOOD LUMBER

Dimension Stock, Mattress Frames, Hard and Soft wood slabs cut to lengths required. Hemlock, Cedar, Posts.
Orders receive prompt attention.
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Being next door to the Patent Office, we have personal interviews with Examiners, thus earlier allowance of your Patents. We have access to all Records and solicit the business of Manufacturers, Engineers, and others who realize the advisability of having their Patent business transacted by Experts. Send for our Booklet, etc.

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Tie your lath with Laidlaw wire. It saves you money. It means satisfaction to the dealer and contractor.
Write for Quotations.

LAIDLAW BALE-TIE CO., Ltd.
HAMILTON, ONT.

CANADIAN OFFICE & SCHOOL FURNITURE CO. LIMITED
PRESTON ONT.
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OFFICE, SCHOOL, CHURCH & LODGE FURNITURE
SEND FOR CATALOGUE

It Just Depends

Advertising and Dynamite are both useful, but the results of each depend upon how it is handled.

Canada Lumberman and Woodworker

Toronto, Montreal, Winnipeg, Vancouver, London, England.

Lumber

Good Grades — Right Prices — Prompt Shipments

Canadian Hardwood. National Grading Rules

Birch
Basswood
Maple
Elm
Beech
All Thicknesses

Also full line in

White, Red

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Jack Pine

All grades and sizes.

Get in touch with us for prices

C. G. Anderson Lumber Company, Limited

Manufacturers and Strictly Wholesale Dealers in Lumber

705 Excelsior Life Building
Toronto

We Buy, Sell and deal in all kinds of Lumber and Timber in Canada and United States: Spruce, White Pine, White and Basswood, Ash, Cedar, Douglas Fir, Beech, Birch, Walnut, Cherry, Chestnut, Cottonwood, Hemlock, Maple, Norway Pine, Short and Long Leaf Yellow Pine, Oak, Redwood, Birch, Maple and Oak Floorings, Pulpwood Ties, and Cedar Poles.

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QUEBEC

The Canada Wood Specialty Co., Limited

Manufacturers:

Lumber, Hardwood Flooring, Handles, Poles, Bed Frame Stock, Cheese Box Hoops, Heading, Baskets, Etc.

Write, Telegraph or Telephone your orders

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R. LAIDLAW LUMBER CO.
LIMITED

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Sarnia
Buffalo

SPRUCE BIRCH HEMLOCK

Merchantable	100,000'	1" Spruce
"	100,000'	2 x 4 Spruce
"	300,000'	2 x 5 and up to 8" Spruce
100,000'		1" Birch
300,000'		3" Birch
100,000'		1" Hemlock

Prompt shipments

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Sawed Hemlock
Red Cedar Shingles
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Timber Estimates and Valuations.
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TRANSACTIONS ON TIMBER LANDS
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A. D. McINNIS
Is prepared to make reports, and estimates on all classes and kinds of Timber, together with Maps, and cost of operating, also sell or buy for you.
25 years practical experience in woods operations and crusing.
CACHE BAY, ONTARIO

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& CO.
LUMBER and TIMBER
Spruce, Hemlock, Pine and Hardwoods
Square Spruce, Hemlock and Cedar Timber, Railway Ties, Telegraph Poles, Etc.
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PRESSES
Hydraulic and Screw
for
VENEER
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Special machinery made to order
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TORONTO, CANADA Limited

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Civil Engineers, Quebec Land Surveyors and Draughtsmen
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Phone 2718
are prepared to examine and report on forest properties anywhere. Forest surveys, Logging maps, Timber estimates, Water Power, Water Storage, Topographical plans, Water supplies, Park Works, General plans for village sites and Private Estates. Railroad location and construction. Roads and Rivers improvements. Good information concerning Quebec Timber and Mining lands cheerfully given.

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Special Crating Items

150 M' 1" Dry Spruce Crating
3 cars 1" Dry Elm Crating
4 cars 1" Dry No. 3 Com. Birch
4 cars 1" Dry No. 3 Com. Maple
100 M' 1" Dry Nos. 2 and 3 Com. Basswood

Other Hardwood Specials

2 cars 1" No. 1 Com. and Btr. Black Ash
2 cars 1" No. 2 Com. and Btr. Black Ash
2 cars 1" No. 1 Com. and Btr. Basswood
1 car 6/4" No. 2 Com. and Btr. Hard Maple

All dry and ready for quick shipment

Baled Shavings in Carload Lots

Dry Pine, Hemlock and Hardwood Slabs

Write us for prices

Graves, Bigwood & Co.

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Pine and Hemlock Lumber

1026-32 Traders Bank Bldg, Toronto, Ont.

Mills: Byng Inlet, Ont.

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NEW and USED
WOOD TOOLS
for Immediate Delivery

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No. 5 New Britain, chain.
M 190 Cowan hollow chisel.
Galt upright, compound table.
Smart foot-power.

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49" Berlin triple drum.
36" Egan double drum.
12" C.M.C. disk and drum.
18" Crescent disk.
8" belt sanders (wood frames).

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10" Clark-Demill four side.
10" Houston four side.
6" Dundas sash sticker.

Wood Planers
36" American double surfacer.
30" Whitney pattern single surfacers.
26" revolving bed, double surfacers.
26" Goldie & McCulloch single surfacer.
24" MacGregor-Gourlay planer and matcher.
24" Major Harper planers and matchers
24" revolving bed, single surfacers.
24" single surfacers, various makes.
24" Crescent pony planer.
20" Dundas pony planer.
18" Little Giant planer and matcher.
16" Galt jointer.
12" Crescent jointer with safety head.
12" Galt pedestal jointer.

Saw Tables
Preston variable power feed.
M138 Cowan power feed.
No. 5 Crescent sliding top.
No. 3 Crescent universal.
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7½' Martin iron frame swing.
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42" Fay & Egan power feed.
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28" Rice 3-wheel pedestal.
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MacGregor Gourlay 2-spindle shaper.
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40" MacGregor Gourlay band resaw.
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Galt blind-slat resaw.
Galt blind-stile borer and mortiser.
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Pedestal tenoner, double heads and copes.
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6-Nail box nailer, Meyers patent.
20" American wood scraper.
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Dry Hemlock and Spruce all sizes

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Also in Dressing in car or mixed lots 1", 2" and 3" to customers' specifications.

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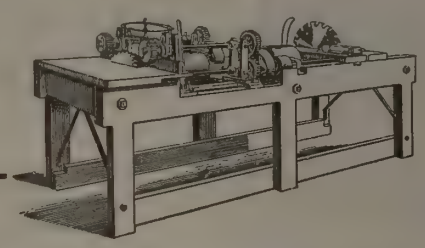

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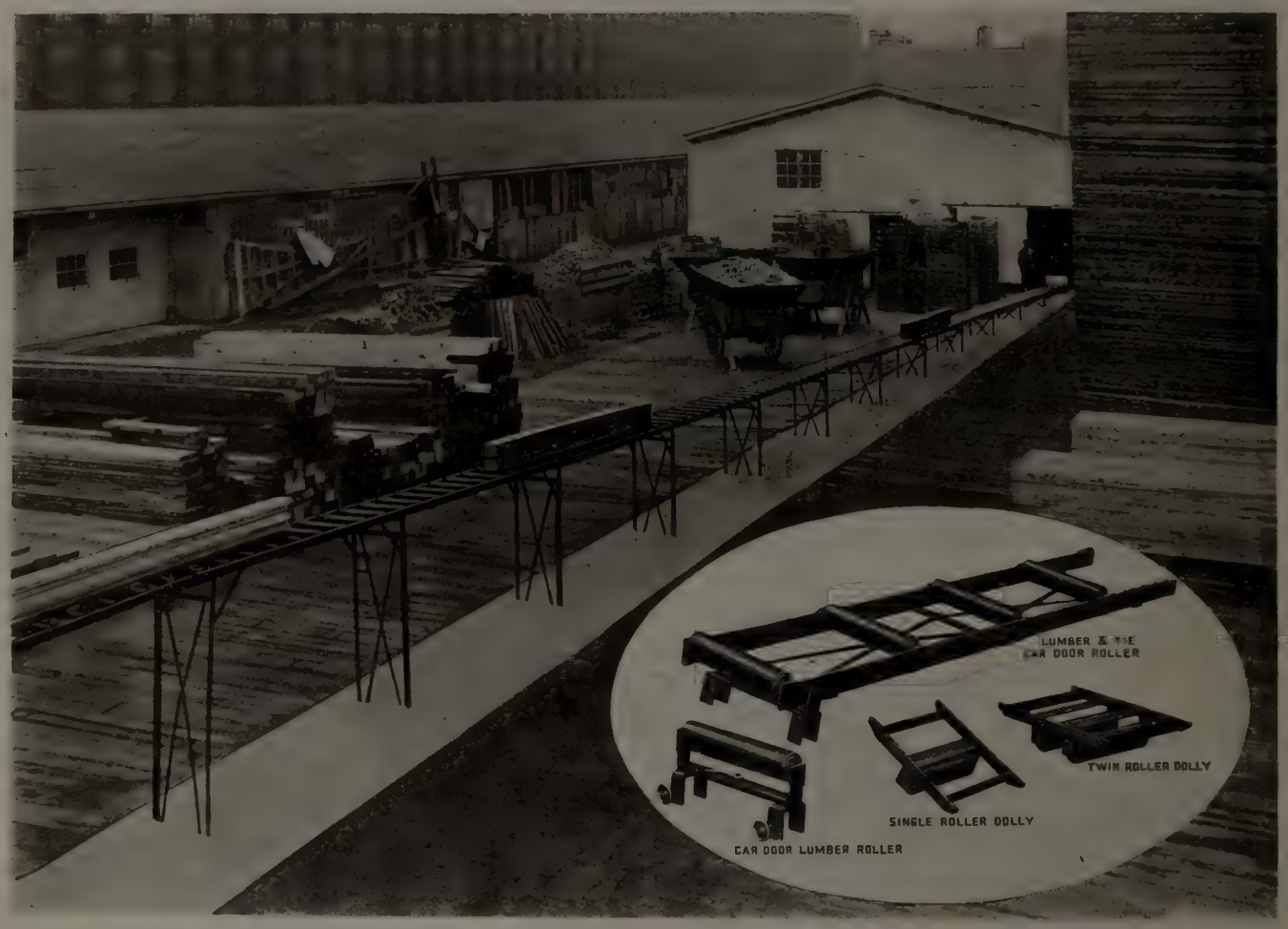

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"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

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Strength — ***Durability***
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Great Strength,
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Michigan Forest Products
Hardwood, Hemlock, White Pine

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40 Million Feet Dry Stock
in pile containing a complete
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Hardwood Specialists

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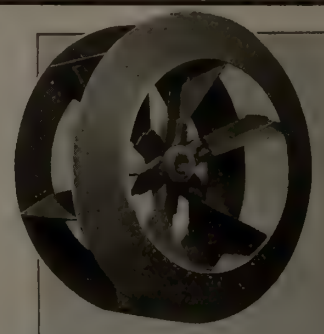

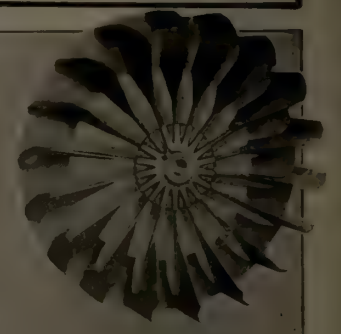

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For more than 50 years we have been studying the pneumatic removal of dust and shavings and have now adopted five different designs of Slow Speed Wheels which successfully fulfill every need encountered in a planing mill. Let us recommend the one best suited to your needs.

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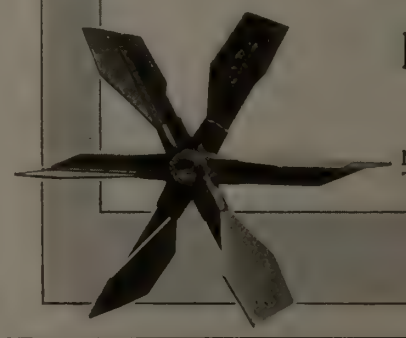

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Specialty:
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We now have them well advertised all over Canada, so that they find a ready sale wherever men want the best in special footwear. When you carry the famous

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New RAILS Relaying

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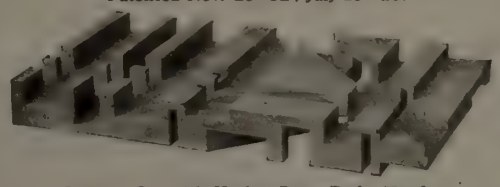

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AJAX Loading Chain

has successfully met every condition and test—it has been pronounced by ninety per cent. of all the lumbermen in the country as being the best—they use it.

If you are still in the minority—one of the ten per cent.—won't you try to prove this for yourself? Try it once—you'll buy it always.

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are saws that cut smoothly, evenly and quickly;
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That have been the standard in Canada for 50 years

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Our two branches at Hull, Que., and Vancouver, B. C. besides carrying a full range of cross-cut saws, bits, holders, etc., are fully equipped to handle repairs, for the convenience of our many customers in these vicinities. Immediate deliveries and carefulness assured.

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BY their swiftness and capacity Packard trucks get the material to the building site at the time ordered. They eliminate hold-ups due to faulty transportation between lumber dealer and buyer.

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The principles of hauling efficiency learned in ten years' study of actual service conditions and Packard standards of design, material and workmanship are embodied in all sizes.

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THE ONTARIO MOTOR CAR COMPANY, Limited
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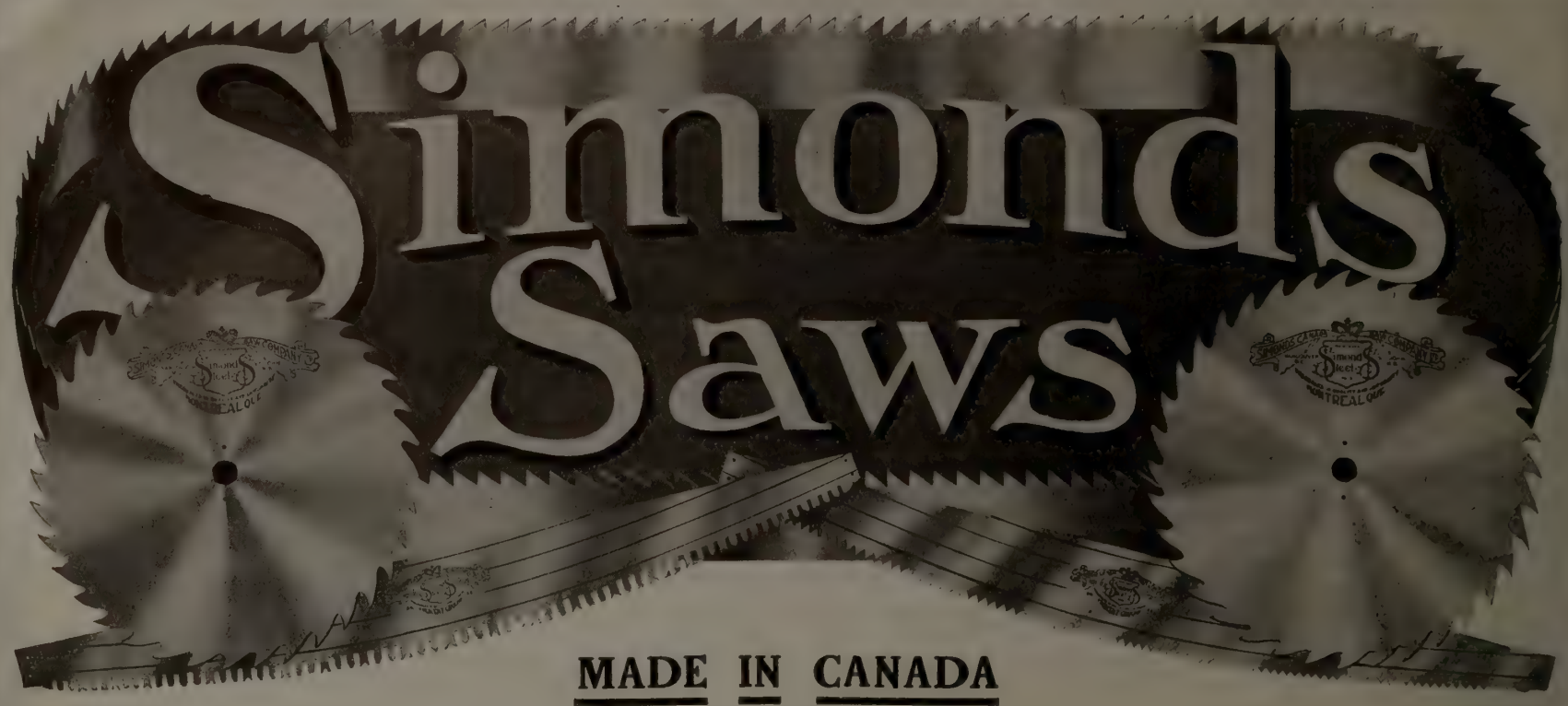
Ask the man who owns one

Packard



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And guaranteed the best on the market. This applies to Band, Circular, Cross-cut and Inserted Point Saws, also Planer Knives of all kinds. Write for further particulars and prices.

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Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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One Year's Experience With Workmen's Compensation Act

We have devoted a considerable amount of space in this issue to reproducing the opinions of lumber manufacturers in Ontario in regard to the Workmen's Compensation Act. This Act has now been in operation for over a year, and although a year can scarcely be considered sufficient for forming a definite judgment as to the merits or faults of any new scheme, it does furnish a basis upon which to consider and discuss some of its details. We do not present the correspondence upon this matter with any idea of opposing the general plan of the Workmen's Compensation Act. We are pleased, in fact, to see how many of the manufacturers in Ontario approve heartily of the plan and offer freely their suggestions for making it more satisfactory in its working out. We had thought at first of publishing simply a digest of the opinions represented in the various letters received, but have come to the conclusion that the best way to lay the matter before all parties who are interested, including the Compensation Board and the manufacturers themselves is to publish the opinions we have received in considerable detail.

The perusal of these letters will show that the most frequent criticism offered is in connection with the rates charged by the Compensation Board, many manufacturers asserting that the rates are far in excess of the previous cost of insurance and many times greater than the amount of indemnity paid in connection with accidents. This is a fault which is admitted to have been unavoidable in connection with the first year's operation of the Act. Nearly all our correspondents are looking forward to the natural remedy of this fault in the form of a reduction in the rates and rearrangement of some of the groups. With these alterations they would approve of the Act fully, as the belief is general that the Workmen's Compensation Act involves an important advance in insurance against accidents.

There are several other criticisms which appear frequently in the different letters we have received. A number of manufacturers, for instance, refer to the tendency which the Act is developing among certain classes of employees to take advantage of it. This is one of the unfortunate tendencies in human nature and is something which no doubt the Board in charge of the working out of the Act must fully appreciate. It should not be difficult in the course of a few years to reduce this objection to as small proportions as it had in connection with insurance by means of employers' liability companies.

Some manufacturers criticize the Act on the ground that it is too wide in its scope, saying that it makes it necessary for a company to insure men whose occupation is only remotely connected with their business, while others find that it is not elastic enough in some cases, not providing indemnity in the case of certain dependents who unquestionably need and deserve it. A somewhat similar suggestion is made by one manufacturer who reports that a conscientious employee who endeavored to return to his work before the seven days limit was up, and subsequently found that he could not stick to the job, could not collect any indemnity from the Board. There must be ways of overcoming such objections by extending the authority of the Board and making the provisions of the Act a little more elastic.

It is noticeable that in the large majority of cases, the criticisms offered refer to the details of the Act and their working out. As to its principle there is very little complaint. In fact nearly all the manufacturers are pleased with the Act in principle, being glad to be relieved of the legal troubles which were involved under the old system of insurance with employers' liability companies. They find, moreover, that the employees themselves are far better pleased than they were formerly and that it is possible to develop a more personal and businesslike relationship between employers and employees than was formerly the case.

Inter-Insurance for Canadian Lumbermen

Insurance problems have always been more or less of a bugbear to lumbermen in Canada. In the United States also, the same is true, but the growth of lumber mutual companies and the recent development of inter-insurance associations has given much relief across the line. The mutuals have extended their operations into Canada to a great extent and have shown our lumbermen that it is not always necessary to pay high premiums in order to get good insurance. The inter-insurance associations go even a step further and show that in addition to giving insurance at cost it is possible to eliminate some of the former elements of cost and automatically to return to the policy holders the whole of the surplus of receipts after losses and expenses have been provided for. The principle of inter-insurance, when brought down to its elementry details, is that the losses are distributed over the premiums and the surplus is returned to the policy holders. To make such a proposition attractive it is necessary to exercise great care in the selection of risks and to establish a rigid inspection service, so as to reduce losses to a minimum.

This is what is being done by the Canadian Lumbermen's Insurance Exchange, which has developed out of the interest taken in the problem by the Canadian Lumbermen's Association and others including prominent members of the lumber trade in Toronto. It is gratifying to report that Canadian lumbermen, after looking into this proposition have been quick to realize its benefits and to give it their support. It was necessary, in the first place, to raise $20,000 for a deposit with the Government. This has been done already. The lumbermen of Ottawa and Toronto having been largely instrumental in subscribing this amount. The Association is therefore assured of an early start. In fact we understand that it is commencing business with quite a fair amount of insurance on its books.

The Lumbermen's Fire Indemnity Contract, which preceded the present Association was established in Canada a year ago by United States interests who made the necessary Government deposit and who are now retiring so as to permit of the Association being converted into a purely Canadian one. The American company had already placed upon its books some one and a half million dollars worth of insurance which brings in premiums of about $35,000. The exper-

ience of the past year was encouraging. There were no losses. On account of its comparative smallness, however, the company was obliged to reinsure all its risks and to pay practically the same rate as it received in premiums, yet it was able to pay all expenses and to show a profit of about 15 per cent. to policy holders. This year as the volume of business grows it is expected that the Association will be able to carry some of its own risks and thus effect a saving in the cost of operation, so that a larger percentage of profit to policy holders will be possible.

When this subject came up for consideration before the Lumbermen's Section of the Toronto Board of Trade an interesting discussion took place. Mr. E. D. Hardy who explained the proposition before the Section was followed by Mr. J. L. Campbell, who, at the request of the chairman told of the experience of the retail lumbermen in the Prairie Provinces. In this case a similar plan had worked out with great success. The rate charged for insurance had been greatly reduced and the Association had been able to pile up a continually increasing surplus. Mr. Campbell, however, differed from Mr. Hardy as to the working out of the plan, being of the opinion that it should be confined to separate classes of lumbermen, that is to say, that the retailers and the manufacturers should not be classed together. He thought that the retail risks were much better than the manufacturing ones and that if all were classed together the retailers would be carrying an unfair share of the premium burden. He did not believe that the plan would work out as successfully as it should, unless the different sections of the lumber business were separated.

Mr. Hardy in reply to Mr. Campbell's point expressed a belief that it would be possible to work the plan successfully with all classes of lumbermen in it. He did not see that any injustice could be done so long as the rates were made proportionate to the risks and the profits were divided according to the premiums. There was no inequality that could not be met by graduating the risks.

We commend the plan of inter-insurance as it appears to us today most heartily to lumbermen. It contains, we believe, the germ of a great improvement to insurance methods from the lumbermen's point of view. It makes it possible to eliminate entirely the conflagration hazard, from which lumber yards and plants in most cases are isolated. It will enable lumbermen to reduce greatly the cost of insuring their properties. It will encourage the improvement of risks, it will give the lumberman who has a good risk the means of getting the most advantageous rate possible and it will in this way, we think, lead to the carrying of much more insurance, at the same time reducing the difficulties of adjusting losses.

Great Britain's Proposed Prohibition of Imports

One of the most important events which have recently occurred in connection with the export trade in wood goods to Great Britain was the recent announcement in the British House of Commons that certain imports would shortly be prohibited, among other articles being many lines of building materials. The object of the prohibition, as announced, is to ease the freight market, and as timber is the most bulky of the building materials imported into Great Britain it is only reasonable to conclude that this is one of the chief articles referred to. The Timber Trades Journal of London, England, in a recent issue, commenting upon the announcement says in part:—An announcement of this sort without details has naturally caused a suspension of negotiations in many cases, and importers are waiting for some clue as to what the prohibition really means—whether it is to be partial, whether import will be permitted under licence, etc., etc. They are also asking themselves the elementary question, What wood is building material and what is not? Nearly all wood can be used for building and nearly all wood for other purposes, and who is to decide the debatable points? The attitude of the trade, on the whole, is very calm, and until more particulars are available there is no disposition to worry about the future. For it must be remembered that for more than a year past a large proportion of the softwood imported into this country has ben directly or indirectly in connection with Government orders, the building trade being more or less a negligible factor except building for the Government.

The timber trade is as anxious as any section of the community to make sacrifices necessary for the general good, and will, of course, submit cheerfully to any prohibition by the Government, especially at a time when the Government is the chief customer. According to most estimates, from 70 to 80 per cent. of the timber trade is for Government work, while the outside business tends to diminish in proportion as prices rise, speculative builders having no use for 2 in. x 4 in. at from £25 to £30 per standard. But the situation is nevertheless puzzling. If the Government consumption of wood is to continue (and there are few signs of much diminution as yet), how can there be a prohibition of import unless the Government intends to take the whole of the trade into its own hands. Has it not enough on its hands already? If wood must be brought in, and the current prices clearly show how much it is needed, is it not better to leave the business in the hands of firms accustomed to the work who must be more fitted to transact it than Government officials? Whilst the primary object of the suggestion may be to economise tonnage, a secondary one is probably an idea to arrest the import of such goods that may be termed luxuries, and so lessen the burden of exchange. As yet, however, the suggested change is only in contemplation. It may be passed into law with reservations, one of which may exclude woods from our Colonial possessions, but the proposals are fraught with a large amount of interest not only to the importers but to the consumer and others.

Since the publication of the above article a royal proclamation has been issued prohibiting the import, after March 1, except under Board of Trade license, among other articles the following: "All materials for the manufacture of paper, strawboard, pasteboard, millboard and wood pulp, board, and manufacturers of paper and cardboard; furniture woods, hardwoods and veneers.

Australian Market for Our Timber

We have made frequent reference in these columns to the importance of the Australian market for Canadian lumber and timber. We believe that manufacturers and shipping firms in British Columbia, as well as brokers and merchants in Australia, are all anxious to improve trade relations in this regard and to work up a more extensive business. Probably the keynote of the whole situation is reciprocal trade. Canadians cannot expect to send many cargoes of lumber or any other products to Australia unless return cargoes can be arranged of Australian goods required in Canada. We publish elsewhere in this issue an interesting letter from Geo. Hudson & Son, Limited, of Sydney, N. S. W., in which they state that they have come to the conclusion that a reciprocal tariff must be introduced in order to increase our exchange of products. One of the practical points made by the writer of this letter is his claim that British Columbia mills should deal direct with the timber merchants in Australia and quote c.i.f. prices. Under present conditions the trade goes through the hands of Australian importers who buy at Canadian mills on an f.o.b. price and make arrangements for the tonnage. Any plan to sell on a c.i.f. basis would, of course, make it necessary for Canadian manufacturers to secure the tonnage of their shipments. The handling of this trade by means of f.o.b. sales to importers in Australia simplifies the business greatly for the Canadian mills. It is an open question, however, whether the Canadian mills would not be better off if they followed the advice of Geo. Hudson and Son, and got in touch with merchants in Australia.

Of course, to a great extent, this matter of quoting on a c.i.f. or an f.o.b. basis is really only one aspect of the larger problem of securing or controlling sufficient shipping to handle the B. C. exports of

timber and lumber. In this connection it is interesting to note the opinion of Mr. Niel Nielsen, Trade Commissioner for Australia, whose headquarters are at San Francisco. Mr. Nielsen visited Vancouver recently and expressed himself as follows:—"It seems to me that the only way the B. C. lumbermen could compete with United States lumbermen would be either by the absolute control of a fair proportion of the shipping they require or by a preference in the customs." It will be seen that Mr. Nielsen's analysis of the situation comes down practically to the analysis we have outlined above. Mr. Nielsen is advocating and working for the adoption of a reciprocal tariff. A trade agreement could be made, he says, whereby B. C. and Canadian products generally could be sold in Australia at a low duty, and such products as meat, butter, etc., which Australia could supply to Canada, would have a similar light duty, or no duty at all, whatever the arrangement might be. Dealing with the subject more in detail Mr. Nielsen brought out the following points:—

There now exists no reciprocal agreement between Canada and Australia, but there does exist such an agreement between Canada and New Zealand. Australia would want no better terms than those arranged with New Zealand. And, furthermore, such an agreement between his Government and Canada would be of greater advantage to British Columbia than the New Zealand reciprocal agreement, for the reason that Australia imports a great amount of lumber while New Zealand uses her own lumber.

While British Columbia lumber is not getting into the Australian market, that country annually buys through Mr. Nielsen's office some 20,000,000 feet. If a customs agreement were arranged between the two dominions, Australia would open a trade office in Canada similar to the office in San Francisco. Four years ago, when he established the office in San Francisco, the business Australia was doing there amounted to only about $600,000, and in 1915 it was approximately $9,000,000. Not only can Australia compete with New Zealand, her neighbor, in meats and butter, but also there would be a good market in Canada for her wines in competition with California wines.

Mr. Nielsen has made an effort to show preference to this country and has recommended to his Government that he be allowed to give British Columbia lumber a ten per cent. advantage. This his Government allowed, and yet he found that even with this advantage over Puget Sound and Columbia River, the lumber in B. C. could not compete, for the reason that there were no ships owned in Canada, and American ships would not come here unless paid extra, the prevailing extra rate being some five shillings per thousand feet.

Shipowners give two reasons for asking a higher freight rate to come to British Columbia. One is that they have greater port and tonnage dues to pay, and the other is that British Columbia lumber is heavier and lowers the carrying capacity of the ships. They claim that a ship carrying a million feet of Puget Sound lumber loses 50,000 to 60,000 feet in the extra weight of lumber loaded here.

Editorial Short Lengths for Busy Readers

The Gloucester Fishing Schooner, Elmer E. Gray, of only 84 tons register, was recently in port at St. John, N. B., taking on a cargo of lumber for the Geo. McKeen Lumber Company, for delivery at a trans-Atlantic port. The master of the vessel expects to make the voyage across in about three weeks. Her load will be about 85,000 feet.

In its issue of February 1st the Timber Trades Journal of London, England, referring to the situation in connection with Atlantic freight rates says:—"Another week has passed without any fixtures of wood-carriers, either steam or sail, having been reported on the market. The scarcity of suitable tonnage, and more especially of steamers, has shown no sign of any diminution, and the recent exorbitant rates of freight obtainable for other cargoes continue at least to retain their high level, with the Government orders for steam grain carriers attracting the best of the comparatively few boats available. The enquiry for tonnage for next season's deals from Canada does not appear to have been followed by any chartering up to the present, and although the basis of rates quoted by shippers may now be taken to have advanced by 5s. per std. to 225s., so small an increase is not likely to have much effect in inducing owners to fix their boats so far ahead in the current condition of freights generally."

The Department of Trade and Commerce is in receipt of a communication from Mr. H. R. MacMillan, Special Trade Commissioner, stating that the largest firm of timber importers in South Africa import several thousand doors each year from the United States. These doors are nearly all made in New York State, largely from lumber supplied from Canada. Several years ago this company imported Canadian doors which were found to be satisfactory but, during the past few years, their New York agents have been supplying them with American doors. It is possible that there are manufacturers in Canada who are in a position to compete with United States manufacturers both in quality and price.

This firm is willing to take a trial order of a hundred 6-foot 8-inch by 2-foot 8-inch by 1½-inch four panel double moulded No. 3 pine doors, provided that these doors can be shipped before the end of March, for a price of 10s each, c. i. f. Durban. They desire that these doors should be shipped by a reputable manufacturing firm prepared to enter into the export trade. The firm shipping the doors may draw upon the company in question at sight for payment in full. When the shipment is made the South African firm will be glad to receive a statement from the shipper dealing with the possibility of the development of an export trade from Canada in doors, giving information regarding grades, prices, and conditions of shipment. The name of the above-mentioned firm may be obtained on application to the Department of Trade and Commerce, Ottawa. (Refer File No. A-1499.)

The attention of the Department of Trade and Commerce has been drawn to the possibilities of opening up an export trade in Canadian paper and wood-pulp with Brazil by the British Consul General at Rio de Janeiro. Up to the present the trade in these articles, which is sufficiently large, has been almost entirely in the hands of Germany and Norway and is now, naturally, mainly held by the latter. There would now seem to be no reason, provided freight can be obtained, why Canadian manufacturers of printing paper and wood-pulp should not secure a large portion of this trade. The steamship lines, which run regular services from New York to South American ports, would probably be able to take the paper, if the railway freight to New York did not cause the total freight to compare unfavorably with those obtainable from Scandinavian ports.

In the year 1913 Brazil imported 30,052,227 kilos of printing paper to the value of 7,373,137 milreis or £491,542 at 16d. exchange, and in 1914 the imports amounted to 21,007,159 kilos with a value of 5,318,808 milreis, or £332,425 at 15d. exchange, thus allowing for the drop in exchange which took place towards the end of last year.

As regards wood-pulp, Brazil in 1913 imported 6,022,875 kilos to the value of 789,725 milreis or £52,648 at 16d. exchange, and in 1914, 3,455,957 kilos to the value of 472,290 milreis, or £29,518 at 15d. exchange, allowing for the fall as before.

The heavy drop in 1914 is due to the abnormal circumstances and financial stringency caused by the European war, but the opinion is expressed that Canada might well look to Brazil as a promising outlet for the products of her paper industry.

It is only by co-operation that the lumber industry of British Columbia can be placed on a sound financial basis, the logger co-operating with the lumbermen, the banks giving all the convenience possible to this great industry, the Dominion and Provincial Governments rendering all the assistance possible, as when the lumber industry is prospering, it not only adds to the prosperity of the lumberman, but helps in no small way in making British Columbia as a whole prosperous and progressive.

Lumberman's Two Sons Serving the Empire

Flight Sub-Lieut. G. A. Maclean, Royal Naval Air Service.

Lieut. A. P. Maclean, 20th Batt., 2nd Contingent.

The accompanying portraits are of two sons of Mr. W. B. Maclean, president of the Conger Lumber Company, Limited, Confederation Life Building, Toronto, both of whom are on active service, one in the Royal Naval Air Service and the other in Flanders. Flight Sub-Lieut. G. A. Maclean, R. N., was formerly secretary-treasurer of the Conger Lumber Company, Limited. He is the eldest son of Mr. W. B. Maclean, and was connected with the company for five years as manager of the operations at Parry Sound, Ont. He gave up this position in June, 1914, to become an officer of the Eaton Machine Gun Brigade. Shortly after his arrival in England he applied for transfer to the Royal Naval Air Service and secured an appointment about October 1st, 1915. He is now on active service in charge of a sea-plane on one of the war ships in the North Sea. Flight Sub-Lieut. Maclean is 24 years old and is an old Upper Canada College boy.

Lieut. A. P. Maclean, 20th Battalion, 2nd Canadian Contingent, is the second son of Mr. W. B. Maclean. He also was actively interested in the business of the Conger Lumber Company, Limited, at Parry Sound. He is twenty years of age and was born in Toronto. He is a graduate of Upper Canada College and was attending the University of Toronto when the war broke out. He then took a commission with the 48th Highlanders, Toronto, and subsequently was transferred to the 20th Battalion. Lieut. Maclean left Toronto in May, 1915, for overseas. He was in camp at Shorncliffe and left there for the front on September 15th, 1915, since when he has been on the firing line in Flanders. Before the 1st Battalion left Shorncliffe he was promoted to the position of signalling officer of the Battalion.

A Shingle Shortage in British Columbia

Private advices received by the Canada Lumberman from B. C. state that on January 28th, fifteen shingle mills with an aggregate total of 105 machines, reporting as to their stocks and orders on hand, showed the following totals:—

Orders on hand, XXX 17,390,000; XXXX 1,640,000; XXXXX 31,255,000; Eurekas 3,910,000; Perfections 11,450,000.

Stocks on hand ready for shipment XXX 2,714,000; XXXX 1,812,000; XXXXX 5,878,000; Eurekas 200,000; Perfections 345,000.

Surplus orders on hand XXX 14,676,000; XXXX 172,000*; XXXXX 25,377,000; Eurekas 3,710,000; Perfections 11,105,000.

*Stock on hand in excess of orders.

This shows a surplus of orders for 54,686,000 shingles or at 25,000 shingles per machine per day enough business on hand to keep all the mills which reported (105 machines) running to full day time capacity for nearly one month. It is hardly necessary to comment on price considering this report, especially when one takes into consideration the fact there are practically no logs in the loggers' hands.

Further advices which were received subsequently, indicate that this situation was unchanged on February 21st, except for an increased volume of orders. It is interesting to recall in this connection that practically all mills on the Pacific Coast were closed down during much of January and February by heavy snow and severe weather, and that the logging operations were similarly interrupted. The Canadian Western Lumber Company for instance, after a lengthy shut down, started operations again on February 19th, but was only able to do so after employing 500 men shovelling snow about the plant.

A New Wholesaler for Toronto

J. R. Summers, Toronto

The accompanying portrait will be recognized by many of our readers as that of Mr. Jas. R. Summers, who has recently opened a wholesale lumber office in the Tyrrell Bldg., Toronto. Mr. Summers is well known to the trade on account of his long connection with Graves, Bigwood and Company, whom he represented on the road, chiefly in the Toronto city trade.

Mr. Summers has had a lengthy experience in the lumber business. He was born at New Lowell, Ont., then quite an important lumber manufacturing town. His father was in the lumber business at that place with the firm of Hay and Patton. Subsequently his father was with the firm of Dobie and Mercer at Angus, Ont., and Mr. Jas. R. Summers obtained his first experience of the lumber business with this firm, working for them both in the mill and in the yard. He thus became intimately acquainted at an early period in his business career with manufacturing and inspection details.

Subsequently Mr. Summers entered the employ of the Imperial Lumber Company, Toronto, for whom he worked for thirteen years, representing them as a salesman and buyer. Then he was for four years with the Wm. Laking Lumber Company in a similar capacity, after which he went to the firm of Graves, Bigwood and Company, with whom he remained for seven years. During his career as a lumber traveller, Mr. Summers has had experience, not only in the city trade, but also throughout most of Ontario and much of the States of Michigan, Wisconsin and Minnesota. His former employers, the firm of Graves, Bigwood and Company found him a capable and efficient salesman, a fact which will be vouched for also by many of the trade whom he was in the habit of visiting.

Mr. Summers will deal in both hardwoods and soft woods, specializing to a considerable extent in crating and box lumber.

Continued Bad Weather on the Pacific Coast

The situation in connection with logging and manufacturing on the Pacific Coast, during the first half of February, continued very unsatisfactory on account of the severe weather. A letter received from a Vancouver firm under date of February 10th refers to conditions as follows:—

We have had continued storms since the 27th of December and, as far as we know, only three or four mills have been running, out of about forty mills in and around Vancouver. Also, on account of the deep snow, the logging camps have been forced to close down. The result is that there will be very little timber on the market when the mills are ready to operate and our opinion is that there will be very little volume of shingles available for purchase from B. C. mills for several weeks to come, as a number of the mills have orders booked which they have been unable to fill during the past month or more and it will be necessary for them to fill them before they take on new business.

Kiln Drying Refused Stopover Privileges by Railroads

At the weekly meeting of the Lumbermen's Section of the Toronto Board of Trade on February 18th Mr. A. E. Clark reported that he had received a communication from J. R. Eaton & Sons of Orillia, Ont., advising him that the C. P. R. and the G. T. R. were refusing to include kiln-drying as work in transit, and that when cars were stopped for kiln-drying it was necessary to pay the local rate both in and out. Mr. Clark suggested that this might be taken up by the Lumbermen's Section. After considerable discussion the matter was placed in the hands of a committee consisting of Messrs. A. E. Clark, J. B. Reid and H. G. McDermid, who were instructed to interview Mr. Marshall the traffic manager of the Board of Trade and discuss the situation with him.

Mr. Fred McLaren, president of D. K. McLaren, Limited, belting manufacturers, St. James Street, Montreal, is on a visit to Western Canada, going as far as Vancouver. One object is to look into business conditions and to confer with the company's representatives in the west. Mr. McLaren is known to the heads of practically every lumber firm in the East, and he will doubtless make many new friends on his western trip.

St. John Commission Final Report

Canadian and U. S. Members Fail to Agree on Chief Points—Recommendations Presented

St. John, N.B., Feb. 19:—The International Commission pertaining to the St. John River gave out its report for publication today. After citing its instructions, the report deals with the questions of piers, booms and sorting works and shows that the Commissioners have been unable to reach an agreement. It outlines the trouble experienced by the St. John Lumber Company with handling logs on the St. John River. The company, acting under legislative authority from the State of Maine, built and maintained works between Van Buren and Ste. Anne, consisting of piers, booms and sorting works and still maintains them.

The Commissioners, on behalf of the Canadian Government, asserted that such legislation was ultra vires (contrary to law) and that the piers, booms and sorting works so established and maintained are an obstruction to navigation and in violation of the treaty of 1842. The Commissioners, on behalf of the United States, maintained that the said legislation was intra vires (legal) and that the maintenance of piers, booms and sorting works was a reasonable use of the river and not in violation of the said treaty. The United States Commissioners referred to the case of the Blue River Lumber Company on the St. Frances River, a boundary between the two countries. Here the company had erected a sawmill on the Canadian side with a production of 20,000,000 feet annually and had built a dam across the river, constituting an impediment to navigation.

The Commission recommends the development of the water power at Grand Falls, N. B., and urges that legislation be enacted to safeguard the interests of both countries in this connection.

Among other recommendations made by the Commission are that certain channel improvements be made in the St. John River for driving purposes; that legislation be passed prohibiting the dumping of mill waste into the river; that various storage dams be built at the head waters of the St. John River and its tributaries, at the joint expense of the United States and Canada; and that an international board of commissioners consisting of three members be appointed to regulate sorting of intermingled logs, etc. The Canadian Commissioner recommended that the jurisdiction of the present Board over the sorting of logs should be limited to those parts of the rivers which are boundary waters according to the treaty of 1842. The United States Commissioners maintained that the jurisdiction should extend from Fredericton to the head waters, including Fredericton.

The Canadian Commissioners, and Mr. Keegan, one of the Commissioners on behalf of the United States, recommended as follows:—

That if the storage dams for log driving purposes recommended in this report be built, it will not be necessary, to meet the requirements of log driving, to change the conditions now existing at Chamberlain and Telos lakes; but, if such dams are not constructed, that measures be taken to determine, by international agreement, or by obtaining the judgment of some competent tribunal, whether, by prescription or otherwise, the continued diversion of water by means of the Telos canal and dam and the Chamberlain dam is lawful; and, if found to be unlawful, that the said works be taken over by and at the expense of the State of Maine, and operated under the supervision of the said board of commissioners for the joint benefit of the St. John and Penobscot Rivers, giving to each river, so far as may be possible, an equal share of the stored water, as the exigencies of log driving conditions may require, and that the cost of maintainence and operation be borne by the owners of logs in both said rivers in proportion to their respective quantities of logs, or, failing such an arrangement, that the Chamberlain and Telos dams be taken down, the Telos canal closed up, and the waters of the Chamberlain system allowed to run in their natural channel down the Allagash River.

James. D. Lacey and Company's Fine Calendar

A splndid calendar for 1916 has been sent out by James D. Lacey & Company, 332 South Michigan Ave., Chicago, Ill., to their many friends. The make-up of the calendar is a work of art, being probably the most tasteful that we have ever been fortunate enough to receiver. A fine reproduction of a photograph of a forest scene in which the trees are imposing examples of western (Sitka) spruce is the decorative feature of the calendar, being reproduced by a splendid printing process in a rich brown. At the base of one of the huge trees there is shown a "hewer" the most romantic figure in the history of North American forest operations. The contrast between the immensity of the trees and the comparatively diminutive size of the man, is very striking, and tells at a glance the story intended to be conveyed by the picture. The illustration is mounted in a handsome manner, the effect being that of a rich brown frame with a deep olive green border between the picture and the frame and a similar border on the outside edge of the frame. The calendar pad is a small one attached beneath the picture.

Pulp and Paper Men Hold Meeting

Annual Gathering at Montreal—President Reports Sound Trade Conditions—Officers Elected

The annual meeting of the Canadian Pulp and Paper Association was held recently at Montreal, Mr. I. H. Weldon presiding. There was a large attendance from all parts of the country.

In the course of his address, Mr. Weldon said:

"On several occasions we have conferred with the Minister of Finance, Sir Thomas White, and his colleagues, on the matter of tariffs, and as a deputation have furnished him with our views and given him the information which he desired. We have always received the most kindly consideration, and are of the opinion that no adverse tariffs affecting this industry will be consummated without the Department first considering our interests and consulting our judgment.

"With considerable pride I refer to the extremely valuable work which this Association has done in the fight against the proposed increase by the Eastern Freight Association. We obtained from our members the approximate tonnage affected by this increase, and found that the increase would cost our industry $209,000 yearly. The saving to us of such an enormous amount which, in our judgment, was being unfairly exacted, required the putting forth of the most strenuqus effort.

"The pulp and paper industry in Canada during the past year has greatly increased its exports and diminished its imports, and compares most favorably with any of the leading industries in Canada. We are fortunate that this industry has not been affected by the present war, nor is it necessary for us to manufacture war supplies in order to keep our mills engaged. The prospects for the future promise an unlimited sale for our product, both at home and abroad. Our manufacturing costs have increased; the supply of certain materials used in the manufacture of special grades is difficult to obtain, and we will doubtlessly experience most unusual conditions occasioned by the present war, but for the industry on the whole we should entertain no fears for the future with our inestimable wealth of forests and our unlimited water powers, both of which largely represent the basis of the industry."

Mr. A. G. Campion, chairman of the news section, commented upon the improvement in the news print industry. While stocks were low, markets were good, and there was reason to believe that the increased tonnage of just over 200 tons per day which would come on to the market during the year would be readily marketed.

The report of the secretary treasurer showed a favorable balance.

Mr. J. H. A. Acer of the Laurentide Company was elected president. and Mr. C. Howard Smith, vice-president.

After the termination of the business meeting the various sections held their meetings, at which the following chairmen were elected: chemical pulp, Mr. Carl Riordon, Riordon Pulp & Paper Company, Montreal; mechanical pulp, Mr. J. A. Bothwell, Brompton Pulp and Paper Co., East Angus, P. Q.; news, Mr. A. G. Campion, Belgo-Canadian Pulp & Paper Co., Montreal; board, Mr. J. F. Taylor, E. B. Eddy Co., Hull, P. Q.; book and writing, Mr. I. H. Weldon, Provincial Paper Mills Co. Ltd., Toronto; felt paper, Mr. E. R. Pepin, Montreal Paper Co., Portneuf, P. Q.; coated paper, Mr. F. H. Gage, Kinleith Paper Co., Toronto.

After a visit to the experimental paper mill at the Forests Products Laboratories of Canada, the members again met, when Mr. A. G. Pounsford, of the Canadian Fibre Co., Canton, North Carolina, delivered an address upon safety work, illustrated by moving pictures.

In the evening the members held their annual dinner, with Mr. Acer presiding.

Mr. C. H. L. Jones, of the Spanish River Pulp and Paper Mills, spoke.

Hon. Jules Allard, Minister of Lands and Forests, Quebec, P. Q., is preparing a bill to be introduced in the Legislature which will amend the Quebec forest laws and provide further protection for forests against fire. The amendments under consideration will prohibit settlers from clearing timber in summer months without a permit from a Government forest ranger; will require limit holders to clear trees for a distance of at least 100 feet on each side of railway tracks, and will provide that persons between 19 and 50 years of age may be called on to assist Government officials in fighting forest fires if their services are needed and they have no valid reason for refusing. Their payment will be from $1.50 to $2 a day.

The Wilson Lumber Company, Portland, Me., have sent out to their friends in the trade an attractive calendar for 1915. The make up of the calendar is very artistic, consisting of a handsome colored photograph of a scene in the woods. entitled "The Edge of the Lake," the picture being mounted on a cream board with a couple of soft tinted borders.

Workmen's Compensation in Ontario

Reports from Employers in Lumber Industry—Premiums Much Too High—Some Regrouping Advisable—Act Widely Approved

The Ontario Workmen's Compensation Act has now been in operation for a little over a year. One year is not a sufficient length of time for judging the merits or faults of so important a change in insurance methods against accident liability, but it is a sufficient length of time in which to form an idea as to the working out of some of its main points and to derive guidance from them for the future administration of the act. With this object in view we recently wrote to a number of Ontario lumber manufacturers asking them to let us have an account of their experiences under the act. Extracts from some of the replies we received are as follows:—

Too Wide in Scope—Good Points and Bad

Our chief objection to the Act is that the system of calculating the assessments is unfair, as we are obliged to include in our returns the wages paid to almost everyone who is even remotely connected with our operations, whether exposed to hazard or not. In this connection, we might mention the cooks and stable-men employed at our camps, and the crews of our tugboats. We are also compelled to include the wages of fire-rangers, whose duties are to patrol the forest, to watch for and extinguish fires, but who are miles away from our actual operations. In fact, office clerks are practically the only employees whose wages are exempt.

Then again, in our opinion, the provision made for the dependents of a workman who loses his life ought to be somewhat more elastic, so as to cover special cases. We give, as an instance, the case of one of our employees who was killed at our mills last spring. This man's family were all grown up, but he left behind him two unmarried daughters who were certainly dependent upon their father for support; yet because they were over the age limit for dependent children, the Board could make no compensation allowance whatever.

During the season just closed, we believe we had a larger number of accidents than in any year of our history, yet the total amount paid by the Board to injured employees was approximately $780.00, whereas the amount of premium paid by us was $4,740.00.

There is no doubt that the Act is, to a certain extent, beneficial to both employer and employee. To the latter, it ensures generous (though in some instances, we feel, too generous) treatment, in case of partial or total disability. On the other hand, the employer is saved the necessity of making settlements with injured employees, which often involve litigation owing to the unjust nature of the latter's demands. Our experience has been, however, that we can purchase this immunity, from one of the various employers' liability companies at only a very small fraction of what it now costs us under the Workmen's Compensation Act.

* * *

Premium Rate Far Too High

While we have found the officers of the Compensation Board uniformly courteous, we feel that the amount and rates exacted, at any rate from the smaller concerns, have been unfairly large, and, judging by our experience, much greater than was necessary to meet the claims. The amount originally demanded from us was $455. We protested against this assessment, which was between three and four times what we estimated it should be. After considerable correspondence, we were surprised to receive a letter from one of the higher officials intimating that, (long after the assessment on us was made), the matter was only then drawn to his attention for the first time. From this it would appear that the important matter of the assessment made by some member of the clerical staff. We made the first payment as permitted under the Act, and protested against any further demand being made on this account. The official also said that this might be doing us an injustice. In checking up the total wages for the year, we find that even the amount paid in is about $35.00 more than the class percentages of the pay rolls call for. Owing to the demoralization of the lumber trade for the past year or more it has been next to impossible to make as close an estimate of the pay roll as might be done under normal conditions.

So far as accidents are concerned, there was only one minor accident, which occurred in our shingle mill, due to the admitted carelessness of the employee, who suffered a slight flesh wound from putting his hand on the shingle saw, in consequence of which he was laid off for seven or eight days.

So far as actual results are concerned, we have paid in $227.50, and the actual amount paid out by the Board on this account was between $4.00 and $5.00. So far as the assessment on us is concerned, we have had to pay in to the Board more than fifty times what claims have amounted to.

Under the old system of insurance against accidents, with Employers' Liability Companies, the amount of the premiums was less than half what we have had to pay in to the Workmen's Compensation Board. Judging from the Factory Inspection Report, 1914, it seems to us that the smaller concerns are actually paying much more in proportion to their accident claims than is being paid by the larger corporations, who appear to have the greater percentage of accidents. So far as we are concerned, we feel that an injustice has been done us, and a much larger amount exacted than the past year's experience gives any warrant for. We understand that it is not the intention of the Board to afford any relief from this, even to the extent of applying the excess amounts collected in 1915 on 1916 account. The very depressed condition of the lumber market during the past year or more, has made it hard enough for the average lumber concern to carry on business, without having to bear this additional burden.

* * *

Burden Shifted—Rates Too High

When it is considered that the intention of this Act was primarily to give protection and compensation to employees for injury, sickness or death, resulting from the hazards of their occupation, without the expense, delay and uncertainty of recourse to the courts, it must be conceded that its working during the first year has proven on the whole, satisfactory, particularly so to the employees who received the benefits without being called upon to contribute anything towards the funds necessary for its successful operating.

As the provisions of this Act become more generally known, there will be found a strong tendency on the part of slackers and ne'er-do-wells to take advantage of those provisions in the Act relating to sickness. Injuries and death are self-evident, but sickness and internal complaints are too open to be taken advantage of, and it is to be regretted that many physicians allow their sympathy for, or desire to stand in with the claimant or his class, to bias their judgment in signing certificates.

We believe the two per cent. fixed upon for logging operations is altogether too high, as our experience of more than twenty years—and we believe that this will be found general—is, that there is a smaller percentage of sickness, accident or death in this, than any other branch of the lumbering business. This percentage will no doubt be adjusted during the present year, on the basis of the first year's actual experience.

Our premium for last year was $1,173.60, which will be increased slightly through the estimated pay rolls being somewhat less than the actual, while the total indemnities collected were less than $500, principally trivial accidents and sickness.

There can be no comparison of cost as, previous to the coming in force of this act, a general accident insurance policy was carried by which every man on the payroll was charged $1.00 per month, which the company collected and transmitted to the insurance company in return for which a blanket policy providing indemnities in case of sickness, injury, or accidental death, according to schedule, was issued.

The premium collected under the Workmen's Compensation Act is thus a direct tax levied on the business.

* * *

No Complaints To Make

We have, to a certain extent, been fortunate regarding accidents here, and they have caused us no great expense during past years. When the Compensation Act was first brought to our attention we were opposed to it and wrote to our local member and also to the head office, and when we were called upon for our assessment we thought it a little high. This we understand was the case in most instances. At the present time we do not know what it cost us last year, as we have not as yet received credit or a call for 1917 assessment.

We had a little experience last year with this Act. A young man had been with us about ten days when he cut the top of his thumb on the jointer. This laid him off a month and he received $8.00 a week for five weeks and later received a cheque for $82.00. He may have received more as we understood at the time that they intended granting him another cheque. We wrote them that we were of the opinion that, considering the nature of the accident and the circumstances, they were very liberal in their views.

Our view of the matter is that to some extent the smaller manufacturers will help the larger concerns. Taking our own business, it cost us only what we considered right to grant compensation to anyone meeting with an accident in our employ, previous to last year; but after a year's operation of the act and trusting to receive a rebate on last year's assessment, we have no complaint to make.

There is a little matter we have to contend with since this act came in force, previous to the act we had only to protect what machinery the factory inspector might see fit to order, and his inspection was of good character, but now we have an inspection by the association formed by the owners of some of the mills and this inspection has been accepted and backed by the Com-

pensation Board. We think the above is not called for in the least, as factory inspectors are quite competent to judge what is required by the Factory Act.

* * *

Working Satisfactorily But Rate Considered Excessive

So far, our experience has been that the Workmen's Compensation Act has worked out satisfactorily, insofar as taking care of the men is concerned. There seems to have been no undue delay in dealing with any case that has come to our notice and we feel that it is the proper way to take care of injuries to workmen. The rate, however, seems to be entirely excessive. We are aware that the original assessment was only provisional and in all probability the commissioners had no very clear data to work from, but looking at the matter from our standpoint, it would seem to us that the cost of the compensation has been very much greater than the returns to the injured men. This, however, will in all probability be rectified as experience in the working of the Act develops. There are so many things to be considered in connection with this question that it is difficult for anyone to get a very clear opinion as to the merits or demerits of any particular principle until it has been tested out thoroughly. One of the things that will have to be particularly guarded against by the employers of labor and the commission, is the tendency to imposition that any law of this kind appears to develop on the part of the benificiaries. We are constantly brought face to face with cases where men with apparent deliberation endeavor to take advantage both of the Compensation Act and the Ontario Medical Act as it applies to men in camp.

* * *

The Workmen's Compensation Act has hardly been in force long enough for us to pass a definite opinion as to its success. So far as claims made by workmen are concerned, we think they have been treated very liberally but the cost to us has been very high. We do not think, on the whole, that the workmen have any better satisfaction than when they were insured under the Employer's Liability Insurance.

The cost to us so far has been 1.80 as against 1 per cent.

We think ourselves, that before the manufacturers either praise or condemn the Act, they should give it another year's trial. By then we should know definitely what our assessment was going to be.

Following are the particulars that we have in so far, of the amounts paid out by the Compensation Board, at our Chatham and Sundridge mills, and Chatham Cooper shop:

	Premium	Paid Out
Mill No. 1	$270.00	$137.73
Mill No. 2	180.00	21.08
Cooper Shop	72.00	.....
	$522.00	$158.81

There was nothing paid out at the cooper shop. You will notice we have paid out $522 premium, and the Board paid out to our men $158.81.

* * *

Previous to the enactment of the Workmen's Compensation Act, we never had liability insurance on our woods operation, so we can give you no data as to the relative cost in comparison with that under the Compensation Act. We did, however, carry liability insurance on our sawmill employees, and we carried this at about half the rate that we paid the Compensation Board. We are unable to give you the amount collected by injured employees from this office.

* * *

We do not care to express our views very strongly regarding the Workmen's Compensation Act, until we see whether the Board are going to make any reduction in the rates, and might say that under the present rates we are paying considerably more than we formally did.

We had no accidents last year, so cannot judge this act in respect to the claims paid employees.

* * *

We paid to the Workmen's Compensation Board for 1915 $1,111.42, this amount being based on wages paid the previous year, and the amount returned to our men for two accidents was $27.04. The amount which we paid before the act came into force would be somewhere in the neighborhood of $75.

From this we take it that we have been taxed very much more than we should have been, and it will be interesting to see the reports of other firms along these lines.

We are well aware that, in many places, too many accidents take place, but where ordinary precautions are taken we think they should be cut down considerably, and hope to see a great improvement along these lines.

Owing to the war the amount which we paid is more than it should have been, and we suppose this will be adjusted before another payment is called for.

* * *

We paid the Workmen's Compensation Board $330 a year ago, but there is approximately $18 credit for 1916. We had two workmen injured, one losing a finger, and the other being knocked off a ladder. The former received $161.21, being off nearly three months, and the latter, so far has received $154.86 but he is now drawing only part of his former wages.

The general idea of compensation is good, since it does away with a great deal of friction between the employer and the men who now understand there is a law to protect them. On the other hand the rate is entirely too high when you consider the rates charged by companies in the past, which paid for injuries, I believe, more than the present rates. Formerly there were a good many companies to stand these losses whereas now there is only one which is a safer proposition.

The cost to us at present is greater than in former years when we partly took our own risk and also partly insured.

* * *

Compensation Too Generous Sometimes

In our judgment, the assessments are higher than are necessary. For 1915 we paid $1,322 while the Board paid out to injured employees and dependants a little over $300, or in other words our payment exceeded by about $1,000 what was paid out to workingmen and dependents.

Scarcely any of the small accidents which occurred were such that we would have been liable, as in the majority of cases injuries were sustained as a result of carelessness on the part of employees. We do not think our total payments for twenty-five years preceding the act going into force amounted to as much as was paid out by the board for 1915 on our account.

In some cases compensation paid is in excess of what it should be, for instance we had one boy 14 years of age employed in our picket mill at $1.25 per day, two days before the mill closed he had his hand cut on a saw. Had this not occurred he would have received $2.50 in wages and we understand intended going to school when the mill closed. The Board paid him $18.31.

* * *

Now Costing Six Times More Than Formerly

We paid the Workmen's Compensation Board $648 premium and had one claim upon them which was settled for something under $30. In the last ten or fifteen years of our operations in the woods, we have not paid $1,000 in claims for accidents, nor have we had any suit against us, but have been willing and anxious always to reimburse our men for any loss by accident sustained by them whether it was their fault or ours.

You will see therefore, that in the next ten years, if we have the same ratio of accidents, we will pay out to the Government $6,480 approximately in premiums and before we would have paid out $1,000 in claims, so that we consider that this new form of insurance costs us approximately six times as much as it did before and we believe that we are carrying others in our group who are not as careful as we are, to that extent.

* * *

Perfectly Satisfied But Paying Too Much

We are perfectly satisfied with the Workmen's Compensation Act. We think, however, that we, as sawmill owners, are unduly penalized by the rate enforced against sawmills. We do not think that log driving and sawmill work should be in the same classification.

We have run our sawmill for thirteen seasons. We have never had a man seriously injured in our sawmill or lumber yard, and if the rate that we are today paying had been in force for the past thirteen years, it would have paid full time for any workman who might have been slightly injured, we think at least a thousand times over.

We presume that as the Commission get more information, they will reclassify certain industries that they have now grouped together, and if this can be done in the proper way, neither ourselves nor anyone engaged in business has any reason to make complaint.

* * *

It is rather soon for us to give any opinion on the working out of the Workmen's Compensation Act, as we only expected to pay out a small wage last year, and so returned the expected amount, but after the season was over we found we had paid out about double the figured amount. We then sent another statement to the Commission stating this fact, but up to this time we have not heard how much more we will have to pay. The premium we expect to have to pay will cost us more than the insurance we have been carrying for some years, but that is owing to our having had only one serious accident since our company started business. During the year just past we have had no accident whatever. So far as our employees are concerned they have not had any accidents, therefore know nothing about the working of the Act.

* * *

Costing Three Times as Much

In regard to the Ontario Workmen's Compensation Act and the way it is working out with us, we find on looking up the amounts we have already paid and what we will probably have to pay later on, that it has cost us for the past year, three times as much as it would have cost under previous conditions. We have had several minor accidents which, under the previous mode of insurance, the workmen would have got pay for, but for some reason only one of them got any pay and that was only $6.60. We find that it involves a great deal more work reporting these accidents; there is more red tape connected with it and our workmen are not as well satisfied under the present

arrangement as they were previously. We fail to see wherein the workmen are benefited by this Act and we certainly are not. From our experience so far, we fail to see where any one is benefited unless it may be those connected by the administration of the Act for the Government.

* * *

Rate Charged Unreasonable

First thing, I think the rate charged under the Workmen's Compensation Act is out of reason. Ever since I have been in business I have always carried employees' liabilities, and the company seemed to be making money out of the rate charged or they would not have continued it, and now the rate charged by the Government is two and a half times as much. We have been very fortunate here, not having many accidents, only had a few small ones of late. With the Workmen's Compensation Act everything is in favor of the employees, no matter how well the employer keeps up his plant. For my part I think the men should be well treated, but do not think the Government should burden the employer with such heavy rates.

* * *

Advantage To Employees Is Doubtful

We have gone over our records and find that we have had several small accidents and most of the injured employees received about half their wages, which, with their loss of time, did not more than pay their doctor bill. We do not think the scheme is very advantageous for them. Personally we think it is alright, although the rates, on logging especially, are too high compared with other risks which are more hazardous. The number of injured in logging with about 600 men is only about 3 men, whereas in the manufacturing line with probably about 150 men there are about 5 injured, and this is on a lower rate.

As to benefits received, it is too early to discuss them. We think the idea is alright, although the rates are a good deal higher than we should pay.

* * *

The only experience we have had with the Workmen's Compensation Act so far. has been to pay our premium on our pay roll and make some improvements as required around our planing mill. So far, we are pleased to state, we have had no accidents. The rate of premium is 1.80. This covers our entire pay roll. We are not advised as to whether there is a difference in rate between planing mill labor and the regular lumber yard labor. We know, however, that there is a difference in the risk between the two classes as far as liabilities are concerned.

* * *

In our opinion we could have done without the Workmen's Compensation Act as, this last year we have been practically doing nothing and the act did not effect us to any extent. We had a fair law before with government inspection of factories and mills. The only easy way out of it is to run a general store and lumber and log on side. There can be a good trade in that way and escape the Compensation Act.

In ten years past we have only had a loss of $60 for compensation. So far as we can find out by statements concerning last year, the cost of maintaining directors and staff for the Compensation Act amounts to 54 per cent. of the amounts of the compensation paid out to injured employees.

* * *

Although the Workmen's Compensation Act has been working for a year, the actual cost to the employer is not yet known, so that whatever the merits or disadvantages in the bill may be, they cannot be intelligently discussed until the actual operating cost to the employer is known. Within six months this should be fairly well settled and everyone should then be in a position to form an intelligent opinion of the act.

* * *

I had not very much experience with the Workmen's Compensation Act as no injuries happened to any of my men, but I am quite satisfied with the plan of the Compensation Act.

* * *

We are hardly in a position to judge as to the working of the Workmen's Compensation Act, as, while we have been charged certain premiums, we have not yet been advised whether these premiums have been in excess of the requirements of the Compensation Boards or otherwise. It would appear to me that this act, if not abused by the workmen, should work out very satisfactorily. We will be able to give our views more fully after we know what the results of the first year have been, and the premiums it is proposed to assess for this year.

* * *

The premiums we paid to the Compensation Board for 1915 were about three times the amount paid to injured employees by the Board. If this condition has been general. the Board should be able to make considerable reduction in the rates charged lumbermen.

* * *

I think it is rather premature to pass an opinion on the Compensation Act, it having been only a year in force. It is an Act which will require time to bring about a just and fair rating. No doubt we are all rated too high at present. My assessment was eighteen dollars. So far as I can remember I have had one accident in twenty years that would have come under the Compensation Act. I think every one should be assessed according to the number of accidents he has, as some employers are more careless in protecting their laborers.

* * *

We think it unwise for any one to make a comparison of this Act with past conditions, until it has been in force long enough to know how it is going to work out from an economical and humanitarian standpoint.

* * *

I have been in business here about 25 years and have never had an accident of any account and nothing to pay. Last year I paid to the Compensation Board $51 and had no accidents. No doubt the act is good for the workman, but my opinion is that with the wages we have to pay and have paid this last five years, the workmen should be quite able to pay for their own insurance or be taxed for it. Of course I am aware that should an accident occur the act makes it easier on the employe but still the workman who gets the benefit should pay for it.

* * *

So far as we are concerned, the Compensation Act is giving good satisfaction and we have no cause for complaint. Possibly the first assessment was high, but we are hoping that the next one may be considerably reduced.

* * *

The amount we paid into the Compensation Board last year was just about double what we have been paying during recent years to the Liability Insurance Companies for protection.

On the other hand we are relieved from any actions we were liable for from men who were injured in our employment and on the whole we think we would prefer working under the Compensation Act.

We think however that an employee should not draw from the Compensation Board unless he is off work for at least 15 days. We notice that workmen who are slightly injured are disposed to want to lay off and draw from the Compensation Board when they are able to work. We think that any workman should be able to stand the loss of 15 days in case of an accident mithout materially affecting himself or his family. We believe that the Workmen's Compensation Act is considered very favorably by the employees, and also by the employers in our line of business, but a number of them have expressed the opinion that the benefits of the Compensation Act should not be paid unless the workman's incapacity for work extended over two weeks.

* * *

Last year I paid over to the Government as premium $80 and had no accidents. This is considerably more than it has cost me in my fourteen years of operation. Of course I may be one of the lucky employers, as in the fifteen years I have employed about twenty men during the summer months, and in that time have not had any accidents to amount to anything. I think the Compensation Act will have a tendency to create, in some classes of men, a desire to cause themselves slight injury, and render themselves unable to work, for the simple reason that they know they will be compensated by the Government for their injury. Of course this will only be applicable to men who do not want to work.

To my mind the old way of compensating is more satisfactory and of least expense to the country, that is, every employer looking after his employees, and if he wants any protection, go to an insurance company for it.

* * *

I have scarcely given the Workmen's Compensation Act a thought as our premium was such a nominal sum. Fortunately we have had no accidents. I certainly am out what I paid, but feel that I am repaid through visits from officials calling our attention to where precautions are required. I much appreciate it.

I have had a wandering thought of late that we should have a staff of inspectors to keep us warned. Levy a rate sufficient to cover the expense. Make it penal not to keep everything guarded as far as possible. This should be an influence to keep men cautious. Although it would not entirely prevent accidents, no doubt it would prevent them largely. Now that the war has come concurrently with Compensation Act, the strain is heavy. I am not kicking, but the premiums as a whole must run into considerable money. Our war tax must be enormous and must be met, and the question arises, could not the compensation tax be ameliorated so as to provide simply a faithful inspection and warning.

* * *

Act Not Elastic Enough

We had one man injured last year, who laid off about three days, but being a poor man he felt that he ought to try and work if possible, which he did for a few days, but eventually he had to quit work altogether. So we wrote to the Compensation Board explaining just how the situation was, but on account of him going to work for the few days, they would only pay for the first time which he lost amounting to $7,88. He wrote different times to the Board re the matter, but could not get any satisfaction, so gave it up. Of course we consider it very unfair that he could not get compensation and

think that the Act really needs some changes to protect the working man. As it is, it seems only to protect the employer. The great kick that the Board seemed to put up in this case was that the man went back to work within the seven days and also that we paid him the same wages as before he was injured. This we did as a matter of charity. This is the only case we had for the year.

* * *

No More Lawyers' Letters

Our experience of the working of the Workmen's Compensation Act is very limited, but the adjustment of two small claims was very satisfactory and prompt. We find the officials courteous and considerate.

One of the pleasant things about it is the freedom from letters commencing "We beg to advise you that our client Mr. Awkward has placed in our hands his claim for damages on account of being smitten on the nose by a maple switch which had not been removed from the trail over which our client had to pass. Yours truly, Seekum & Skinam."

* * *

Examples of Irregularities In Results

The premiums we paid for 1915 to the Workmen's Compensation Board amounted to $108.90, whereas under previous liability policies our premium would have been $60.50 on the same amount of pay roll.

In the past year we have had but one accident in which the employee was unable for a period of not less than seven days, to do his work, and which was the only case where compensation was received. The compensation received by this individual was $36.30.

In our opinion there are certain conditions in the act which are very unjust. For instance, a man, whose wage is $1.50 per day, meets with an accident in which he is totally disabled temporarily or permanently. At this wage a man is barely able to live if he has any family to keep. If he is injured to total disability he gets as his compensation 82½c per day. Another man whose wage is $5 per day gets injured to the same extent and he gets as his compensation $2.75 per day, in both cases the compensation is reckoned at 55 per cent. of his earnings. To this we would say:—would it not be much easier for the man receiving $2.75 to give up a few luxuries and divide up with the man getting 82½c, thereby giving both a living at about $1.75; than for the other man to live on 82½c per day?

Australian Trade Needs Reciprocal Tariff

Editor Canada Lumberman: Glebe Island, Sydney, N.S.W., Jan. 20th.

We note that you are much interested in doing what you can to develop trade between Canada and Australia. The consummation of your object would be welcome in New South Wales, and it is a matter I have been extremely keen about ever since my visit to your country in 1901. The conclusion I have arrived at is that we must have reciprocal tariff between the two countries; and this has been advocated on many occasions without, so far, any ultimate result. Still, under present conditions, there are very much better reasons to be advanced in favor of establishing a reciprocal tariff in the near future. Our present Minister for Customs—Mr. F. Tudor—is the most capable man who has ever held that position, and the writer feels certain he would give every consideration to any representations made from your side.

One suggestion we might make (which would give your mills an increased trade) is that they communicate direct with the timber merchants here and quote c. i. f. prices. At the present time, purchases are made by merchants here from importers who, in turn, purchase the lumber from your mills at their schedule f. o. b. price and who—at the same time—make arrangements for the tonnage. The mills do not seem to relish the idea of securing tonnage for their shipments, and they also seem to evince a preference for importers rather than doing the business direct with us; so that when you take the matter up with the mills per the medium of your paper it may convince them of the advantage to be received by them if our suggestion were acted upon.

Sales of lumber generally since the commencement of war have depreciated some 40 to 42 per cent. and it is extremely difficult to forecast requirements for the future. At present, as you are doubtless aware, the whole of the tonnage is being lifted by sailers whose owners are asking 105 shillings—per 1,000 feet to Sydney; whereas before the commencement of the war 30 shillings to 35 shillings—was the recognized freight.

We have had an abnormal wheat harvest as you know, and, although the wool clip has been smaller than in other years, the price obtained for wool will recompense graziers for the scarcity in the clip. There is no periodical issued upon timber trading conditions but we are enclosing copy of a report showing quantities of different timbers imported into Sydney during 1914; and when we receive the report on 1915 we will forward it on to you.—Geo. Hudson & Son Ltd., per Geo. W. Hudson.

Editor's Note:—The statement of imports of timber referred to in the above letter shows imports from America, Japan, Norway and Sweden, in one total. The statement is as follows:—Imports for the year from July 1913 to June 1914: Oregon, 79,297,257; Pickets. 3,430,631; Laths, 1,650,265; Redwood, 17,398,181; Door Stock, 1,462,762; Shingles, 199,400; Oak, 1.507,600; Pine, 543,440; Ash, 488,150; Baltic, 25,738,925; total shipments, 131,716,611.

St. Maurice Protective Association

The St. Maurice Forest Protective Association, Limited, held their fourth annual meeting recently at the Place Viger Hotel, Montreal. The report of the president, Mr. S. Laurence de Carteret, stated that the scope and influence of the association had increased materially during the past year, and the introduction of new methods have raised the degree of efficiency attained.

Most satisfactory advances have been made in eliminating indiscriminate slash burning on farmers' lots in clearing land. Use of burning permits in an experimental way during the season of 1914 gave such encouraging results that in 1915 a widespread effort was made throughout the territory of the association to have all slash in clearings burned under the supervision of fire rangers in conjunction with burning permits.

No forest fires occurred from burnings conducted in this manner, and these results have carried much weight with the Department of Lands and Forests when the desirability of the use of burning permits throughout the province has been under consideration.

Among the changes desired being urged upon the Government are: No setting of fires to clear land between April 1st and November 15th without written permits; penalty for refusal to fight fire when called on to do so; increase in penalties for infractions of fire laws; an established minimum for each offence. The consideration given to these proposals by the Minister of Lands and Forests give promise of adequate measures being passed. A distinct advance in preventing fires was made in placing special rangers on the river drives and with improvement gangs. This, with the co-operation of the foremen, should eventually eliminate fires from these sources.

It has been suggested that the members of the association issue written instructions to their woods employees advising them that preventing and extinguishing fires is their first duty, and the president suggested that a standard set of instructions to employees pertaining to forest protection, for use by all the members of this association, should be drawn up.

During the past fire season the total number of fires was 27 per cent, less than during that of 1914, while the number of fires requiring extra labor was reduced 20 per cent. Several hundred miles of portage and trail had again been cut and cleared, making communication easier and quicker. Nine more lookout stations were constructed, making a total of twenty-three.

Good trails had been cut to all these stations with the intention of connecting them to the nearest telephone lines.

The financial statement showed receipts of $37,757.45 and expenditures of $36,509.52, leaving a balance of $1,247.93. The regular assessment for patrol and general expense was a quarter of a cent per acre, totalling $19,731.94. On December 2nd a special assessment of one-tenth of a cent per acre was voted for general uses, principally to cover the expenses incurred in fighting fires. The area patrolled held by members of the association was 7,892,776 acres, to which must be added the settled districts adjoining, but from which no income is derived, and Government lands not under license. The expense in fighting fires during the past season was only 56 per cent. of that during the season of 1914, and a large percentage of the timber killed by fire in 1915 is so located that it can be logged during this and next winter.

Mr. Henry Sorgius, manager, reported that during the season 628 burning permits were issued. Not one of the burnings started under this system got beyond control, nor did any damage result therefrom. Through the use of the system the number of settlers' fires had been greatly reduced in the territory, as the following comparison showed:—1913, 151 fires; 1914, 80 fires; and 1915, 41 fires. The results obtained during the past year were fully sufficient to warrant the demand that no burning of slash should take place between April 1st and November 15th, except under the permit system.

Suit had been brought against eighteen offenders against the fire laws. Six of these cases were won, four lost, and eight were still pending.

Between April 15th and October 22nd, 169 fires, caused as follows, were extinguished:—berry pickers, 7; campers, 3; dam keepers, 2; fishermen and sportsmen, 7; improvement crews, 6; Indians, 2; jobbers, 2; lightning, 4; lunch fires, 4; old fires, 4; railroads, 35; river drivers, 17; settlers, 41; squatters, 1; and unknown, 34.

The suggestion of the president that the members prepare a standard set of instructions to employees pertaining to forest protection was adopted.

The following officers were elected: President, Mr. Ellwood Wilson, Laurentide Company, Limited; vice-president, Mr. Robert F. Grant, St. Maurice Lumber Company; directors, Messrs. Joe. M. Dalton, St. Maurice Paper Company, Limited; Charles LeBrun, Belgo-Canadian Pulp and Paper Company, Limited; S. Laurence de Carteret, Brown Corporation; J. H. Dansereau; secretary-treasurer and manager, Mr. Henry Sorgius.

In the Public Eye

A budget of comment on men and things of moment presented in the interest of our readers, independent of party politics and with malice toward no one.

I wonder what Premier Hearst and his friends think now of J. R. Fallis, and at the same time I would like to know whether Sir Robert Borden has seen the handwriting upon the wall. Fallis is the man who used to represent Peel county, Ontario, in the local legislature. The Davidson Commission showed him up in connection with profits he is said to have made in purchasing horses for the Government. Many a man has disappeared from public life for dealings of this kind, but Fallis did not see it this way; neither did Premier Hearst. Fallis simply resigned and sought vindication by the re-election route. Peel county electors took a different view of it, however, and turned Fallis' former majority of 627 into a Liberal majority of over 300; a turn over of about 1,000 votes. They have given the first public reply to profiteering methods.

Fallis' defeat is a lesson for Fallis, and a pretty clear announcement of the downfall of any others who follow his ideals. If Fallis had made his commission honestly on the horse deals he should have kept it. Handing it over for a patriotic purpose and then seeking re-election was too much for independent Conservatives to stomach. They simply felt that a member of the Government, in his own interest even, should keep his skirts clear, and they went out and voted against Fallis.

When will political leaders in Canada realize that honesty is the best policy and that a clean Government would remain in power indefinitely? That is what I have been trying hard to hammer in, but the task grows more and more difficult, and the Government, instead of taking my good intentions at their face value, has been misconstruing them and classing me with its enemies. If Sir Robert Borden would rise above party politics he would realize that behind these criticisms there lies the best friend the Government could have—the independent citizen who would gladly see him measure up to the stature of a clean and a great political leader.

If Sir Robert Borden fails to see the Peel result in the light of a warning closely related to the Shell Committee situation, he ought at least to recognize it as a public assurance that the people will stand behind him if he tries to stamp out the profiteering business. The defeat of Fallis cannot be taken as a Conservative defeat or as a Liberal victory. It is an announcement of the public temper about profiteering and what it means to any party which fails to stamp it out.

Here is the opinion of a strong Conservative paper (The Montreal Daily Star) on the events in Peel County:—

"BRAVO! PEEL COUNTY:—The electors of Peel County, Ont., are worthy of public congratulation and universal gratitude from the entire people of Canada. Their late member in the Provincial Legislature was a professional cattle dealer, who was entrusted by the Militia Department with the purchase of horses for military service. He pocketed a profit on the transaction—an unforgivable act in a public representative. It is true that when he saw the business in its true light he resigned his seat and turned his profits over to a war fund.

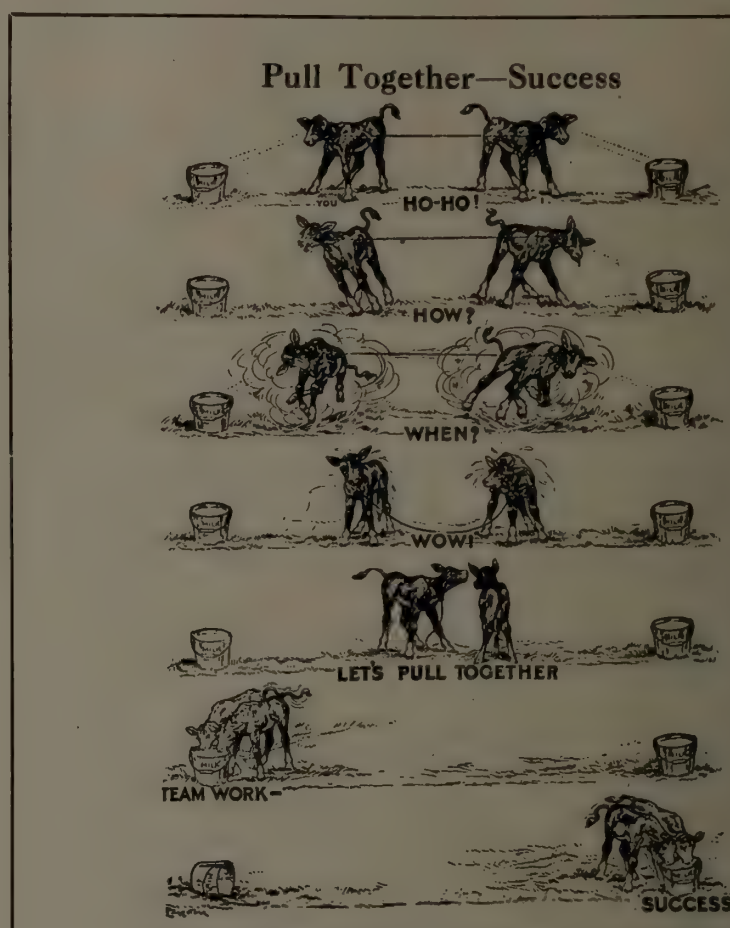
"But he made a mistake in asking his county to re-elect him. They could not do that without seeming to condone his course. So, though they voted Conservative by a majority of 627 two years ago, they voted for his Liberal opponent this time by a majority of 335. That is the right brand of political independence. That is the true way to make use of our party system. We should never allow ourselves to be hypnotized or overawed by it. We should not be its servants—it should always be ours. We should be ready to vote against a bad policy, a bad principle, or a bad man, no matter what label he wears. In this case, it seems chiefly to have been a bad principle—the principle that a public representative can be permitted to make money out of war purchases which pass through his hands."

* * *

When Colonel J. Wesley Allison gave evidence some time ago before the Davidson Commission he stated that he "was not the agent of any company which sold pistols to the Government" and did not profit "in any way, directly or indirectly," by such sale. Major General Sir Sam Hughes, however, now classes him as his special confidential agent in securing munition supplies in the United States, and in cutting down war combine prices charged there. The latest evidence about this special confidential agent was read before the commission a few days ago. Samuel M. Stone, vice-president of the Colt Patent Fire Arms Company of Hartford, Conn., tells of an order for 5,000 pistols given to the company, after a conference between the chairman of the company's board, Colonel Allison, and General Hughes at Moira, N. Y. He states that the Canadian Government paid $18.50 for each pistol, while the U. S. Government has for years been able to buy them for $14,50, and that dealers could buy them nearly 20 per cent. cheaper. Mr. Stone adds that the company gave Col. Allison a "present," a very small one indeed considering his services, but a "present" for all that, and that he "would not like to consider Colonel Allison one of our regular staff."

At present Colonel Allison is in Florida for his health. When he comes back we are told he will be called upon to give more information. Perhaps we will then get at the facts—learn how much he got for a "present" and just what he considered his duties to be, as Major-General Sir Sam Hughes' special confidential agent for keeping down war combine prices. Perhaps too, we shall be given an inside account of the conference at Moira between Colonel Allison, General Hughes and the chairman of the Colt Company's Board.

—SEARCHLIGHT.



How the Western Retail Lumbermen's Association at Portland, Ore., shows that success cannot be attained without co-operation.

Gen. Sir Sam Hughes is reported to be taking steps to organize a battalion of woodsmen in Canada. The War Office has asked that this be done and the Minister has already drawn up plans for raising and officering such a battalion. Prominent lumbermen have expressed their willingness to co-operate in raising the battalion. Companies will be recruited from among the experienced woodsmen of Ontario, Quebec, New Brunswick, British Columbia, Alberta and the northern districts of Saskatchewan. Lieut.-Col. Alex. McDougall, of Ottawa, will be in command, and it is expected that the Majors will be Gerald White, M. P. for North Renfrew, and R. B. Hepburn, of Prince Edward.

In a report recently submitted to the Hon. the Minister of Lands on conditions in the Cranbrook Forest District, mention is made of the severity of the weather, the snowfall in certain sections of that country being heavier this winter than for many years. While this has compelled many logging operators to suspend activities for the time being, there is every prospect of a cut of fifty million feet. Quite a number of ranchers throughout the district are taking out logs, the sawmills buying all that are offered. In the spring the Columbia River Lumber Company intend to begin logging their limits on Bugaboo Creek.

James A. McNair and associates have leased the British Canadian Lumber Corporation shingle mill at Coal Harbor, Vancouver, from the representative of the bondholders, and the plant will likely be started up early in March following some needed repairs to the building. Eight or nine machines will be operated.

Lumbermen Form Insurance Exchange

Inter-insurance Organization Approved by C.L.A.—Being Worked Out as an Individual Scheme—To Provide Insurance at Cost

At the meeting of the Lumbermen's Section of the Toronto Board of Trade held on February 18th, Mr. E. D. Hardy, insurance broker, of Ottawa, was present and delivered an address in regard to inter-insurance on sawmills, lumber yards, etc. This subject was recently taken up by the Canadian Lumbermen's Association at its annual meeting at Ottawa and was referred to a committee. The committee reported at a directors' meeting held in Ottawa during the second week in February. The proposition to establish an inter-insurance organization in connection with sawmills, lumber yards, etc., was then approved by the directors of the Canadian Lumbermen's Association, but it was decided that the Association as a body should not take the matter up, but should recommend it and give it individual assistance as far as possible. The plan is being worked out by Mr. Hardy along lines which are proving acceptable to lumbermen and is meeting with a great deal of encouragement.

In his remarks before the Lumbermen's Section of the Toronto Board of Trade, Mr. Hardy said that they were trying to treat the matter of inter-insurance among lumbermen as a family affair, and not in any way to antagonize the old-line companies. There were four generally recognized forms of insurance. he said. First were the stock companies, second the Lloyds, third the mutuals, such as the Lumber Mutuals in the United States and fourth the Inter-insurance organizations. Inter-insurance simply amounts to the exchange of indemnities between lumbermen through an attorney whom they appointed to act in their behalf.

Eliminating the "Conflagration Hazard"

In connection with fire insurance the element of "conflagration hazard" had always been an unknown factor leading to high rates and frequent losses. Fortunately, in the case of the inter-insurance organizations such as those formed by lumbermen, insurance could be confined to lumber plants. Most of the lumber risks were more or less isolated and in some towns there would only be one risk in the whole locality. Stock companies, taking various lines of risks in one locality were unable to strike an adequate rate and were often obliged to charge a rate based more or less on experience which in some cases would prove to be too high. In the stock plan of insurance any profits from the operations of the company went back to the surplus of the company, or into the pockets of the shareholders. The policy holders only participated in the paying of premiums.

In the case of the Lloyds, the underwriters guaranteed the liability. They paid up a certain amount and were therefore liable to the extent of their private fortunes and in that case of course while there was a saving at the start, there was no return to the policy holders in the form of a dividend or a profit. In the case of the Lumber Mutuals the operation resembled a little more closely that of the inter-insurance plan, the resemblance being that after the profits had been determined the board of directors voted what percentage of the profits should be returned to the policy holders in the form of Dividends. Some of the mutuals were returning 40 per cent. of the premiums and applying a substantial amount to surplus.

Insurance Provided at Actual Cost

The Inter-insurance plan provided indemnity at actual cost. The premium receipts were placed on one side of the ledger and against them on the other side were placed the operating expenses, estimated from long experience at 20 per cent. When the losses commenced to come in they were apportioned pro rata over the premiums, so that each policy holder bore his proportionate share of each loss. Then at the end of the year there was placed to the credit of the subscriber or policy holder all the profits standing to his credit on the books after providing for losses and expenses. The inter-insurance plan simply distributed the losses over the premiums. By confining operations to the very best class of risks and establishing a rigid inspection service they reduced the loss ratio to a minimum.

Mr. Hardy explained that a United States company which he represented in Canada had been operating an inter-insurance organization in Canada under this form, under the name of the Lumbermen's Fire Indemnity Contract. During the past year their loss had been less than 10 per cent. of the premiums. If an average stock company had a loss ratio of about 50 per cent. of the premiums, it considered that it was doing very well. When the present organization operating in Canada had been started, the interests in New York had put up the necessary Government deposit of $20,000. They had now agreed that if Canadian Lumbermen were willing to put up this amount they would retire and allow the organization to be converted into a Canadian one.

Mr. Hardy explained that the idea was to organize in Canada a Lumbermen's Insurance Exchange. By the arrangement made with the New York representatives it would be possible for the Exchange to obtain at the outset the benefit of the time, labor and expense that had been involved in bringing the organization up to its present stage. All that was required was a deposit of $20,000 to be handed to the Government. Ottawa lumbermen had been strongly in favor of this arrangement and many of them had already subscribed to the plan, so that they now had 50 per cent. of the amount required. The subscriptions were being taken in the form of Government war loan bonds recommended by the Government as a perfectly good and stable security, paying 5 per cent.

The organization now have roughly $1,500,000 worth of insurance on their books with premiums of about $35,000. Last year they had reinsured all their business and although they had to pay for reinsurance practically the same rates as they received they had been able to pay all their expenses and would show a profit of about 15 per cent. to subscribers. If they had not reinsured and had known that they were not going to have any fire loses, the profit to subscribers would have been 60 per cent. This year they hoped that they would be in a position to assume some of their own liabilities and if they had an equally favorable year the results would be all the more gratifying.

Experience in Western Canada

Mr. J. L. Campbell, at the request of the chairman, outlined the experience of the Western Retail Lumbermen's Association in the Prairie Provinces. He stated that the Western Retail Lumbermen had been paying on a basis of $2.50 about twelve years ago. The old line companies refused to reduce that rate. The lumbermen then established a company of their own. All those who joined paid a premium equal to what they had been paying to the old line companies. They were soon able to commence building up a surplus and to reduce their premiums. This continued from year to year and they were still building up a surplus and reducing their rates. They had now brought the rate down to something like 30 or 40c and were still building up the surplus.

This association was confined entirely to retailers. It did not touch the manufacturers because the retailers considered that the manufacturing risk was too hazardous. Mr. Campbell was inclined to favor the organization of an inter-insurance association which would confine itself in the first place to retail lumbermen, being doubtful whether it could be successfully applied to the manufacturing risks.

Mr. Hardy thought it would be rather unkind to the manufacturers to exclude them from this form of protection. The question was simply one of determining what rate should apply to the manufacturers or to the retailers. The large manufacturers had been the first to recognize the advantages of this form of indemnity. The largest inter-insurance companies in the United States were controlled by lumbermen who catered to the manufacturers first of all. Their income had been largely built up on the manufacturing business and it was an exception whenever they insured retail yards. In Ottawa the largest lumber firms, those of J. R. Booth and W. C. Edwards and Company were now using this class of indemnity first and then filling up the balance of their requirements with old line companies.

Mr. Campbell stated that he had no intention of throwing any cold water upon the proposal, but he suggested that the manufacturers should take it up as a class for themselves and that the retailers should do likewise.

Mr. Hardy added that while it might be true that the retail dealers as a class had shown a better fire record than the manufacturers, still it was not entirely clear to him that this was the case. There had been numerous fires among retailers in Montreal, if not in Toronto. The plan he had outlined would not involve an injustice to any one class, provided the rate were made commensurate to the risk and the profits were divided in proportion to the premiums. It was simply a matter of adjusting the rates to the hazards. There was no inequality that could not be met by graduating the rates.

At the conclusion of Mr. Hardy's address a vote of thanks was moved by Mr. J. L. Campbell and unanimously carried.

We understand that during his visit to Toronto Mr. Hardy succeeded in securing subscriptions sufficient to complete the government deposit.

British Columbia Western Soft Pine

Qualities and Uses of an Important B. C. Product

"British Columbia Western Soft Pine" is the title of a new bulletin (number 17) which has been issued by the B. C. Forest Branch. The bulletin which bears a cover picture of B. C. Western Soft Pine trees in the forest, contains an extensive description of the wood and its uses. Western Soft Pine is sold under various trade names. In British Columbia it is known as Western Soft Pine and also as Mountain Western Pine. In Idaho and Washington it is known as Western Soft Pine; in California as California White Pine; and in Arizona as Arizona White Pine.

The tree grows almost everywhere in the Pacific and Rocky Mountain forest regions from Southern British Columbia to Mexico. It is, in fact, one of the most widely distributed and important of the western timber trees. The total stand of Western Soft Pine timber is greater than that of any other pine in North America.

The tree is usually smoothly cylindrical and straight, with a long narrow open crown of large branches. In British Columbia the height of mature trees is usually from 80 to 100 feet and the diameter from 2 to 4 feet, though many of them grow much larger. The bark of the mature tree is from 2 to 3 inches thick and is reddish yellow in color. Partly on account of the dry climate which characterizes its range, it is a tree of slow, even growth, producing wood of fine grain and quality. The species is long lived; trees have been found which were over 600 years old.

The Wood

The wood of Western Soft Pine is soft, light, strong in proportion to its weight, works very easily and smoothly without splintering or splitting, and readily takes and holds paints, stains and varnishes. It seasons unusually well, being very free from warping and checking, and once seasoned holds its shape without shrinking or swelling. It varies in color and texture according as to whether it comes from the outer or inner part of the tree.

The outer wood of the tree is yellowish white in color, with a very fine grain and soft satiny texture; it is from the outer part of the logs that all the clear grades of lumber are cut. When seasoned, it is so similar in appearance to white pine that it is difficult to tell the woods apart. In 1902 a carload of this pine (shop grade) was mixed with eastern white pine in a large yard in Ohio, and on a trial, expert graders failed to distinguish one wood from the other. Because of the large size to which Western Soft Pine grows, and because the wood does not check in seasoning, it can be obtained in wide clear stock. The knots, though larger than in white pine, are few in number. The wood is especially suitable for shop and factory lumber. Short clear lengths such as are used for sash and door stock can be cut from between the knots easily, and with little waste, a valuable quality appreciated by factories which purchase pine for cutting out clear lumber between the defects. The soft, even fibre, fine grain, and good working qualities of the wood make it highly valued for all kinds of finish work.

The wood near the centre of the tree is very similar to Norway pine, being orange brown or reddish brown in color. It is less soft than the light colored outer portion, and having as a rule grown faster, it is somewhat coarser in grain. The lower grades of lumber are sawn from the central part of the logs and from top logs.

Weight. The weight of the dry wood per cubic foot is, according to Sargent, 29.4 pounds. The following weights, which have been obtained by manufacturers in making shipments, and are shown in shipping records, may be considered approximately correct:

	Dry	Half Dry	Green
	Per 1,000 feet B.M.		
Boards, Dressed one side	2,000 lbs.	2,450 lbs.	2,900 lbs.
" Rough	2,400 "	2,800 "	3,200 "
" Re-sawn	1,000 "	.....	.....
Shiplap, Finish	1,800 "	2,200 "	2,600 "
Dimensions, Dressed one side and one edge	2,150 "	2,575 "	3,000 "
Timbers, Rough	2,500 "	2,900 "	3,300 "
Drop Siding and Flooring	1,750 "	.....	.....
Bevel Siding and Ceiling, 5/8	750 "	.....	.....
Ceiling	1,700 "	.....	.....
Lath, per 1,000 pieces	450 "	.....	.....

Durability. Western Soft Pine makes a splendid lumber for outside use, and its value in this direction is increased by its ability to take and hold paint well. It is especially suitable for siding and sash and doors. It should not be used in contact with the ground unless first treated with creosote or other preservatives.

Strength. Exhaustive strength tests for Western Soft Pine have not yet been completed, but such tests as have been made show that it is stronger than the white pines.

Sargent gives the following strength values:

Western Soft Pine (Pinus ponderosa)	10,000 lbs. per sq. inch	1,209,000 lbs. per sq. inch
Eastern White Pine. (Pinus strobus)	8,800 " " " "	1,208,000 " " " "
Western White Pine (Pinus monticola)	8,700 " " " "	1,356,000 " " " "
Sugar Pine ..... (Pinus lambertiana)	8,400 " " " "	1,096,000 " " " "

Bulletin No. 101, United States Forest Service, in comparing car sills of Western Soft Pine with Douglas Fir sills of the second grade, gives the Pine the following values: Cross bending strength, 70 per cent.; modulus of elasticity (stiffness), 68 per cent.; and crushing strength, 74 per cent. that of the Fir.

The Cut

Western Soft Pine forms a large portion of the timber cut along the Kootenay and Kettle Rivers, and in the Okanagan and Nicola Valleys. During recent years the annual cut of this wood in British Columbia has averaged around seventy-five million feet board measure.

Uses

Western Soft Pine is manufactured into the same products and used for practically the same purposes as white pine. It is used for nearly everything from common lumber and ordinary rough construction timber to fine interior trim and finish.

Dimensions and framing timber. A large quantity of the pine is cut into the ordinary dimension material used in buildings, such as joists, rafters, sheathing studding, shiplap, etc. Some of the qualities which give it value for these uses are: It does not warp or shrink after being seasoned, is easy to work, nails without splitting and holds nails well. It is used in buildings of every kind—houses, barns, granaries, garages, sheds, and all farm buildings.

Siding. Western Soft Pine is manufactured into all varieties of siding—drop, bevel, novelty, barn, and also the old-fashioned bevel siding commonly called "weather boarding." Its ability to take and hold paint, and the fact that even the thin bevel siding will nail without splitting, makes it especially suitable for this purpose.

Siding is manufactured in two widths, four inch and six inch. In the cities four inch siding is in strong demand, owing to the better style and architectural effects obtainable by its use. In the rural districts the six inch siding has been used most, but the narrower width is now becoming popular.

Outside finish. All wood exposed to the weather should be kept well painted, since paint keeps out moisture and fungi and prevents decay. Some woods do not have the quality of holding paint well. If they are used for outside finish the continual repainting which they need is a big item in the upkeep expenses of a building. Western Soft Pine is especially adapted for outside finish, because it takes and holds paint so well.

Interior finish. Western Soft Pine is a splendid wood for interior finish. Any form of varnish, hard oil, stain, paint or enamel may be used on it. Oils or stains penetrate readily below the surface and give a permanent color, which gradually softens, darkens and becomes more beautiful with age. On account of its softness, even texture, and ease of working, the wood comes from the planing machine without showing any knife marks or fuzz, and with a smooth surface which can be given a high, satin-like finish with less expensive hand labor than most woods. The wood, if properly dried, does not check while seasoning, and when thoroughly dry it stays in place and does not swell or shrink.

Ceiling and Partition. In the form of ceiling and partition, Western Soft Pine is very popular owing to its attractive appearance, its good finishing qualities, and its freedom from shrinking, checking, etc.

Sash and Doors. A large proportion of the shop and factory grades of Western Soft Pine is re-manufactured into sash and doors.

Patterns. Owing to the ability of seasoned Western Soft Pine to hold its shape without warping, shrinking or swelling, it is also used, like white pine, for pattern lumber.

Turnery. Western Soft Pine is a fine wood for turnery stock, because it is easy to work, is of soft texture, fine grained, does not

check, splinter or warp, and takes a high polish. It is manufactured into balusters, grills, newel posts, solid and built-up porch columns and spindles.

Boxes. Western Soft Pine as a box material is equally as good as white and sugar pine, and is extensively used from the Pacific Coast east to the Mississippi River, especially for fruit boxes. It makes a box that is strong, serviceable, and also attractive in appearance. The wood is light in weight, takes a good, smooth finish from the planer, and is easy to print on. Very thin lumber can be used, because it is strong and does not split when being nailed.

Cooperage and Tanks. Western Soft Pine is used in slack cooperage for buckets, kegs, and barrels for shipping fruit. It is also used a great deal for tank stock.

Furniture. Western Soft Pine is well suited for making all kinds of cheap furniture, such as kitchen tables, chairs, and cupboards.

Agricultural Implements. Western Soft Pine is much used in the manufacture of agricultural implements, carriage frames, wagon boxes and similar products.

The Weak Link in Business

By Frank H. Young*

Today business is no longer a thing to be looked down upon by the elite, but it is a profession in every phase of its development. It is a science requiring as deep and careful study as any other profession of the present day.

The sooner men realize the importance of getting together to study out their problems then the question of future trade development and protection will be solved.

Never before have the opportunities for growth been so great, yet never before has there been so much need for caution and understanding that the growth may be permanent and not a temporary splurge with its usual disastrous results.

My chief desire is to awake in every man the knowledge of the possibilities before him if he will only grasp them; to probe under the skin until the weak spot hurts and then prove that there is a remedy which will act as a cure-all most effectively if men can be induced to crawl out of their shell of fear, lack of confidence and jealousy. I do not propose to tear-down excepting to rebuild where the foundation is rotten. I am not a pessimist, but I do believe that out of the pessimism of some the optimists have made the rounds by which they built their ladder to success.

The business man of to-day, no matter what his line may be, just as soon as he thinks himself big enough is prone to forget the struggle by which he succeeded in achieving his present position, takes success as a matter of course, and at this point shows the weakness of inefficiency. Simply because he thinks too much of his own bigness and too little of efficient management. He forgets that where efficiency has built his present success he must continue that same aggressiveness to hold that which he has gained.

Therefore in criticising the administration of any man's business the spot-light should be first turned on the man higher up and not on the office boy.

What The Spotlight Shows When Turned Inward

When things have not been going just right and you are piling it on good and thick, just reverse the glimmer of the spot-light onto yourself. How it shows things up. Cobwebs completely block the door-way of clear sighted, well rounded, efficient management.

Do you play fair in searching yourself for faults? Or do you try to slide the blame off onto some of your employees? Or again do you find places that are weak and skip the spot-light over to some particular feature your natural ability may shine in? The weak spot remains just as big as before. There is hardly a man but that knows how easy it is to let slide, cover up, or go around something they lack ability or energy enough to go through; while the talent which they unquestionably possessed received all the attention and development, with the results that you have become one-sided; efficient in just one feature alone.

How about the time when the weak side of your business is taken sick, will you know how to doctor it with your lack of developed all round insight.

In most cases it is where no employee has the ability to effect a cure; unless you can come to the rescue disaster inevitably follows.

I do not contend that a man can be perfect in all the phases of even his own business, but I do contend that it is altogether too easy to travel along the lines of least resistance, especially when success is coming easy, and leave the things seemingly unimportant but equally as complex to some employees.

Why this preliminary about efficient management you say? We are successful men. We have plenty of money. We can hire efficient help.

In every successful man's life there comes a time when knowledge of every phase of the management of his business is necessary, and it is imperative that he should not be found wanting. He must be able to save himself.

You boast of success because you can buy equal to the best, but don't know anything of the selling, leaving that all to your manager; you may be a wonderful salesman, but never were any good on the buying end; that you always left to someone else. You can buy, you can sell, but the accounting always fretted you; you have a pretty good man who looks after that end, so you don't bother with it at all. Now without questioning the integrity or ability of your salesmen, your buyers or your accountants, what are you going to do if they drop dead? You are going to suffer inconveniences and losses until some one else has ben found to fill those certain places. Further, these able men have a perfectly natural right to be ambitious; they are not going to be salesmen, buyers or accountants all their lives; they are going to have an interest in your business, become your competitors, or some competitor is going to grab them away from you. Without in any way questioning the honesty of these able employees, yet they have stored away in their minds not only the result, the losses and gains, but also every step down to the very minutest detail of how every problem of your business is worked out and developed. They know where you buy, on what terms, the qualities and the service you get; they already have studied out your weak points and know where you could have overcome them to your advantage. They know to whom you sell; what classes are the safest risks; which certain customers are surest pay; they also know the customers from whom you could secure more business. You say all this may be true, but if you have not forestalled every such move in studying out the possibilities of your business I say you are not the efficient managers you could be.

Aside from caring for the buying, selling and possibly examining the accounts of your private ledger once in a while, how many of you ever take the time to go carefully through the accounts as shown on your books. The man who does is an exception to the usual.

The branch of your business that has the most important bearing on the success of your business is given the least thought.

Do you know how your accountant got the figures he posts to your private ledger? Do you know whether they are right or not? Do you watch carefully the purchases from the different business houses? The terms and method of payments? Naturally you say of course I do; don't I sign the checks. I question the depth of the sincerity of your answer. I can cite you from actual experience where one firm worth several millions of dollars thought just as you do, but they were buying on a seventy day basis and I was paying on a ten day basis, with a much larger percentage of discount. They had been doing business that way for over thirty years and never new the change had been made until while poring over the private ledger they discovered a gain of almost 20 per cent. earned over any previous record.

This man had previous to this paid out in discounts which he might have saved enough to keep one family in first class circumstances for a lifetime.

I can cite you a case of what was at one time a partnership owning mills in several parts of the country. These partners were unquestionably evceptionally capable business men, supposedly worth many millions, but they counted their wealth by mills and not by money.

They grow old in the business and their boys who had been living in white flannels and on nursing bottles all their lives assumed control. These boys were not competent to sell popcorn let alone handling a real man's size business. They decided it would be much better sport to sell out, divide the receipts and go back to the nursing bottle life again. Listen to the results. Where they had fully believed each would get over a couple of millions, there was actually less than one hundred thousand dollars left to divide among them all. How did this happen? The two original partners were not efficient business managers; they knew every department of the business but the accounting. They could not tell the meaning of a balance sheet and would not confess it to their accountants. Hence the disaster.

Leaving Too Much to Others

As the result of a series of questions put to several different dealers in lumber I find that an average of 95 per cent. of your sales are on credit. The number of accounts on your books may vary from five hundred to as many thousand. Do you know how your customers care for their indebtedness to you? Do you ever take the trouble to understand the postings to your debtors accounts in the sales ledgers? Is it not true that you watch many of the big contracts and their settlements while the smaller ones you pay no attention to? Do you not also remember many of your customers' accounts and noticing their checks when received in the mail resolve in your mind that

* An address delivered before the State Convention of Retailers at Poughkeepsie, N.Y.

they are pretty good people to cater to without finding out one thing more about their financial integrity?

But what about the hundreds of other charges you know nothing about? Those are left to your bookkeeper too. He is capable of looking after them without any trouble. Your bookeeper will not take any more interest in your business than you do yourself. There is no reason for him to. The amount of responsibility is not properly divided. You expect this man to shoulder the worries that are equal to one-half of your yearly net gain while you say you have other worries to look out for. He has only his position to lose; you your business.

Let us eliminate the good accounts and look into the slow and never pay ones. Statements are rendered, then requests for payment, then you send them severe letters, even going so far as to warn them of possible suit, without a reply of anything better than promises. You finally in disgust, at the next period of closing your books, list the tough ones and forward to your attorney for collection. The big easy ones he goes after and gets in; they mean actual money to him; to the harder and smaller ones he will mail one, two or possibly three letters and then forgets that he has the accounts for collection. Your accountant requests of your attorney a statement of progress on the accounts, receiving in reply a check covering your share of the good collections made and a return of the others with the statement "Obliged to return uncollectable." Your accountant asks you what he shall do about them, and you after saying a few things under your breath tell him to cross them off the books. Mr. Business man you deserve to lose that money; there is no other to blame but yourself; don't try to take it out on your employees.

From figures obtained from dealers in different parts of the State of New York, New Jersey and from many dealers in one large city the following percentages have been averaged: Your individual experience may be different and you personally may not agree with them, but nevertheless they are the figures quoted by representative lumber dealers in the different locations mentioned.

Let us take gross yearly sales on one million dollars for a basis to work on. We find that your net gain averages 8 per cent. or $80,000. On your gross sales we will figure that only 90 per cent. or $900,000 is sold on credit. Of your credit sales 90 per cent. is collected without any trouble; of the remaining 10 per cent. or $90,000, 25 per cent. or $22,500 is collected after considerable trouble on the part of your collectors. The remaining 75 per cent. is turned over to your attorneys for collection.

We will give him credit for being two-thirds successful, and he collects $45,000, retaining, however, $20,000 for his fees; the balance or $22,500 he returns as uncollectable and you cross off to loss and gain this amount, which is 2½ per cent. of your gross sales. This 2½ per cent. is the average of loss by uncollectable accounts as reported by different firms. The average firm fails to connect the collection fees with the loss caused by these accounts. Is there any reason why the $20,000 paid for collections should not be charged in as part of the loss by bad accounts? Adding the $20,000 fees and the amount ordered crossed off you have an actual loss of $42,500 or 4¼ per cent. of your gross sales. This is a total loss your business had to suffer as the result of a weakness somewhere. Do you realize what this means? It means that on a yearly sales basis of $1,000,000 you should have earned $122,500 instead of only $80,000. Your lack of efficient interest in the accounting department of your business has cost you over 50 per cent. of your actual earnings. I can readily understand many of you saying those figures are off, too high, but I would hardly dare doubt the veracity of the men giving these figures. many of them being well known to you as leaders in this profession. Even granting that the figures are too high, if divided, and we use just one-half, making your actual losses by uncollectable accounts only 1¼ per cent. and fees paid attorneys 1 per cent. your actual loss would be 2¼ per cent. or $21,250; over 25 per cent. of what your net gain amounts to. This means that you have given from one-quarter to one-half of your entire year's labor in lost energy.

Who Is To Blame For Losses?

Now who is to blame for all this loss? YOU ARE. "An ounce of prevention is worth a pound of cure" is a safe motto to tack over your desk. Practically the entire amount of these losses could have been prevented. Eliminate the causes. Unhealthy jealous fear of competitors is one of the great bug-bears of nearly every line of business and proves the undoing of many otherwise successful firms.

Why should you grant a man credit just because you knew your competitor across the way would get his business if you turned him down? You had rather risk your money than allow him to get the business. That idea is not business; it is child's play, but very few merchants have backbone enough to overcome such childishness, and it proves pretty expensive in the long run.

The year 1915 has seen greater strides along the lines of efficiency, co-operation, burying the hammer and getting together of business men than has been known in all previous history put together.

The great losses to your business can be overcome.

First—By starting a systematic search for your own weakness.

Second—By competitors getting together and in a friendly way study out the difficulties that each knows should be overcome.

Third—By eliminating jumps in the dark.

Investigation proves that losses by uncollectable accounts could have been prevented by foreknowledge of the integrity and bill paying habits of the party seeking credit, and if such information is not available from systematic investigation or the customer himself, why not let the other merchant take the risk and the loss too.

No business house should extend credit without first knowing the purchasers ability to pay. If a purchaser is unwilling to explain on what grounds he basis his right to seek credit the firm selling him is sure to have trouble and suffer loss. Too often the firm and customer both forget that in seeking credit the customer is seeking a favor or actual loan that is worth to the firm at least ½ of 1 per cent. each month the credit is open, and that the purchaser should in fairness be willing to show wherein lies his ability to care for the debt he desires to contract.

I recently read a bold type ad in a New York paper, "What does a creditor care where the money comes from so long as the debtor meets the bill promptly?" It voices the failing of most creditors. Just because a bill is paid promptly is no excuse for your lack of knowledge of the debtor's resources. The full knowledge of a man's integrity and his bill paying habits are the only mediums upon which to base a man's credit worth.

Many men worth fortunes have become enormously wealthy because they have successfully evaded payment of their just debts, and not one of you men here today but have had experience with one or more of this class. On the other hand many men with small assets, but whose integrity is unquestionable, have proved among your best customers. An occasional loss from reverses is reasonably expected, yet such men do not seek credit for any large amount without gladly securing you against loss. It is only a certain class of speculators, promoters, carpenters, etc., who contract to do certain pieces of work on a protected contract without giving you the same protection that prove the cause of the greatest percentage of your losses. Very seldom can you secure satisfactory security, yet you allow them almost unlimited credit with but a vague knowledge of their ability to care for or even intentions of settling their just dues. Again, in order to secure a certain contract they underbid competition, do the job at a loss, and you are made the goat; obliged to either pocket loss or await your chance to get even.

Co-operation Eliminates The Losses.

If you men would co-operate there would be little chance for such losses. You could entirely eliminate every scalper, unfair promoter and speculator and put that amount of business into the hands of promoters and builders of well known integrity and ability.

The leaps in the dark need not be taken any more. If by the use of a little horse sense you can grant credit to whom you will with a perfect knowledge of how and when payments will be made—why not use horse sense?

Until very recently the means for the proper investigation were not at hand, but now a system has been developed that is applicable to every individual line of business so that every creditor using it need take no chance whatever. For this system covers the compilation of Facts not Thinks, which, however, depends on just how far each merchant gets out of his rut of fear and jealousy.

While there is bound to be in every community a certain percentage of people who solicit credit with no intention of paying, yet the knowledge of the new co-operation credit system being in operation proves like letting down the gates at a railroad crossing; it's only the very few daring ones who will try to get by, But they will find the engine of credit investigation rushing at them and will jump aside or be put out of the running.

On the other hand, there are others doing a business that warrants a desire on your part to extend them credit; if the means for a proper investigation were at hand you would secure a rating and make a bid for their business.

A system of investigation increases your income in two ways; it eliminates losses by bad accounts and opens the way to securing reliable new ones with perfect safety.

Experience with retailers in general shows that in a city of one hundred thousand inhabitants, in one year foreknowledge saved approximately $100,000. Another city just installing a credit system has already proved its ability to benefit its members, and specific

cases can be cited where hundreds of dollars have been saved in individual cases.

Another benefit of this new co-operation is that in change of circumstances the co-operator is advised in time to take steps in order to prevent loss.

I have given as my subject "The Weak Link." I have proved that the weakest link of your business is the credit department. I have shown that the greatest need for development is along lines of credit knowledge. I have shown by concrete example how ridiculously weak this link really is. I have demonstrated the possibilities of welding so that this link may become the strongest in the chain of efficient management.

All that is required is your affiliation and co-operation; your willing self-sacrifice and earnest thought; a broadened view of present day business economies. Be big enough to forget petty competition and jealousies. Make your slogan for 1916 Safety First. An ounce of prevention is worth a pound of cure, and you have made strong the weakest link.

Trade Reorganization—What the War Involves

Germany's Commercial Supremacy Must be Extinguished

A special luncheon of the Canadian Manufacturers' Association was held on February 23rd, at which the members were given an opportunity of hearing an address by Mr. F. C. Armstrong, European manager of the Export Association of Canada, Ltd. Mr. Armstrong is on a brief visit to Canada, after making a careful study of the general business situation in England and France. While abroad he had exceptional opportunities for obtaining reliable information regarding the fiscal policies that are likely to be adopted by the allies before the war is over. In his address Mr. Armstrong said that he had gone to England about the end of September, 1915, to look over the situation there and on the continent, in behalf of the Export Association of Canada. He had now returned to report upon the position as he found it in Great Britain, France and elsewhere, and to consult with the directors and shareholders of the Association as to future steps.

The subject of export trade was of the most vital importance to every Canadian. Next to the winning of the war the most important thing for Canada and for all the allies was to organize their manufacturing industries, transportation facilities. etc., so thoroughly that after the war the prosperity of the country would go on without interruption. When one spoke of "after the war" there had formerly been a great deal of misunderstanding as to just what was meant. During his visit to England and France he had realized that a great unanimity of opinion was developing as to what this term involved. The people of the allied countries had come to realize that they could not be satisfied with winning the war, but must rid the world of German aggression after defeating Germany's army in the field. If they allowed Germany, after the war, to build up her commerce and wealth, they would be giving her power once more to forge another weapon with which to renew her scourge upon civilization. Therefore it had become a matter of the salvation of humanity that Germany should not again be entrusted with the power to repeat the damage which she had been inflicting during the present war.

It was necessary, first of all, to crystalize public sentiment into some concrete and definite understanding of the method by which they could put it beyond the power of any individual to buy German goods, or, if he bought them, to make the price so high that the goods would no longer be attractive. The ordinary machinery for accomplishing such a result was that of tariffs. Mr. Armstrong had been enabled to speak with many representatives of both political parties in Great Britain and had become convinced that all people in Great Britain were now a unit upon the subject of dealing with the tariff question on national and economic lines. Prominent Liberals had told him that there would be no resumption of the tariff fight. The free trade and conscription fights in Great Britain had gone into the melting pot. England would deal in future with the tariff problem from an entirely new angle so that the way would be clear for working out a plan for consolidating and strengthening the whole Empire.

The British Government and nearly every important commercial association in Great Britain had taken the matter actively in hand and were calling for some form of preferential trade arrangements which would be effective along these lines. Sir Richard Musgrave, secretary of the London Chamber of Commerce, had put the matter to him in a very definite form, saying that what they had in view was first of all, to make arrangements for looking after the interests of the Empire, then to do all they could to promote the interests of the allies, then to treat with neutrals as they had deserved, and finally to deal with the enemy and to take the necessary steps to exclude his trade from allied countries. Invitations had been sent out, Mr. Armstrong said, for a meeting on June 4th, of the Imperial Chambers of Commerce, to be held in London, the chief object of which would be to get the best business opinions of the different portions of the Empire to aid in working out the commercial problems that would develop after the war.

First of all, he believed, that it would be recognized that there would be a trade preference given within the British Empire. It was important therefore, to perfect their representation in all the countries which make up the Empire; in Australia, New Zealand, South Africa, the Crown Colonies, India, etc. The Export Association of Canada had already been able to make arrangements for representatives in New Zealand and Australia, both of which arrangements were working extremely satisfactory, except for the difficulty in securing transportation. These representatives would no doubt become distributing machinery of great value. In England Mr. Armstrong had been able to conclude arrangements for promoting Canada's trade with the Crown Colonies. He had even been able to secure orders for many thousands of dollars worth of material, which, in most cases, unfortunately, we could not supply because we were so heavily engaged in the production of war order materials. Canada, however, could count upon a very large field for her manufactured goods in these colonies in the future.

In regard to India and the east it had appeared to him to be inadvisable to open up connections there at present when they were unable to furnish either the goods or the transportation. The promotion of trade in these countries might be left in abeyance for the time being.

In South Africa they were being pressed by the Trade Commissioner, Mr. Egan, to extend their organization and to help in building up Canada's trade with that country.

Perhaps the most difficult country of all to deal with was Great Britain, especially under the present restrictions in regard to transportation. The recent statement by Mr. Lloyd George that the Government of Great Britain had made a mistake in not taking complete control of shipping at the beginning of the war was of great importance. Mr. Armstrong believed that if the Government should take control of shipping, Canada would really be benefitted thereby because, when tonnage is scarce it is inadvisable to tie up shipping in carrying goods from very distant countries such as Australia and the Argentine, when the necessary materials can be had from countries such as those of North America which are so much nearer Great Britain.

After the war, many countries would be urgently in need of articles which formerly could only be made in Germany. The allies could only complete Germany's economic defeat by supplying these materials. Russia had been buying three hundred million dollars worth of goods from Germany annually, in fact over fifty per cent. of the manufactured goods she imported. She could not produce these goods herself. As soon as the war was over she would have to get them, She would not be able to buy them from France or Belgium, because all of Belgium and the finest manufacturing districts of France had been devastated by Germany. She would have to turn to Great Britain, and Great Britain would be very fully occupied and would only be able to take care of a portion of the demand. Then Russia would have to come across the Atlantic. She would come to Canada, beyond any doubt, and would strengthen her tendency to buy Canadian material. But she would not come to Canada to anything like the possible maximum extent unless we went to Russia ourselves and showed her our ability to furnish such materials as she required. If we did so, Russia would be prepared to buy our goods in preference to United States goods. We must therefore study the markets of Russia, and organize our production, distribution and finance, or we would not secure the share which otherwise could easily be had.

Mr. R. J. Young, Joint Manager of the Export Association of Canada, Limited, also spoke briefly, enforcing what Mr. Armstrong had said regarding the importance of organization, and stating that he intended to call upon as many Canadian manufacturers as possible, chiefly those directly interested in the export situation, so as to urge upon them the necessity for joining the Association. Some time in June or September they intended to hold a Canadian National Export Trade Convention which would bring together the carriers, the financiers, the manufacturers and every other national interest which was a factor in the building up of export trade.

Sawmilling Operations Following the Railways

Developments Along The C. N. R. and G. T. P.

Now that the interior of British Columbia is being served by railways to an extent undreamed of a few years ago, the timber wealth of regions hitherto remote is being levied upon by the pioneer sawmall owner to an extent of which the average lumberman can have no conception. Some of these small plants were located ahead of railway construction at points likely to become centres of development later on; others were started up by ranchers and land companies to supply a local demand for building material; but in most cases the impelling circumstances were ideal mill sites going to waste, plenty of good timber close at hand, and the assurance of transportation for the output in case the local demand proved insufficient. Back of all this was a supreme faith in the future of the province and the belief that in the course of time the modest sawmill of today would become the nucleus of a thriving community and be replaced by a modern band mill capable of turning out perhaps 100,000 feet every ten hours. This corallary of events has been duplicated more than once in the past hostory of British Columbia, and is bound to be repeated many times in the future owing to the fact that the rapid settlement of the prairie provinces foretells a demand for lumber in a few years that will tax the ability of our manufacturers to supply.

Some fifteen or twenty sawmills of limited capacity have been located along the Canadian Northern and Grand Trunk Pacific railway lines during the past two years, while probably half as many have been built or are projected at points along the Kettle Valley and Pacific Great Eastern lines. The prediction has been made by several of our most experienced lumbermen that the next ten years will see as many mills erected along our new lines of railway as are now tributary to the pioneer Canadian Pacific line, and in view of the new timber areas opened up, and their nearness to the prairies, the opinion would seem to contain no element of improbability. It may be taken for granted that a large proportion of the rough lumber and timbers to be purchased by the prairie retailers a few years hence will be shipped to them by plants not now figuring in the manufacturing game. By that time, it is to be hoped, the mills at the Coast will be so busy catering to the foreign demand for lumber that the competition of the small mills will be welcomed.

Nelson's Sawmill at Barriere North Thompson River, B. C.

Typical Plant on Thompson River

At Barriere, in Kamloops district, there is a small mill so advantageously placed that the proprietor, J. H. H. Nelson, sees prosperity ahead. The mill site comprises sixteen acres fronting on the Thompson River at a point where the Barriere River joins that stream. The Canadian Northern Railway track parallels the north boundary of the site, thus affording handy shipping facilities by means of a spur line to side of mill. The building is 30x110 ft., with boiler house and filing room 12x80 ft. on east side, and planer room 20x60 ft. on west side. The equipment comprises 50 h.p. Leonard boiler and 40 h.p. Leonard engine, with 60x14 in. drive to circular (54 in. inserted tooth Simonds saw), also 56 in. x 8 in. drive to countershaft above for edger fitted with three 18in. Simonds saws, 40 in. trim saw, 20 in. bench rip-saw, post boring machine, and one 8 in. x 14 in. Cowan outside moulder. Logs are stored in boom in front of mill, delivered on mill floor by friction log haul, and rolled to 50 in. three-block rope feed carriage installed by A. R. Williams Co., Ltd., Vancouver. The filing room is fitted up with saw grinder, double emery-stand, planer knife grinder, and full set of tools for saw repairs. The present capacity of the mill is about 20,000 ft. in 10 hours, but when the need arises this can readily be increased to 30,000 ft., and a comparatively small expenditure would permit of the output being raised to 40,000 ft.

The plant was erected by Mr. Nelson in 1913 as the result of an arrangement entered into with the Barriere Land Company, an offshoot of the Franco-Canadian Trust Company, Ltd., Vancouver. The Barriere Company own some 1,800 acres of excellent land at that point, which is slated to become a town of some importance in the near future owing to the agricultural possibilities of the region. Already there is quite a little settlement springing up, one large general store doing a business of about $3,000 per month. Mr. Nelson operated his mill for about six months in 1913 and about four months in 1914; this year it ran for only two months owing to the limited local demand and the fact that the railway line was not opened to traffic as early as planned. The return of prosperity being indefinite early in the season, when the log supply had to be arranged for, Mr. Nelson decided that it would be unwise to tie up money in yard stock until communication with the prairies was absolutely assured.

There is a good supply of lumber easily available all the way up the Barriere River and North Thompson and East Barriere Lakes, these bodies of water varying from five to nine miles in length. The lumber consists of cedar, fir, white pine, full pine, spruce and silver fir. Next season Mr. Nelson expects to ship to the prairies, and with that aim in view he is arranging to have a sufficient supply of logs taken out this winter by ranchers to keep his mill running steadily all summer. Being located well towards the summit of the mountain range, the mill should enjoy a considerable advantage in freight rates over the Coast plants.

Farm Demonstrating as Side Line

Following the example set by many owners of small mills in the interior of the province, Mr. Nelson utilized his spare time in demonstrating the soil possibilities of his holdings. He cleared a large portion of the mill site and farmed it in thorough fashion, the result proving that the Barriere Flats will grow anything in the shape of farm and garden produce. Mr. Nelson, referring to this branch of his activities, writes the Western Lumberman as follows: "I used the land for demonstrating all kinds of garden and field produce without irrigation for two years, the results being exceptional in character. All kinds of fruit grows to perfection here—even peaches, apricots, watermelons and muskmelons. Tomatoes ripen splendidly and the climate is well suited for general farming and sheep raising. The climate here is simply grand—after living for 30 years at the Coast before coming up here I am well pleased with the change. The temperature in summer reaches 85 degrees, but it is a very dry heat; in winter it goes as low as 25 degrees below zero, but the air is very calm and dry, and one does not feel the cold as severely as at the Coast. We get from one to two feet of snow, coming about 15th of December and lasting until 15th March. This gives splendid sleighing all winter and facilitates outdoor work of all kinds."

The hydro-electric power system of the City of Kamloops, generating 10,000 h.p., is situated five miles up the Barriere River and the power lines run through Barriere town site and within 200 yards of Mr. Nelson's mill. He is thus assured of cheap power to any extent desired, and this will be a factor in plans for the future development of this promising mill proposition.

A Boy Scout Forest Book

Copies of a Boy Scout Forest Book have been presented by the Canadian Forestry Association to the sixteen thousand boy scouts of Canada as part if an educational propaganda for forest protection. In the thirty-two pages of text and illustration the boy is made acquainted with the Canadian forest as a personal and national necessity. The subject is handled from a new angle and the young reader is given the business reasons for putting an end to our plague of forest fires. The idea is an excellent one and ought to bear good fruit.

Fewer Ties Being Taken Out

We are advised by a firm in close touch with the situation that, owing to the great number of men that have enlisted, and the high wages prevailing in the lumber camps, very few if any railway ties are being taken out this winter, and it looks as if there will be a shortage when the railways commence to look for their requirements later on.

The Crescent Belt Fastener Co. Toronto., H. J. Walker, manager, have moved from 28 Wellington St. W., to larger offices at 32 Front St. W.

Plant of Port Clements Milling & Trading Co., Port Clements.

Sparks & Atkin's Mill, Sewall, Graham Island.

Spruce Mills Operating in Northern British Columbia

The strong and increasing demand for spruce lumber for aeroplane construction and box-making purposes is resulting greatly to the advantage of the lumbermen in the northern part of B. C., where the finest spruce limits are located. Particularly is this true of the Queen Charlotte Islands, where the quality of the spruce timber is unexcelled. Four or five plants on the different islands are taking on a new lease of life as a result of their entire output having been contracted for by Vancouver and other firms. It is altogether likely the demand will lead to the opening up of other timber propositions and the erection of several modern plants of good capacity. In the meantime the existing small mills are making the best of their opportunity by improving their facilities and adding new machinery.

At Sewall, on Graham Island, Messrs. Sparks & Aitkin have a mill with a capacity of about 40,000 feet per ten hours. It has circular rig, the equipment being of heavy design to handle the big timber. For several months past the owners have been busy with improvements, and manufacturing commenced on January 3rd. The firm employ about 50 men—25 in the mill and the same number in the woods.

Another Graham Island mill was erected several months ago at Port Clements by the Port Clements Milling & Trading Company. This plant has a daily capacity of about 20,000 feet, has been cutting steadily for some months, and made the first shipment of spruce lumber to Vancouver early in December per Union Steamship Co. The owners, Messrs. E. J. Tingley and Chas. Coulson, are possessed of large timber holdings and are doing their own logging. About 30 men are employed in the mill and woods operations.

At Massett, also on Graham Island, Messrs. Wanless & Brickman have a small mill with a present daily capacity of 8,000 feet, but this will be increased to about 20,000 feet in the spring, according to the present plans of the owners. The mill is cutting steadily and has already made a shipment of lumber to Vancouver.

Still another Graham Island mill is being operated by W. L. Barton, also near Port Clements. In its present shape the outfit is a rather crude type, but creditable indeed as the work of a pioneer who was hampered by a lack of equipment. The site is a desirable one and the plant is now being enlarged to a capacity of 10,000 feet per day. Mr. Barton visited Vancouver recently and purchased a new engine, carriage, edger, log haul, transmission, etc., from J. B. Weir & Co., Ltd. Mr. Barton had his improved mill in operation early in January.

Typical Spruce Tree, Graham Island.

The mill of the Moresby Island Lumber Company, on Moresby Island, is owned by Seattle parties and at one time had a good output. It has not operated for four or five years past and is fast falling into decay. It is reported the shareholders are sending a practical man to report the probable cost of putting the plant in good shape, believing the time has arrived when money can be made by developing their extensive cedar and spruce holdings.

Messrs. Timms, Phillips & Co., Ltd., lumber wholesalers and exporters, Vancouver, have contracted for the output of the two Port Clements plants and also the small mill at Masset. Smith, Shannon Lumber Co., Ltd., Vancouver, will handle the cut of the Barton mill.

Miscellaneous Items of Interest to Lumbermen

The Main Belting Co. of Canada, Limited, of Montreal, have opened a Toronto office and warehouse at 32 Front St. W., with Mr. S. R. Walsh in charge; as Ontario representative.

Geo. Bury, vice-president of the Canadian Pacific Railway, states that the C. P. R. system uses, in a single year, five million track ties, two hundred thousand fence posts, fifty thousand telegraph poles, and sixty million feet of lumber.

A despatch from Port Arthur, Ont., states that the Pigeon River Lumber Company, Limited, on account of the scarcity of labor for their camps is asking for the release of fifty Austrians interned at the camp at Kapuskasing.

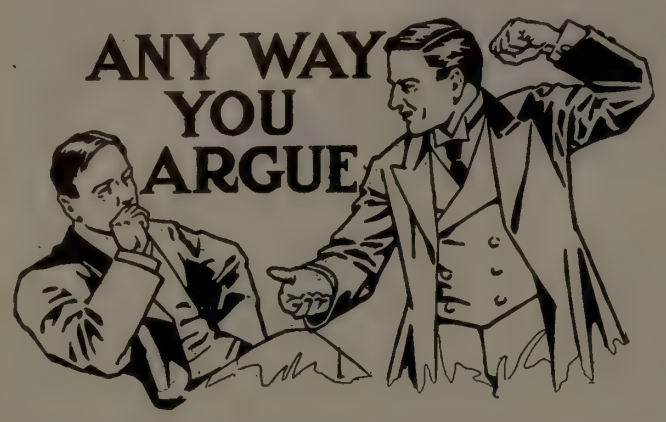
W. E. Allen, who is in charge of sales in the United States for the Finger Lumber Company, has left Milwaukee for Winnipeg, where he will be in charge of the combined Canadian and American sales forces. The combination is due to shortage of stocks.

An order for 51,000,000 feet of lumber for the Italian Government was recently placed with the yellow pine mills of Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Missouri and Oklahama. The specifications called for 29,000,000 feet of boards, 15,500,000 feet of timbers ranging in size from 2 x 4 to 12 x 12 inches, and 6,500,000 feet of railroad cross ties.

The charter rate from Puget Sound and British Columbia ports for lumber to South Africa has recently advanced from 160 shillings per thousand board feet to 190 shillings. Other rates for foreign lumber from Puget Sound remain unchanged at the following figures: To New Zealand ports, 110 shillings; to Sydney, Australia, 97 shillings 6 pence to 100 shillings; to Melbourne or Adelaide, 110 shillings; to Valparaiso and Callao, 95 shillings.

During the month of December, 1915, the latest for which statistics are available, Canadian exports of printing paper were valued at $1,753,013, which is a new record for any month in the history of the industry. Of this amount, the United States took printing paper to the value of $1,425,312. Australia took paper to the value of $170,745, and New Zealand's share was valued at $119,759. During eight months of the current fiscal year Canadian exports of printing paper to Australia were valued at $510,489, and to New Zealand $315,032. To Great Britain printing paper was sent to the value of $131,832.

WANTED & FOR SALE DEPARTMENT



"There's One Best Way"

There's one best way to buy and sell special lots of lumber, second-hand machinery, timber lands, etc., and that is by inserting a small advertisement in this department.

Every mail brings word of big results from these small ads. Last week a large lumber firm sold their entire 1916 cut, several million feet, through an advertisement on this page.

What Have You to Advertise?

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Wanted good sound Basswood logs, 12 in. and over in diameter. Quote best price F.O.B. cars. Apply Hay & Company, Limited, Woodstock, Ont. 3-6

WANTED—Four cars 1-in. No. 2 Common and Better Hard Maple. State when cut, lengths, widths, and price, with Toronto Freight rate. Box 286, Canada Lumberman, Toronto, Ont. 2-5

WANTED—A quantity of Hard Maple and Birch, both for immediate and future delivery. 1 inch and thicker. State quantity you have to offer, price and full particulars. Box 285, Canada Lumberman, Toronto, Ont. 2-5

WANTED—During summer will need—
Soft Maple
Hard Maple
Birch
Beech
Elm
Ash
Basswood

Can use all grades or whatever you cut at your mill. What have you to offer?
Box 284, Canada Lumberman, Toronto, Ont. 2-5

Wanted

Wanted for shipment whenever in shipping condition:
2,000,000 ft. 3 in. No. 1 Com. & Bet. Soft Elm.
1,000,000 ft. 2½ in. No. 1 Com. & Bet. Soft Elm.
1,000,000 ft. 2 in. No. 1 Com. & Bet. Hard Maple.
500,000 ft. 2½ in. No. 1 Com. & Bet. Hard Maple.
Box 332, Canada Lumberman, Toronto, Ont. 5-8

Lumber Wanted

Wanted several cars maple, beech or birch squares 1, 1⅛, 1¼ in. x 42 to 60 in. in length. Write for particulars. J. Finlay & Sons Co., Norwood, Ont. 5-8

Grey Elm

Wanted 100,000 ft. of 1½ in. grey elm, No. 1 common and better, this lumber not to be edged, and can be loaded direct from the saw, but must be in 6 or 12 ft. lengths. Write for prices f.o.b. cars shipping point. Box 295, Canada Lumberman, Toronto, Ont. 3-6

Maple Squares

Wanted to buy 700,000 Maple squares, 1 in., 1¼ in., 1½ in., 1¾ in. and 2¼ in. Lengths 12 in. and up. A. K. Hansen & Co., St. Peter Street, Quebec City. 3-6

Wanted to Buy

450,000 ft. 2 in., 2½ in., 3 in. and 4 in. log run Birch. Terms 75 per cent. cash on shipment, balance on arrival. Apply P. O. Box 643, Montreal, Que. 3-6

Wanted

All kinds and thicknesses of hardwood and softwood lumber. Give full description of same, together with price. Box 328, Canada Lumberman, Toronto, Ont. 4-t.f.

Basswood Wanted

Wanted 200,000 feet of 1-inch White winter cut Basswood to grade No. 1 Common and Better, to be plump 1-in. thick when dry. State price F. O. B. cars shipping point. Address, Box 308, Canada Lumberman, Toronto, Ont. 4-t.f.

Logs Wanted

Several cars Rock Elm logs. Quote price to St. Marys Wood Specialty Company, Limited, St. Marys, Ont. 4-7

Wanted

Two cars No. 2 Hemlock, sized in widths in 2 x 8 and 10 - 10 ft. to 16 ft. Part 1 car 1-in. dressed.

Two cars Cedar Posts, dry, peeled, sound, 3½ to 4½ top; 8 ft.; for cash. Apply Box 195 Jordan, Ont. 4-5

Soft Elm and Poles Wanted

Soft Elm, one or two cars, firsts and seconds, 3 in. and 3½ in. Quote lowest price. Also want poles 8, 16 and 24 feet, Tamarack or Hemlock. Large number wanted. Box 349, Canada Lumberman, Toronto, Ont. 5-6

Wanted

We are in the market for a large quantity of 2-in. Spruce Plank 4 in. and up wide, 8 feet and up long. Good merchantable stock. Kindly write us your lowest price. Box 334, Canada Lumberman, Toronto, Ont. 5-t.f.

Wanted

Several cars 16/4 Birch, No. 2 common and better grade. Must be dry and ready for immediate shipment. Write us your lowest price and full particulars. Box 333, Canada Lumberman, Toronto, Ont. 5-t.f.

WANTED
4-ft. Plastering Lath

We are ready to contract for 75,000,000 No. 2 and 3 Lath, cut 1½ x ⅜—4 ft., bundled 50 pcs. per pack. Can use mixed Pine and Spruce or all Spruce. Advise what you have now, quoting prices f.o.b. Chicago. Will consider proposition on your 1916 cut if you have no dry lath on hand.

Cannon River Lumber Company,
5-6 Webster Bldg., Chicago, Ill.

Spruce Pulpwood Wanted

Spruce Pulpwood wanted of good size, merchantable quality, four-foot peeled preferred, on cars shipping point. Box 323 Canada Lumberman, Toronto, Ont. 4-7

Lumber Wanted

All kinds of hardwood lumber, also Hemlock. Wire or write. J. R. Summers, Tyrrell Building, Toronto, Ont. 5-5

For Sale–Lumber

For Sale

One car nice 8/4 Rock Elm running high in grades. C. B. Janes & Co., Limited, Orillia, Ont. 5-5

For Sale

White Pine and Hardwood, estimated 300,000 feet, will cut to order. G. A. Patrick & Son, Delaware Saw Mills R. R. 2, Lambeth, Ont. 1-6

Poplar For Sale

For sale two cars 1-in. Poplar cut March, 1915. Enquire by letter to Knight Bros. & McKinnon, Limited, Box 569 Cobalt, Ont. 4-tf.

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
c Montreal, Que.

For Sale

200,000 pcs. 1½ in. x 4 ft. No. 1 Spruce Lath.
200,000 pcs. 1½ in. x 4 ft. No. 2 Spruce Lath.
36,000 feet 1 x 9 in. Mill Run White Pine.
Box out, 12/16 feet, bone dry stock. The Elgie & Jarvis Lumber Company, Limited, 18 Toronto Street, Toronto, Ont. 5-5

Wanted–Machinery

Wanted

Small portable mill suitable for sawing ties, must be cheap for cash and in good order, either steam or gasoline. Send full description. Herbert Grier, 137 McGill Street, Montreal, Que. 5-5

For Sale–Machinery

For Sale

One large Goldie & McCulloch Planer and Matcher, 14 in., good repair.

One Clark & Demill Double Surfacer, 14 x 26, not been used much. Will take lumber in exchange. Box 339, Canada Lumberman, Toronto, Ont. 5-5

Engine For Sale

Corliss Engine, 150 H.P., 18 cylinder, 24 inch leather belt, with pump, first class condition, no fault, changing to Electric. Inspect at Guelph Lumber Co., Guelph, Ont. 5-8

Saw Mill Machinery For Sale

Second-hand Machinery for Complete Saw Mill, all practically new, in excellent condition, including Bullwheel, Steam Kicker, Steam Nigger, 42-in. Steel Carriage, 10-in. Steam Feed, 8-ft. Waterous Bandmill, 5-saw Slab Slasher, 48-in. Edger, Trimmer, also Independent Lath-mill, and Filing Room outfit. Power Plant complete. Offers accepted for all or any part. On view at the Waterous Engine Works Company, Brantford, Ont. t.f.

Wood-Working Machinery

1—36" Crescent band saw, A1 condition $75.00
1—24" Cowan double surfacer, A 1 condition 375.00
1—8" Crescent jointer 75.00
1—Variety saw table, iron 85.00
1—Wood frame, 8 ft. saw table 60.00
1—Combination drill and mortiser, McGregor-Gourlay, 4" stroke, table ¾ x 5½, raise and lower 12", side movement 10", knife 1" wide 50.00

Pollard Manufacturing Company, Ltd.,
5-8 Niagara Falls, Ont.

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

Wanted position as band saw filer, long experience and good references. Box 300, Canada Lumberman, Toronto, Ont. 3-7

WANTED to hear from lumbermen who anticipate needing a mill foreman this spring, by an experienced mechanic who can give results, open to engagement. Any capacity. Box 283, Canada Lumberman, Toronto, Ont. 2-5

Open for year round position April 1st to take full charge for company with large stock of logs interests of the sawing, grading, estimating and inspection of all shipments. Married man with twenty years of experience as lumber inspector and manager. Box 305, Canada Lumberman, Toronto, Ont. 3-6

Position wanted as band saw filer, double or single cut. Twelve years' experience, first class references. Box 317, Canada Lumberman, Toronto, Ont. 4-8

Wanted position by experienced lumberman, holding qualification papers for scaler in Quebec and New Brunswick. Last position, yard foreman. Box 314, Canada Lumberman, Toronto, Ont. 4-5

First class double cut band or circular sawyer wants position for the coming season, band preferred. Accustomed to left hand rig; habits sober. Can supply first class references. Box 319, Canada Lumberman, Toronto, Ont. 4-5

Position wanted as Manager or Secretary-Treasurer of Lumber and Woodworking business. Thoroughly experienced in Lumber, Factory and Office routine. Good organizer and have record for producing best results. A1 credentials. 15 years with one large Ontario company; at present engaged. Box 318, Canada Lumberman, Toronto, Ont. 4-5

PLANING MILL MECHANIC wants position. Expert in moulding knives and saw filing, band or circular, sanding machines, etc. French and English language. Highest credentials. Box 344, Canada Lumberman, Toronto, Ont. 5-5

BAND SAWYER wants position, left hand mill. Good references. Box 335, Canada Lumberman, Toronto, Ont. 5-8

BAND SAWYER wants position, single or double cut. Best of references, strictly sober. Box 341, Canada Lumberman, Toronto, Ont. 5-5

MANAGER AND SALESMAN—Position wanted by lumberman of 12 years' experience in capacity of Bookkeeper, manager and salesman. Familiar with grades and inspection of Hardwood and Pine. Best of references. Box 247, Canada Lumberman, Toronto, Ont. 5-5

BAND SAWYER wants position. Three years' experience on double and two on single cut. First class recommendations. Box 342, Canada Lumberman, Toronto, Ont. 5-5

BOOKKEEPER AND STENOGRAPHER, thoroughly conversant with all routine office work, desires position; satisfaction absolutely guaranteed. Box 340, Canada Lumberman, Toronto, Ont. 5-6

EXPERIENCED MANAGER—Have had twelve years' experience wholesaling American Hardwoods and Yellow Pine, thoroughly acquainted with source of supply. At present with large American wholesale concern as Manager; desire to return to Canada, and wish to get in touch with wholesaler or large consumer as buyer who has had trouble in securing Southern Hardwoods and Yellow Pine at right prices. Have also had experience shipping heavy oak and yellow pine timbers, ties and car material into Canada. Can show results, thoroughly competent to handle office work and correspondence covering buying and selling. Box 348, Canada Lumberman, Toronto, Ont. 5-5

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

STICKER MAN wanted to work in shop in Western Ontario. Box 337, Canada Lumberman, Toronto, Ont. 5-5

FOREMAN WANTED to take charge of shop and planing mill, figure on blue prints, give estimates, etc. State wages expected. Box 338, Canada Lumberman, Toronto, Ont. 5-5

WHOLESALE LUMBER COMPANY in country town, wants energetic office man to handle buying and selling; must have knowledge of Canadian hardwoods; state experience, salary expected, and furnish references. Box 345, Canada Lumberman, Toronto, Ont. 5-5

BAND SAW FILER WANTED for season of 1916; must be first class. Apply giving experience and reference to Box 321, Canada Lumberman, Toronto, Ont. 4-5

Wanted filer for circular mill in Ontario cutting hardwood, man who can do mill repairs. Must be abstainer. Steady job to good man. State wages. Box 316, Canada Lumberman, Toronto, Ont. 4-5

Business Chances

Farm For Sale

For sale model farm, close to New Liskeard, 153 acres in cultivation, price $7,000; good reasons for selling. Herbert McKnight, Cobalt, Ont. 5-5

For Sale

For sale modern planing mill and lumber yard in Niagara Peninsula. Write Room 67, 18 Toronto Street, Toronto, Ont. 5-5

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

For Sale

Exceptional opportunity to acquire a going Lumber Business, Steam Saw Mill, situated on a never-failing stream, good Railway and other facilities; 75 per cent. of the timber large white pine. Plant operated last season. Owner obliged to sell on account of ill health. Box 325, Canada Lumberman, Toronto, Ont. 4-5

Miscellaneous

30 Replies

are often received to "Wanted" and "For Sale" ads. on this page. Even 50 replies are not an uncommon return from the investment of the small amount a condensed ad. costs. And isn't that good business—to get right into close touch with so many people interested in what you have to buy or sell? For you can be sure their transactions with you will not end when they have closed the business your single ad. announced.

J. E. Ray, Canadian Trade Commissioner at Birmingham, England, reports that "several firms have inquired for picture frames and timber suitable for their manufacture. Supplies were formerly obtained from Norway, Holland, Italy, and Germany. Plain oak and finished moldings are now being imported from the United States, and one large buyer states that he would prefer to transact business with Canada if manufacturers can supply what are known as raw oak moldings.

Union Lumber Co.
Limited

Dry White Pine
Norway
Spruce
and Lath

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

For Sale or Lease

As a going concern—Situate at Sault Ste. Marie, Ont.

Up-to-date Saw Mill, Shingle, Lath and Picket Mill

DAILY CAPACITY		
	Lumber	120 M
	Shingles	12 M
	Lath	30 M
	Pickets	12 M

High level land tram to piling ground. Mill served by railway with 3 spur sidings. Approximately 160 acres available for booming logs adjacent to Mill, together with convenient dockage facilities.

For further particulars write

Algoma Steel Corporation, Limited
SAULT STE. MARIE, ONT.

Review of Current Trade Conditions

Ontario

The lumber trade in Ontario continues very quiet, there being no feature so far as local trade is concerned, except perhaps the interest which is being taken in the renewed appearance of prospective shell box orders. So far as these are concerned, however, although orders in considerable quantity are likely to be given out in the near future, the situation is not at present so promising as it was in connection with the orders which were completed last year. A number of firms with whom we have discussed the situation advise us that the system of giving out orders has been entirely altered under the management of the Imperial Munitions Board, and that they are now calling for tenders for specified boxes upon a standard tender form, and that the business is expected to go to the lowest tenderers. In this connection we have heard considerable dissatisfaction regarding the fact that some parties who have no connection whatever with the box making or lumber business are submitting tenders, and seem to be confident of getting a large portion of the orders by tendering below the actual cost of production. What there may be behind this situation is hard to say. The prices they submit, whether they deliver the goods or not, are likely to affect the Munitions Board in giving orders. In short, it is feared that the Board may give attention entirely to price and not to the bona fides of the tenderers. Many Ontario manufacturers who could quote on this business and handle it satisfactorily in large quantities are likely, for the above reason, to refrain from doing so, as they feel that it will be of no use. If the orders which are under consideration are given out, however, at reasonable prices, they will be the means of creating considerable activity in the local trade in Ontario.

The building business continues practically dead from a comparative point of view. What it will be during the coming spring and summer is difficult to say, though we have lately heard a little more optimistic opinion in this regard than was general a few weeks ago. In the United States, a great increase in building operations is developing. We have many of the same factors at work in Canada to produce a similar state of affairs and it is not impossible that the large amount of money which has come into circulation during the past six months on account of war orders of all kinds will create a fair amount of building activity.

The situation in connection with B. C. shingles is exceptionally interesting at the present moment. We publish elsewhere in this issue a report from British Columbia showing that the stocks available are far below the quantity of orders on hand and that production has been so greatly curtailed of late by severe weather and the closing down of mills that available stocks will not catch up to orders for some months. Under these conditions wholesalers in Ontario are expecting shingle prices to advance.

Manufacturers and others interested in the export business to Great Britain are discussing with a good deal of interest the embargo ordered by the British Government upon the importation of hardwoods, the object of which is said to be the saving of cargo space for materials that are more urgently required. The embargo prevents importations, except under government license, and it may result in stopping imports of Canadian birch and other hardwoods which have been extensive during the past year. It remains to be seen, however, whether the British Government will provide for imports of these lines by issuing special licenses to cover such shipments as are required.

Eastern Canada

The export trade situation at St. John, N. B., shows no change. The freight problem is still the most important factor in this connection. At present, freight rates are still advancing and practically no vessels are available to take up the increased offerings. An ordinary price now is 250 shillings per standard on deals for summer shipment, and very few charters are being made, because of the scarcity of vessels. English deals at St. John have been selling in a few cases at $20 per M. for 50 per cent. 3 x 7 and 8, 50 per cent. 3 x 9 and 11, with scantlings at usual reductions. This is a record price for a mill cut at St. John. All deals have been sold ahead.

A strong upward tendency is reported in the New England spruce market with a firm base price of $27 for 2 x 8 and down, 20 feet and down, delivered. Stocks of spruce are scarce as most of the mills are tied up. Logging conditions are good throughout New Brunswick and the results of the winter's operations will now depend entirely upon the drives.

The Montreal trade is much interested in orders for shell boxes which were called for recently by the Imperial Munitions Board. It is stated that orders for 500,000 boxes were included in this call for tenders, and that 275,000 were called for in Montreal. Under the new arrangement the Munitions Board is asking for tenders on all this work. Local trade in Montreal is slow. Export trade is fairly active and the outlook is encouraging. Indications in connection with the export season are that it will again be an anxious one for shippers, as freight rates are still advancing and tonnage will probably continue scarce. Enquiries from Great Britain are numerous. It is possible that the British Government's prohibition of import of furniture woods, and hardwoods, except under government license, may reduce Montreal's exports of birch.

Reports from Boston indicate that the eastern spruce market shows continued strength. Retail yard men are buying both frames and random dimensions more extensively. Manufacturers and commission dealers will now quote nothing less than $27 base, Boston rate for rail shipments of frames. Some producers are asking 50c and even $1 more. The demand continues strong, being considerably in excess of normal for this time of year. Quotations on random stock are about $1 higher than they were a fortnight ago, the current prices being 2x3, $22 to $22.50; 2x4, $22.50 to $23; 2x5, 2x6 and 2x7, $21.50 to $22; 2x8, $25 to $25.50; 2x10, $26.50 to $27; 2x12, $27 to $28. The market for spruce boards is now showing some real strength. Stocks have been considerably reduced, and dry covering boards, 5 in. and up wide, 8 ft. and up long are held at $22. Matched boards, 10, 12, 14, and 16 feet are bringing $25 to $26. The hardwood market at Boston shows greater firmness. Firsts and seconds inch maple are bringing $41 to $43; basswood $43 to $45; red birch $53 to $55 and sap birch $45 to $47. The enquiry for eastern hemlock at Boston is fairly satisfactory, with quotations strong. The best clipped boards 10, 12, 14 and 16 ft. are bringing $22.50 at least, which is $3 higher than the prices which prevailed last fall. White cedar shingles at Boston are showing a little increased strength, as a result of the higher prices for red cedar shingles following the adverse weather conditions in the Pacific coast districts. White cedar extras are bringing from $3.35 to $3.50, and clears are now held at $3 to $3.10. Red cedar shingles are somewhat uncertain in price. There is a little better enquiry for lath. Sales of 1½ in. have been made up to $4 and 1⅝ in. continue steady at about $4.25.

United States

One of the most important features in connection with United States lumber trade conditions during the past fortnight has been the widespread curtailment in production caused by extreme weather conditions. These have varied from floods in the south and blizzards in the east, to excessively cold weather and heavy snow storms in the west, the result being the tying up of extensive production districts. Business conditions, however, have been progressing satisfactorily throughout the United States. Building operations for instance, although considerably restrained by the weather, give promise of great activity as soon as weather conditions are fairly settled. Activity in this line promises to be greater than it has been for many years. Increases in building permits are reported from practically all parts of the country and most of the increases are on a remarkably extensive scale. The steel industry is making great gains, the amount of unfilled orders on books of the steel corporation being now greater than at any other time in its history. Railroads are in a better financial condition than they have been at any time for a number of years. They are thus ready to make heavy expenditures for new rolling stock and equipment as well as for necessary repairs.

In the southern pine territory, buying for spring trade has already commenced. For the week ending February 11th the order files of the Southern Pine Association showed for the first time in several weeks an increase over production. Mill stocks are badly broken and the recent curtailment in production on account of severe weather makes it look as though there cannot be any large accumulations of stocks anywhere in the southern pine district.

In the north Pacific coast district, recent reports indicate what looks like improvement in weather conditions, but there is fear of floods following the thaw which is expected. It does not look as though mills in that territory will be able to produce again at their normal capacity for some weeks. There have been opportunities recently for these manufacturers to quote on a considerable amount of desirable business, but few have been in a position to guarantee delivery and they have therefore been seriously handicapped in their

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

efforts to get the business. The market on the Pacific coast has continued to gather strength and advances are expected to be maintained, even further advances being likely.

The hemlock situation continues very favorable, the chief difficulty now being the inability of manufacturers to supply the demand for certain sizes and lengths. This is in marked contrast to the situation of a few months ago when nearly all the mills had stocks far beyond normal and hemlock was a drug on the market. Heavy shipments during the last few months have depleted stocks and the continuation of the present demand will stiffen prices. Northern pine also is in a favorable position, with a very satisfactory demand and good prices.

Great Britain

Few fresh goods have recently arrived for the London spot market and the numerous cargoes lying on the quays are being piled only at a very moderate rate. Not 15 per cent. of the European and Canadian deals at the quays were yet available for delivery at latest reports, although the demand for them was very strong. Deliveries from the docks have therefore been showing a falling off, amounting to 2,354 standard during the week ending January 29th as compared with 4,483 standards during the corresponding week of 1915. Prices of all stocks that can be moved are continuing to increase and it is difficult to find any size or quality that can be had at less than 3 shillings cube. The scarcity of tonnage and the resulting high freight rates are the chief factors in the price advances. Forward buying is not extensive, on account of the inability of shippers and buyers to agree regarding terms.

At Liverpool, the c. i. f. business in spruce deals is confined for the time being to small parcels by liners and higher prices are being obtained, stocks being quickly snapped up when offered. Very little forward buying for the season is in evidence as shippers are unwilling to take the risk of the freight market and are quoting f. o. b. or on a freight basis c. i. f. Up to the present, only a limited quantity has been offered even on these terms. Shippers are asking for higher f. o. b. prices than those of last year and as the freight market is still very uncertain importers are not inclined to take the risk which shippers are also unwilling to assume. The spot market shows further advances. The consumptive demand continues on an active scale with every indication of keeping up, and as stocks are becoming more and more depleted values seem certain to advance. During the next two months it is expected that the almost complete cessation of arrivals will make itself very apparent. C. i. f. values for birch at Liverpool are firm. The spot market is very steady and the consumptive demand continues strong. Stocks are gradually being decreased and values are advancing.

At Manchester, the trade continues active. Prices are as strong as ever, in fact stronger than they have been in the past as a result of the threatened restrictions of imports. On a recent parcel of wood goods from Ottawa to Manchester the total freight rate from Ottawa to the ship canal was 250 shillings per standard. Pine goods are advancing rapidly in value at Manchester. The price of 3rd quality Quebec pine 11 in. x 3 in. is about £29 per standard, and 4th quality about £26 to £27, and stocks are running very low. Sidings also are advancing in price. All industries using timber are very busy with the single exception of building.

At Glasgow, the price of spruce continues to advance, without any appearance of a set back being possible in the near future. Imports continue on a moderate scale and are far from adequate to meet the requirements of the market.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Montreal Getting New Shell Box Business

Montreal, February 23rd; (Special to the Canada Lumberman):—The most interesting feature of the market is the inquiry by the Imperial Munitions Board for shell boxes. Orders for one and a half million boxes are to be given out, and of these 275,000 are allocated to the Montreal district. The Board have now adopted the tender system, and the bids were to be in by February 28th. There is certain to be keen competition for the orders, as some of the factories are short of business. Owing to this lack of orders, and the Government not taking quick deliveries, work was recently suspended in some instances. The new orders, it is said, will involve the consumption of two and a half million feet of spruce and about half a million feet of birch, all dry stock. The following are details of boxes required in Montreal: 50,000 two round six in. shell; 3,000 2-pound shell; 25,000 two round 60-pound shell; 70,000 two round 4.5 shell; 30,000 one round eight shell; 40,000 six round 18 pound shell; 30,000 one round 9.2 shell. Inquiries have been received from Ontario as to securing lumber in case factories should be successful.

Local trade is very slow, with wholesalers reporting an occasional good order for rush contracts. Business with the United States keeps up very well indeed, and prospects are stated to be bright for increased trade. Advices from the province report a brisk demand for pulpwood, and a quickening of values.

Although the export season is some way off, there are indications that it will be one of anxiety for shippers. Freight rates will certainly not be lower than at the end of last year. The chances are that they will be higher, with increased difficulty of securing tonnage. Provided firms can obtain vessels, it is more than likely that exports will be extremely good, as there have been inquiries for large amounts of lumber for the other side. Montreal exports a considerable quantity of hardwoods, principally birch, and in this connection it may be pointed out that the British Government has prohibited the import, except under Government license, of furniture woods, hardwoods, and veneers. The Government is aiming at a reduction of these and other commodities, and it is possible that the exports of birch from this port, which showed a very large increase last season, may be considerably affected.

In the pulp and paper sections, sulphite has had another advance, and prices are now at a very high mark. Inquiries are more numerous, it being feared that quotations will go ahead still further. This condition is due to the restricted importations from Europe, United States' consumers turning to this country to supply the deficiency. The embargo on pulpwood, paper, etc., by the British Government, will not affect Canadian productions to any great extent, comparatively small quantities of sulphite and mechanical pulp and newsprint going to the United Kingdom, although the trade has lately increased. The probabilities are that with reduced quantities imported from all sources, the British newspapers and magazines will decrease the size of their sheets.

There is an excellent demand for newsprint, especially on export account. For the month of November, the last period for which the figures are available, the exports were of the value of $1,753,013, the highest on record, the greater part of the total going to the United States.

St. John Prices Continue Strong

St. John, N. B., February 21st; (Special to the Canada Lumberman):—The lumber trade so far as export is concerned, remains in about as healthy a position as at last writing. The one great bugbear, so much talked about, the freighting question, remains in a very unique position, namely: freights climbing, and no bottoms to take up the increased offerings. 250 shillings is now an ordinary price paid per standard on deals for summer shipment. Very few charters are being made, not because of the rate, but on account of the limited offerings. Prices of English deals from this port for next season's cut are said to have reached the height expected of $20 per M. for specifications running ½ 3 x 7 and 8, ½ 3 x 9 and 11, with scantlings at usual reductions; this is the highest price ever paid at St. John for a mill cut. Not all buyers, however, are offering any such figure, and those doing so are felt to be taking extreme risks. All deals have been sold ahead, and now it only remains for the logs to come forward to start the season's operation. It is to be hoped that the year 1916 may be more lucrative, so far as profit making is concerned, than was the year just passed.

The New England spruce market still shows a strong upward movement, and has reached a firm base of $27 per M. on 2 x 8 and down, 20 ft. and down, delivered. The one great trouble is now to get the stocks, as the mills are largely tied up, and only a few winter mills are in motion. These are doing well so far as price is concerned. New York prices, while not so good as New England, are in a good strong position. Building trades both at New York and throughout New England have been moving along at a good pace. The last few days of more wintry weather will no doubt have their effect, but as soon as warmer conditions arrive a spurt will again take place.

Laths are firm in New York at $4.50, and interior points, reached

J. & D. A. Harquail

Company, Limited

Manufacturers of Lumber

Extensive New Brunswick and Quebec timber limits, abundant with Virgin Spruce, Pine and Hardwoods.

Twenty years' experience in Milling and Manufacturing, together with a practical knowledge of Building and Architecture, is why our Customers tell us that the Dressing, Grading, and Manufacture of our Stock is just a little better than they expected.

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Established 1894 ***Incorporated 1908***

Campbellton, New Brunswick

only by rail, are paying $4.75 per M. About all the laths from St. John, some eight million, are now afloat. It is to be hoped that this will not have any weakening tendency on the market when they arrive, but it should not, when it is considered that this is a complete clean up.

Shingles have taken an advance of 25c. per M. during the last two weeks all over the New England market. It is very timely, as the shingle industry surely needs an upward movement. It has been practically unprofitable to cut shingles at prices prevailing during the past year.

Logging conditions are good all over the province, and work is well along everywhere, but at least three weeks is yet needed before jobbers will be finished. On the head waters of the St. John, conditions have been good all winter, and all that will be needed is plenty of rain to bring out the drives when the right time comes.

All the mills at St. John are now idle, and it will be well towards April 1st before they start operations. Local conditions for building and factory and yard deliveries are the worst they have been in years and the outlook for building trade does not look encouraging. Should the war take a decided turn for the better confidence would be restored and people would become active in all lines, and again aggressive.

Great Ship-Building Activity in Nova Scotia

Parrsboro, N. S., February 17th: (Special to the Canada Lumberman):—The great war and the consequent scarcity of merchant vessels have caused a partial revival of the wooden ship-building in this vicinity. Shipyards which have been idle and silent for years are once more scenes of activity and are ringing to the sounds of the axe and the caulker's mallet.

G. M. Cochran, of Port Greville, who built one schooner last year, has now three vessels in course of constructioon. One of them, a three-masted schooner of over 400 tons register, is nearing completion, and will be launched in April. Another, a vessel that will register above 500 tons, is in frame and well advanced. She will be rigged as a four-masted schooner, and will be commanded and partly owned by Captain Tower, who was master of the ill-fated four-masted schooner L. C. Tower which was torpedoed last summer on her maiden voyage when within a short distance of the English coast. The frame for the third vessel—a trim schooner of between 400 and 500 tons register—is being prepared, and she will be completed as rapidly as possible after the others are out of the way.

H. Eldenkin & Co., also of Port Greville, are adding to their fleet a tern schooner of about 400 tons register, and Captain T. K. Bentley, who had one schooner in the deal trade last season, is building a 400 ton vessel at West Advocate. There is strong talk of building a schooner of about the same dimensions at this town, but arrangements are not yet completed. Many fine ships have been built at Passboro, but none has been launched here for nearly six years. If the vessel now under consideration is built it is probable that several others will follow.

The cost of building vessels—and particularly of their outfits—is much greater than it was a few years ago, but, on the other hand, the inducements to build far exceed any ever offered before. Two or three years ago forty shillings per standard was thought a good freight on deals to the United Kingdom. This season it is reported that two Passboro schooners have already been chartered at two hundred and forty shillings per standard. Small wonder then, that ship-building has revived, and that builders are induced to pay exorbitant prices—prices which under normal conditions would be prohibition—for the required materials. And it is not on ship-building alone that our lumber dealers are depending for transportation of their output. J. N. Pugsley, one of our leading lumbermen, has recently purchased two tern schooners registering about 350 tons each, at just double the price they could have been bought for a year ago. In fact every available vessel has been snapped up at a record price, and a sharp lookout is being kept for every possible freighter. Whether enough bottoms can be secured to carry the season's lumber output remains to be seen, but every effort is being made to obtain carriers, and there is no doubt that freight rates will soar far above all previous records.

Further Price Advances at Liverpool

Alfred Dobel & Co., Liverpool, in their monthly timber market report, under date of February 1st, says:—Deliveries are still being held up as a result of the curtailed railway facilities, and it is consequently difficult to gauge the actual consumption, but it is accepted as being generally satisfactory. Lighter imports and the continued rise in freight rates have caused a further general advance in prices and the possibility that the importation of some items will be prohibited in the near future has caused an advance in the values of these quite beyond that resulting from light imports and advanced freight rates.

Canadian woods—Waney board and square pine was in limited request. Oak—No change. Rock elm—The stock is practically exhausted. Birch—Logs—There was an improved consumption. Planks—The arrivals were very light. A good demand prevailed and stocks have been further reduced. Pine deals and boards—The arrivals, which were nominal, met a steady consumption. New Brunswick and Nova Scotia spruce deals—As compared with the corresponding month last year the import and consumption are both favorable—the former being less by 1,495 standards and the latter more by 2,740 standards. The combined stocks stand 24,120 standards, which still remains misleading owing to transport difficulties.

Liverpool and Manchester Stocks

The following report upon Liverpool and Manchester Stocks for the month ending January 31st, is furnished by H. W. Lightburne & Co., Liverpool, and their St. John, N. B., representatives John E. Moore & Co., Ltd.:—

Spruce and Birch

Month Ending, 31st January, 1916.

Liverpool

	Import			Consumption			Stock		
	1914.	1915.	1916.	1914.	1915.	1916.	1914.	1916.	1916
N.B. & N.S. Spruce and Pine, Stds..	1,660	1,550	720	2,650	3.140	4,170	6,740	2,930	10,700
Birch Logs, Loads	60	0	0	220	80	120	140	60	780
Birch Planks, Stds.	97	18	6	382	436	370	612	455	710
Manchester									
Spruce, Stds.	750	1,625	960	4,280	3,000	4,710	14,310	6,055	13,420
Birch Logs, Loads	100	0	0	140	140	140	300	500	980
Birch Planks, Stds.	36	12	0	127	152	97	479	491	630

Stocks in Manchester and Liverpool Combined

Spruce

	1912.	1913.	1914.	1915.	1916.	
Manchester	9,740	8,350	14,310	6,055	13.420	
Liverpool	4,730	2,590	6,740	2,930	10,700	
	14,470	10,940	21,050	8,985	24,120	Stds.
Birch Logs						
Manchester	100	440	300	500	980	
Liverpool	320	780	140	60	780	
	420	1,220	440	560	1,760	Loads.
Birch Planks						
Manchester	73	509	479	491	630	
Liverpool	467	697	612	455	710	
	540	1,206	1,091	946	1,340	Stds.

Pulp, Paper and Lumber in Sault Ste Marie District

United States Consul Shotts, Sault Ste. Marie, Ont., in a report to his government, says:—

The harvesting of pulp wood and the manufacture of the same into pulp and paper constitute one of the largest business interests in the Sault Ste. Marie district, employing many thousand people. There are three pulp and paper mills in this district, all owned and controlled by the Spanish River Pulp & Paper Mills (Ltd.), but each operating and shipping the product under its original name. The combined output of these mills in 1915, as reported by the company, was: Newsprint paper, 114,774 net tons; sulphite pulp, 36,307 net tons, and ground wood pulp, 90,715 net tons.

The manufacturing capacity of these mills is over one-fourth of the combined capacity of all paper mills in the Dominion of Canada. They have the exclusive right to cut pulp wood on over 6,000 square miles of territory, and in addition have practically a monopoly of much surrounding territory. The harvest of pulp wood in this district for 1915 was approximately 223,000 cords, of which 41,400 cords were shipped to the United States. The approximate cut for 1914 was 144,000 cords, of which 18,000 cords were shipped to the United States.

The lumbering interests were unusually active during the year. The demand was light and prices high for the last half, the result being that the quantity of lumber left standing over on the docks is not so large as usual. The cut of lumber in this district for 1915 was approximately 187,000,000 feet, of which 186,000,000 feet were shipped to the United States.

Plans for Farm Houses

Following up their policy of publishing a series of bulletins for promoting the use of lumber in the Prairie Provinces, the Forest Service of B. C. have issued bulletin No. 10, entitled "Farm Houses." The bulletin contains plans and specifications for six different houses suitable for farmers, varying from a small one-storey house, designed for a new settler, to a large comfortable and attractive home for the prosperous farmer. These plans have been prepared by men who are thoroughly in touch with the requirements of farmers and the result is a series which will appeal immediately and will unquestionably result in improving the Prairie Province market for B. C. timber and lumber.

Cream of the West Flour

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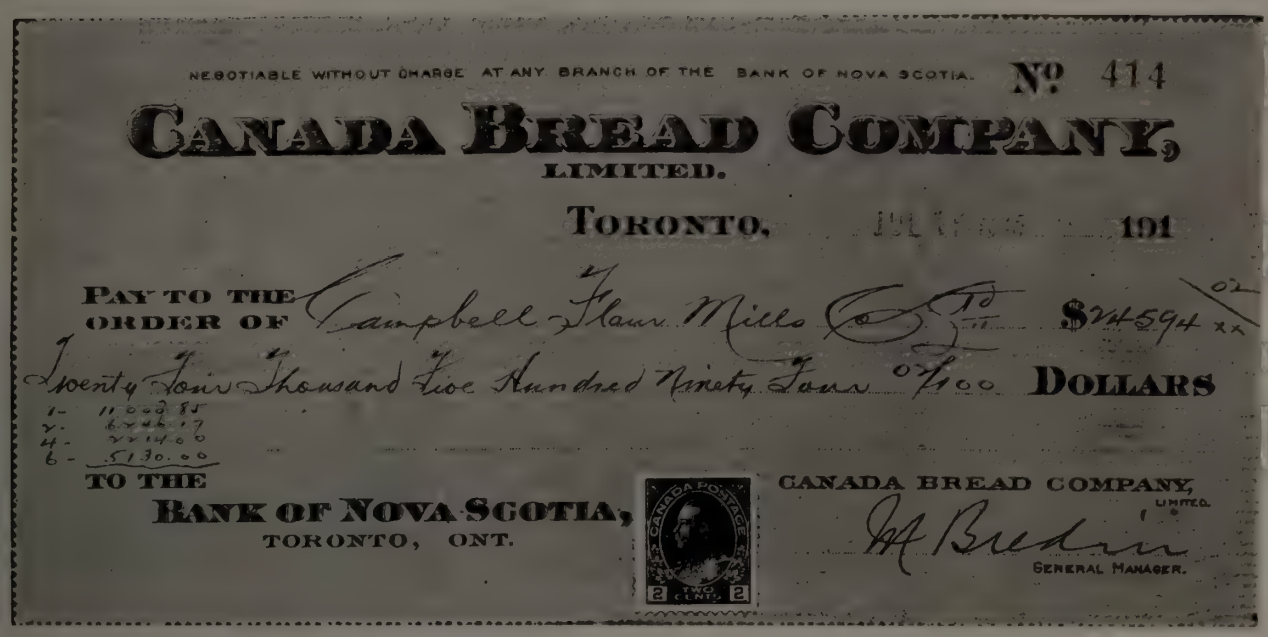
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Fir "Twopan"

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Canada's Largest Lumber Manufacturing Plant

Mixed Car Shipments containing **Doors, Mouldings, 3 Ply Panels and guaranteed quality X X X B.C. Red Cedar Shingles**

PROMPT SHIPMENTS

Fir Timbers and **Dimension Flooring, Ceiling, Finish, Casing, Base and Interior Trimmings**

GUARANTEED QUALITIES

The 1916 model is a ***FIR*** Door made with 3 Ply Rotary Cut beautifully Grained Veneer Panels and Edge Grain Stiles and Rails.

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Capital $6,500,000

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Books For Sale
Special Prices

The Preservation of Structural Timber, by Howard F. Weiss. Published in 1915 by McGraw-Hill Book Company. 312 pages, illustrated. Price $3.00.

Scribner's Lumber & Log Book, 1915 Edition, Price 35c.

Baughman's Buyer & Seller, 75c.

Utilization of Wood - Waste (Second Revised Edition), by Ernst Hubbard. Published in 1915 by Scott, Greenwood & Sons. 192 pages, illustrated. Price $1.00.

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Glasgow Trade in 1915

Cant & Kemp, Glasgow, Scotland, in their annual timber market report say:—The Timber Trade during 1915 has been without precedent. The year began with a great increase in freights, and many buyers felt timid about paying the prices demanded, as they feared the rates would not be maintained. We have only to look at the freight rates quoted today to see how entirely wrong such fears were. Freights are now in most cases more than double those current in the early months of the year, and further increases are being constantly demanded. The consumption all round has been good, although the demand from the Shipbuilding Industry has been smaller than usual, on account of the class of vessels under construction not calling for the same quantities of timber. Spruce has been in strong demand for box-making, etc. Owing to the curtailed imports from the Baltic, large quantities have been imported from Canada and the Lower Ports. Hardwoods and fancy woods of the lower grades particularly have met with a steady sale, and stocks are low.

Shipbuilders have experienced a trying year. The demand from the Admiralty has been great, and most of the yards are almost wholly controlled by the Government. During the year the output of new steamers for merchant service on the Clyde has been 126 vessels, measuring 215,060 tons, as against 307 vessels, measuring 460,258 tons for 1914, being a decrease of 181 vessels, measuring 245,198 tons for the year. Shipbuilders have also a difficult problem to solve in the delivering of steamers contracted for before the war, owing to the great advance in wages and materials, and unless war prices are obtainable serious losses must ensue. It is, however, some satisfaction to know that already enquiries are being made for large liners, as well as other classes of steamers, which would appear to indicate good trade after the war.

The housebuilding trade has had another year of depression, ordinary building operations being almost at a standstill, the high cost of wages and materials rendering such work unprofitable.

The waginbuilding trade has been well employed, largely with war work,—the wood consumed being large quantities of wagon oak planks, ash, hickory, etc., in the making of transport and other wagons, while much of the ordinary work is at a standstill at present, for both home and foreign buyers.

The cabinetmaking industry has suffered from the war, particularly in high-class furniture, although an active demand for the cheaper qualities is reported, largely due to the high wages earned by the workmen.

It is difficult to anticipate for the coming year, as so much depends upon the duration of the war, but so long as the high freights continue, and the large Government orders come on the market, it is reasonable to suppose that the present values will be maintained—at least while the war lasts. We have luckily been very free from any serious labor troubles or financial difficulties during the year, and it is hoped that this satisfactory state of affairs may continue.

Quebec Yellow Pine Waney Boardwood.—The stock is moderate. The demand has chiefly been for parcels suitable for war work, for which high prices have been obtained.

Quebec Red Pine.—There are no logs in stock and only a small quantity of deals on hand. The demand is limited with firm prices.

Quebec Oak.—The stock is greatly reduced. The import has not been heavy, with a moderate enquiry. Quotations are very firm.

Quebec Elm.—The stock is very similar to last year. Values have considerably advanced and are still likely to increase.

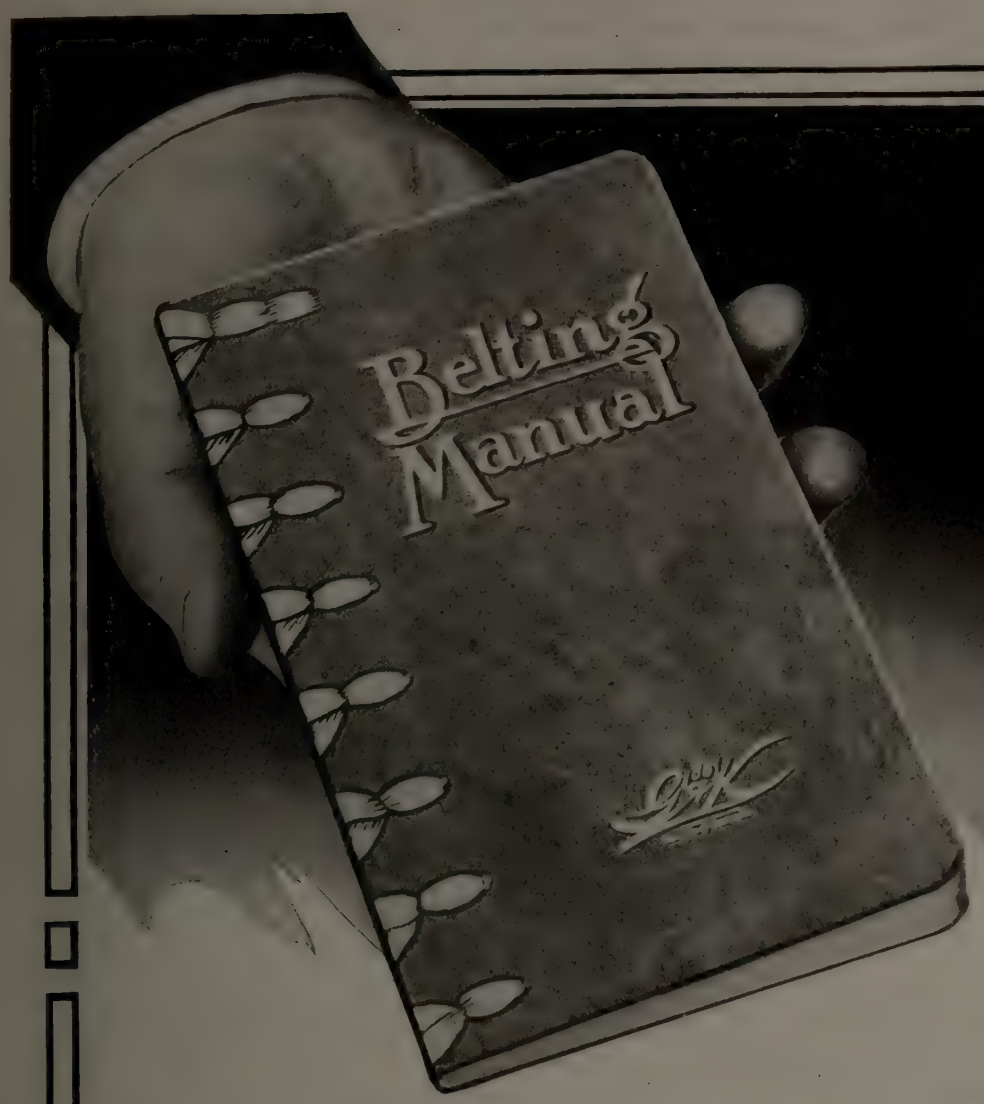
Ash.—The stock is considerable, and consists chiefly of States wood. Prices are high, and may be quoted from 4/ upwards per cubic foot, for fresh parcels of logs, according to quality and specification, and from 3/ to 5/6 per cubic foot for planks and boards, according to quality and specification.

Birch.—The stock of logs is much reduced from last year. The stock of planks and boards is also considerably lower. There has been a good demand for special specifications, and prices are firm. Quotations are, logs:—2s. 9d. to 3s. 3d. Planks, 2s. 9d. to 3s. 3d., all per cubic foot.

Quebec Yellow Pine Deals, etc.—The stocks are moderate. The import has been on a small scale. The demand, however, is not very great, and the stocks on hand may probably be ample for the market's requirements. Prices are firm, and may be quoted as follows:—Firsts—Broads, 5s. 6d. to 6s.; regulars, 5s. to 5s. 6d.; undersized, 4s. to 4s. 3d. Seconds—Broads and regulars, 3s. 10d. to 4s 3d.; undersized, 2s. 1d. to 3 s. 1d. Thirds—Broads and regulars, 2s. 11d. to 3s. 3d; undersized, 2s. 4d. to 2s. 7d. Fourths—Broads and regulars, 2s. 4d. to 2s. 7d.; undersized, 2s. to 2s. 3d. Good sidings, 4s. to 5s. 6d. all per cubic foot, according to specifications. The demand for Californian and Siberian pine deals and sidings is very limited.

Quebec Spruce Deals.—The stock is considerably heavier than at this time last year, while there has been an unprecedented demand,

(Continued on Page 54)



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SPRUCE rough or dressed

1" No. 2 and Better Birch, 1914 cut
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65,000 feet 1 x 5, 10/16 ft. Mill Run Box out.
15,000 feet 1 x 9, 12/16 ft. Mill Run Box out.
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EDGINGS

Ontario

The Northumberland Paper & Electric Co., Campbellford, Ont., recently lost their paper mill, etc., by fire. The amount of the loss is not known, but it is well insured.

The Colonial Lumber Company, Pembroke, Ont., have made extensive improvements to their equipment during the winter, having installed a quantity of new machinery and increased the capacity of their mill considerably, as well as replacing the burner which collapsed some weeks ago.

Mr. J. E. Beechler has completed the plant of the Goderich Lumber and Milling Company at Goderich, Ont., and it is now ready for operation. The plant includes all modern improvements and will give employment to about sixty men. Mr. Baechler reports that he now has extensive orders on hand for 1916.

A report from Rainy River, Ont., states that the Rat Portage Lumber Company have sold their old mill site property to the T. M. Partridge Cedar Company, of Baudette, and that the Partridge Company intend moving their business to Rainy River this winter. The company will employ about twenty men during the greater part of the year.

Mr. A. G. McIntyre, 706 Traders Bank Building, Toronto, who recently resigned from the position of manager of the Bathurst Lumber Company's pulp and paper plant in order to accept the position of general manager of the Mattagami Pulp and Paper Company, Limited, whose plant is to be located at Smooth Rock Falls, Ont., states that building operations will commence at once, that the plant will turn out 75 tons of bleached sulphite per day and is expected to be ready for operation in June, 1917. The company intend to erect a model town at Smooth Rock Falls for the housing of their employees. They have already commenced to instal a portable sawmill with which they will take out the timber and lumber required in connection with the building of their plant. Subsequently they will put in a band-saw mill with a capacity of about 30,000 feet per day.

Eastern Canada

Jos. Boule is starting work at once on a sawmill at Loretteville, P. Q. The cost of the mill will be $10,000.

P. E. Bourassa & Son, 1495 Notre Dame East, Montreal, P. Q., are making alterations to their planing mill at a cost of $3,000.

The Nouvelle Lumber Company, Boston, Mass., contemplate making several changes in their mill at St. Omer, P. Q., during the coming summer.

Haley & Son, St. Stephen, N. B., recently lost their box mill at Calais. Maine, by fire. The loss amounted to $5,000 which was covered by insurance.

The contract for the supply of elm and maple timber and hemlock railway ties for the Montreal Habor Board has been awarded to Mr. W. H. Kelly, Buckingham, P. Q.

The St. Maurice Lumber Company, Three Rivers, P. Q., expect to commence work during the coming spring upon the construction of a telephone line in their limits between Hervey Junction and La Tuque, along the line of the Transcontinental railroad.

The Miner Lumber Company, Limited, recently incorporated, have opened an office in the Coristine Building, Montreal, as wholesale lumber dealers. A mill is under construction at Rawdon, P. Q.

The mill at Lumsden Mills, Quebec, owned by Mr. John Lumsden, has recently been altered so as to increase its capacity over 60 per cent. A twin circular has been put in and two new water wheels added, made by Chas. Barber & Sons of Meaford, Ont.

The International Land and Lumber Company, Limited, Ottawa, Ont., who own about 300 square miles of spruce limits in the neighborhood of Lake St. John, P. Q., intend, it is reported, to erect a sawmill and a pulp mill as soon as the necessary capital can be obtained.

The Richards Manufacturing Company, whose lumber mill at Kedgwick, N. B., was destroyed by fire on February 22nd, will rebuild immediately. Plans have been prepared by R. McLean. The equipment of the plant will include three new shingle machines. The building will be 33 x 60 feet, frame construction and fireproof roofing.

The South West Boom Company, operating on the south west branch of the Miramichi River, N. B., are asking the local legislature for an extension of their charter for a further term of twenty years; also for permission to increase their boomage charge by 10c. per thousand superficial feet and to provide for an increase in their capital stock.

At a meeting of the creditors of the Tobin Manufacturing Company, held in Sherbrooke, P. Q., under voluntary liquidation, Mr. John W. Quinn, of Windsor Mills, P. Q., was appointed liquidator, with the following advisory committee of creditors:—Messrs. J. A. Begin, Montreal; W. H. Mitchell, Lot-

biniere Lumber Company; J. A. Bothwell, Brompton Pulp & Paper Company, East Angus; P. Pare, G. A. Grier & Sons, Limited, Montreal, and Arthur H. Campbell, Campbell-McLaurin Lumber Company, Ltd., Montreal.

Messrs. Murray and Gregory, Limited, of St. John, N.B., are erecting another new mill at Lac de Frontiere, in their Quebec limits. This is now the last station on the new extension of the Quebec Central. This new mill will have a capacity of about 50,000 feet per day of long lumber and 30,000 to 35,000 laths, besides shingles. Rossers for rossing pulpwood are also being installed in the plant, as they also get out considerable quantities of pulpwood each year. It is hoped to have this mill in operation by June 1st. Their mill at St. Camille, Quebec, on the same railway, is running on its second year, having run night and day through the past year. Mr. J. Fraser Gregory, president of the company, has just returned from Quebec, and reports everything going favorably.

Western Canada

The Schreiber Fuel and Lumber Co. Ltd., Winnipeg, Man., have been incorporated.

The Shull Shingle and Manufacturing Company's plant on the North Arm, Vancouver, B. C., started operations during the last week of February.

The Western Pine Lumber Company, Grand Forks, B. C., expect to start operations again shortly, having some 6,500,000 feet of logs at the mill ready for sawing.

The Spruce and Cedar Mills, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $10,000, to carry on business as timber merchants, sawmill proprietors, etc.

The Brunette Saw Mills, Limited, New Westminster, B. C., which had not been operating this year, with the exception of the box factory, commenced running during the third week in February.

The Montreal Trust Company have been appointed permanent liquidators for the Sprague Lumber Company, Winnipeg, Man. The Montreal Trust Company have already been acting as provisional liquidators.

The Vancouver Creosoting Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $300,000, to carry on business as manufacturers and dealers in lumber, timber, shingles, lath, sash, doors, portable houses, boxes, also as sawmill owners and as general lumber and timber merchants.

The Canyon Shingle Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $10,000, to take over the shingle and lumber business carried on and owned by Fred A. Johnston and T. L. Taylor, of West Vancouver.

At Eagle River, 32 miles west of Revelstoke, B. C., on the main line of the C. P. R., a shingle plant has been erected by E. D. Mayhue. The plant has dry shed capacity for three million shingles, and Mr. Mayhue reports a good demand for his output.

Cook's mill, between Dennison and Mount Lehman, B. C., was considerably damaged recently by an extensive cave-in of the roof on account of the heavy accumulation of snow. Much of the machinery, including grinders, planers and saws was seriously injured.

Work on the property recently purchased by the Vancouver Creosote Company at North Vancouver, B. C., is to be commenced at once. Orders calling for 1,250,000 gallons of creosote early in May are expected to be filled according to contract. The company will have a subscribed capital of $300,000. The plant and property are estimated to cost about $200,000.

The Montreal Chambre de Commerce has appointed the following as members of the mines, woods and forests committee: Messrs. Frank Pauze, Leon Gagne, Rod Tourville, J. H. Dansereau, J. A. Laferte, J. T. Armand, J. P. Dupuis, Thos. Prefontaine, and E. Oullette.

In 1913, 13,220,132 superficial feet of hewn timber was imported into New Zealand and 33,688,145 superficial feet of sawn timber, valued respectively at $793,677, and $1,492,419. In 1914 only 8,482,099 superficial feet of hewn timber and 30,085,970 superficial feet of sawn timber were imported, valued respectively at $531,297 and $1,251,780.

A disastrous fire occurred at the mills of the Riverside Lumber Company, McGillivary, B. C., Mr. A. Sereth, Calgary, Alta., stated to the press of Calgary, that the fire did serious damage which is only partially covered with insurance. Their big mill, with a daily capacity of 100,000 feet of lumber and which cost $65,000, was destroyed. This is one of the largest sawmills in the Crows Nest Pass. In addition about $3,000 worth of lumber was burned. Saw logs totalling about 20,000,000 feet were in the water ready for the saws, but were saved. The company will commence rebuilding at once and will probably be sawing by early Spring. The Riverside Lumber Company also own a large mill at Calgary, Alta., at which point Mr. A. Sereth is manager.

Blair & Rolland, Limited

Lumber & Pulpwood

20 St. Nicholas Street, Montreal, Que.

Dressed as Required, Spruce and Pine

MILL RUN 1 in. x 4 x 10 ft. up
" 1 in. x 5 x 10 ft. up
" 1 in. x 6 x 10 ft. up
" 1 in. x 7 x 10 ft. up
" 1 in. x 8 x 10 ft. up
MILL RUN 2 in. x 4 x 10 ft. up
" 2 in. x 5/7 x 10 ft. up
" 2 in. x 8 x 10 ft. up
" 2 in. x 9 x 10 ft. up
" 2 in. x 10 x 10 ft. up
MILL RUN 3 in. x 4/5 x 10 ft. up
" 3 in. x 6 x 10 ft. up
" 3 in. x 7 x 10 ft. up
" 3 in. x 8 x 10 ft. up
" 3 in. x 9 x 10 ft. up

P 1 or 2 Sides V joint, Beaded or Novelty Siding Prompt and Good Work. We Ship Mixed Car Loads as Required.

Roofing, P 2 S and Matched

1 x 4 up x 8 up—about 60 per cent. 12 and 13 ft.

Mill Cull Spruce

2 in. x 4 up x 10/13 and 3 x 9 x 10/13
3 in. x 4 up x 10/13

1,700,000 pcs. MILL RUN SPRUCE LATH 4 x 1⅜ x ⅜
500,000 pcs. MILL RUN WHITE PINE LATH 4 x 1⅜ x ⅜
200,000 pcs. No. 2 WHITE PINE LATH 4 x 1¼ x ⅜

H. BOURGOUIN

Dominion Express Bldg., 145 St. James St., Montreal

Wholesale Lumber and Timber

SHELL BOX STOCK

White and Red Pine, Spruce

Hemlock, Birch, Maple

Railway Ties, Fence Posts, Etc.

Prompt shipment. Satisfactory stock. Good service Write for Prices

A. F. B. AUSTIN, Manager

FRED WOOD & SON

135 Richmond St. W., TORONTO

Manufacturers and Dealers in HIGH-GRADE CIRCULAR SAWS

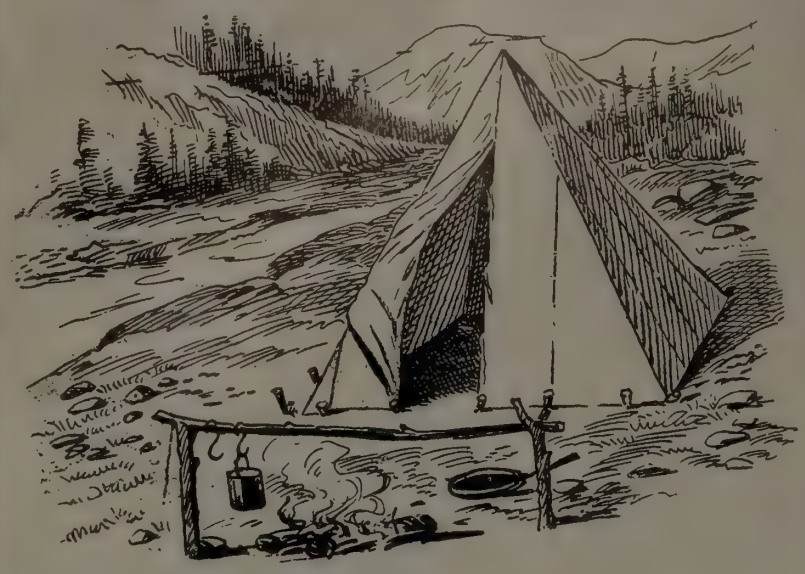
Circular Cross Cuts
Trimmers
Edgers
Bolters
Concave, Etc.

REPAIRING A SPECIALTY

We make a Specialty of Repairs and can give your orders prompt attention

35 years' practical experience in making saws in Canada

"Canada's Largest Tent and Flag Manufacturers"



The World Knows None Better Than Woods' Non-Absorbent Duck Tents.

Pyramid Tent
without walls, as illustrated above

8 oz. Woods' Non-Absorbent Duck

Size	Price
7 x 7½ x 7 ft.	$ 9.00
9 x 9 x 7½ ft.	12.00
10 x 10 x 8 ft.	13.00

7 oz. Woods' Non-Absorbent Duck

Size	Price
7 x 7½ x 7 ft.	$ 8.75
9 x 9 x 7½ ft.	11.00
10 x 10 x 8 ft.	12.00

WOODS' Non-Absorbent Duck is exclusively our own production and is entirely different from any other duck used in tent manufacturing, being made in our own cotton mills at Welland, Ont., from specifications of the highest standard. Every tent made from this duck bears our trade mark which is your identification stamp of quality and lastingness, and our guarantee of "Perfect Satisfaction" to every purchaser.

Send for our Catalogue de Luxe. The greatest catalogue of its kind ever published.

Smart-Woods LIMITED

Ottawa Toronto Winnipeg Montreal

which still continues. Prices are very firm, and may be quoted as follows:—9 inch and up, 2s. 8d. to 2s. 10d.; 8 inch and under, 2s. 4d. to 2s. 6d., all per cubic foot.

Clyde Stocks, Imports and Consumption

The following table shows the amount of timber in Clyde at 31st December, 1914 and 1915, with statement of imports and consumption for the year ending 31st December, 1915.

Description—	Imports to 31st Dec. 1915 Pieces	Consumption 31st Dec. 1915 Pieces	Stock at 31st Dec. 1914 Cubic Feet	Stock at 31st Dec. 1915 Cubic Feet
Quebec Waney and Square Pine	3,215	2,728	71,460	99,748
" Elm	2,116	1,842	75,527	82,968
" Oak	391	1,985	94,744	15,507
Ash	3,687	2,094	1,820	21,429
Birch—Logs	4,252	6,143	41,888	29,457

How It Happens

THE WRONG WAY
COME AND GET IT IF YOU WANT IT
OURS IS BEST LET US SHOW YOU
IT WON'T RUN
CALL ON OUR SERVICE DEPARTMENT
LETTING A PRODUCT SELL ITSELF
SELLING A PRODUCT
I DON'T KNOW WHETHER IT WAS WHAT HE WANTED OR NOT I SOLD HIM WHAT I THOUGHT IT OUGHT TO HAVE
DID YOU FOLLOW OUR DIRECTIONS?
DID IT SUIT?
KEEP HOUSE OUR 10 YEARS GUARANTEE
INDIFFERENCE
SERVICE
AS IT SHOULD BE
WOOD IS BEST, MOST BEAUTIFUL AND MOST ECONOMICAL BY PROPER SELECTION OR TREATMENT IT WILL FULLY MEET YOUR NEEDS. LET ME HELP YOU
DON'T YOU KNOW US WELL ENOUGH?
THE TABLES TURNED
THIS COMPETITION MAKES US SAD

The Lessons of Service	INCREASED SALES SATISFIED CUSTOMERS REPEAT ORDERS NEW BUSINESS MORE PROFIT

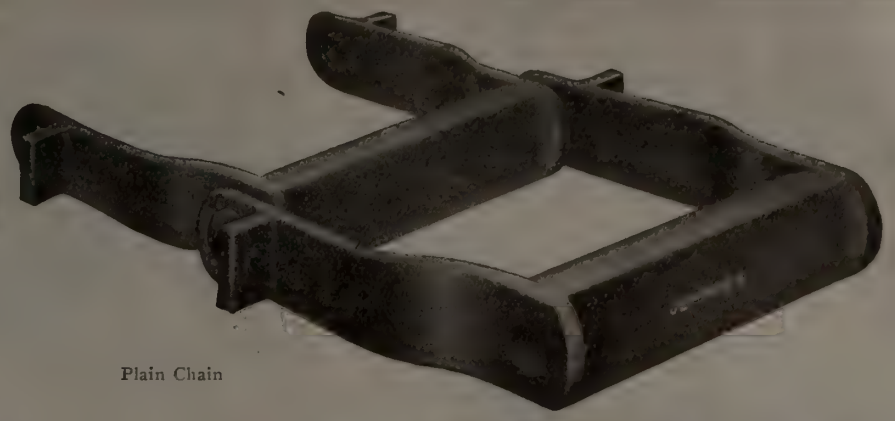
A picture which contains lessons to lumber dealers. By the National Lumber Manufacturers' Association, Trade Expansion Department, Chicago, Ill.

W. T. Culver, Vice President and General Manager of the Stearns Salt & Lumber Co. of Ludington, Mich., was elected President of The Michigan Manufacturers' Association at their annual meeting held in Detroit during the week of February 17th. With Mr. Culver's election a vigorous policy will be adopted along many lines of effort and the Association will undoubtedly become a greater force in the industrial world than ever before. This organization comprises in its membership the greater number of the progressive manufacturers of the State and has made its influence felt in every movement having for its object the betterment of the conditions of employers and employees.

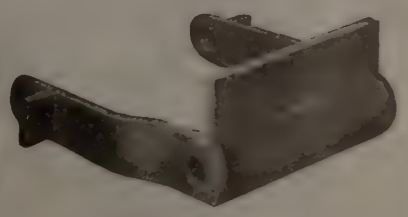
W. R. Stuart, head of the Stuart Lumber Company, Calgary, Alta., died recently at his home. The late Mr. Stuart was one of Calgary's leading business and financial men. He had resided in Calgary for 23 years, all of which he spent in the lumbering business.

Mr. A. C. Hastings, president of the American Writing Paper Company, in a recent statement, said that the United States was now facing the greatest general paper famine in its history. Stocks in the hands of jobbers are low; imports from all countries except Canada have been cut off and exports are greater than ever.

Wing or C Attachment



Plain Chain



Flight or D Attachment

Jeffrey "Reliance" Malleable Drag Chains

(Riveted Pins)

An Inexpensive and Durable Chain for Conveyer Service in handling Saw Dust, Refuse, Ashes, etc.

Extra Heavy Plain Cast Iron Sprocket for Riveted Sawdust Chain

This chain in either the Plain or Attachment Links, as illustrated at top of page, is especially adapted for handling ashes or other gritty materials in boiler house conduits or trenches.

Note the Long Pin Bearing in the Malleable Links, which gives long life in the bending of the chain in its internal wearing parts. Extension Lugs protect the heads of pins.

Write for Bulletin No. 162-6, containing illustrations, Description and Prices of Jeffrey "Reliance" and Drag Chains, Attachments and Sprocket Wheels.

The Jeffrey Manufacturing Co.

Canadian Branch and Warerooms, MONTREAL

(Prompt Delivery can be made from our Big Stock of Saw Mill Chains)

Extra Heavy Cast Iron Sprocket for Delivery End of Conveyers with 3¾-in. Extension on each side

Jenckes Boilers

We make a Specialty of

Horizontal Tubular Boilers

for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

Sherbrooke Montreal Cobalt So. Porcupine St. Catharines Toronto Vancouver Nelson

LINK-BELT
SAW MILL CHAINS

Superior in Design, Workmanship, Quality
High Carbon Steel Pins.
Patterns Full Weight—Full Strength

We are prepared to make prompt shipments of standard sizes from our own factory and warehouse in Toronto. Let us figure on your requirements.

This Trademark >——————< *on every link.*

Write for Catalog No. 110D.

Canadian Link-Belt Company, Ltd.
1189 King Street West, Toronto

Seattle, Link-Belt & Dodge Products Company, 580 First Avenue South.
Portland, Ore., Link-Belt & Dodge Products Co., 14th and Lovejoy Sts.
A. R. Williams Machinery Company, Limited, Vancouver, B. C.
Waterous Engine Works Company, Limited, Brantford, Ont.

Always in Your Stable
Stops Bleeding

The wise horse owner will always have in his stable a supply of Douglas Egyptian Liniment. It is so easily and quickly applied and always proves a rapid cure for the many ailments of horses.

It is the only liniment on the market that **will stop bleeding at once.**

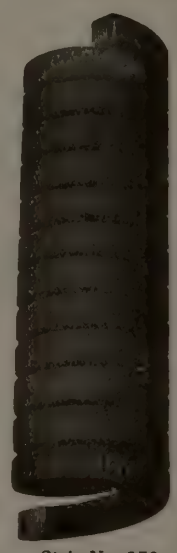
Free samples and literature mailed on request.

Douglas & Company
Napanee, Ont.

Garlock Packings

Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

Style No. 777


Style No. 150

The Garlock Packing Co.
Hamilton, Ontario

Branches:
Calgary
Montreal

Branches:
Toronto
Winnipeg

Are your horses of use to you?

This seems an absurd question—and the answer is always **"Of course they are"**—In which case provide your stables with:

Johnson's Reliable Veterinary Remedies

Johnson's Horse Liniment, No. 1 (Alcoholic)
1 gal. jugs (Imperial) $4.50 gal.
1 lb. bottles 8.00 doz.
2 lb. bottles 15.00 doz.

Johnson's Horse Liniment, No. 2 (an oil liniment)
1 gal. jugs (Imperial) 3.00 gal.
1 lb. bottles 6.00 doz.
2 lb. bottles 11.00 doz.

Johnson's Horse Colic Remedy
A sure and speedy cure for all kinds of Colic
1 gal. jugs (Imperial) 40 doses 5.00 gal.
1 lb. bottles 4 doses 8.00 doz.
2 lb. bottles 8 doses 15.00 doz,

Johnson's Veterinary Healing Ointment (Gall Cure)
2 lb. tins 2.00 per tin
4 oz. tins 3.50 doz.

Johnson's Condition Powders (Concentrated)
1 lb. Packages 3.60 per doz.

Johnson's Camp and Household Remedies, such as Cough Syrup, Healing Ointment, Headache Powders, Big 4 Liniment, Stomach Bitters, Cathartic Pills, etc., etc., have stood the test of twenty-five years and are in use all over Canada, from the Atlantic to the Pacific. Prices are lower than those of all other manufacturers. Letter orders receive prompt attention.

A. H. Johnson, Wholesale Druggist, **Collingwood, Ont.**

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Deputy Minister.

Department of the Interior, Ottawa,
December 20th, 1912.

HOE

Chisel Tooth Saws

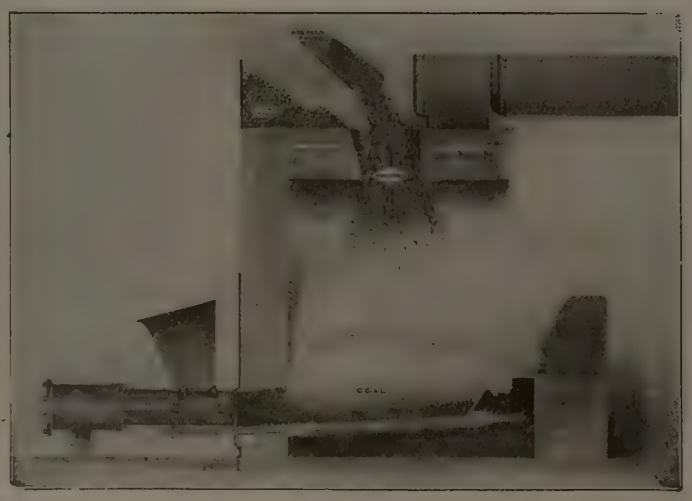
The Choice of Lumbermen in two Hemispheres

More than 80,000 of these saws are now in use in all parts of the world. Hoe Chisel Tooth Saws are backed by 86 years' experience in the manufacture of saws. They are made from the finest steel, evenly tempered throughout. Special Flanged Shanks and Superior Bits are supplied for sawing hardwood.

We are the oldest Saw manufacturers in America

R. HOE & CO. 504-520 Grand Street, **NEW YORK CITY**

Make Steam and Dollars From Your Refuse



Arrangement of Jones Underfeed Stokers in Dutch Oven for burning paper mill refuse in conjunction with coal.

Burn your saw mill and paper mill refuse in our special Jones Underfeed Stoker Dutch Oven and increase your profits.

Our stokers are installed in many of the most modern pulp and paper mills throughout Canada and the United States using a system combining the burning of mill refuse in conjunction with a small proportion of coal and are giving excellent results. If you have refuse to dispose of or if you depend on coal alone to fire your boilers the addition of a Jones Underfeed Stoker will make an enormous cut in your costs for steam.

Partial List of Users

	Boiler H.P.
Cleveland Sarnia Saw Mill Company, Limited, Sarnia, Ont.	1,200
St. Lawrence Pulp & Lumber Corporation, Chandler, P.Q.	3,000
E. B. Eddy Company, Hull, P.Q.	2,700
Kinleith Paper Company, St. Catharines, Ont.	450
Abitibi Pulp & Paper Company, Limited, Iroquois Falls, Ont.	1,672
Edwin Crabtree & Sons, Limited, Crabtree Mills, P.Q.	300
Minnesota & Ontario Power Company, Fort Frances, Ont.	1,533

Jones Underfeed Stoker Co., Limited

National Trust Building - TORONTO

The Logical Meeting Place

—of Buyer and Seller—

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Logging Equipment
Business Chances
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Machinery
Pulpwood
Timberlands
Shingles
Lumber
Poles
Lath

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and Woodworker
Toronto - Canada

The Lumberman's Milk
IN POWDER FORM

KLIM

READ BACKWARD

Klim is pure—cheaper than fresh liquid milk. One-third the cost of condensed milk. No freights on useless water—keeps in any temperature—no waste. Packed for camp use especially in 10 pound tins $2.00 each, the pound makes one gallon. Case lots, special price.

Write for samples, etc.

Canadian Milk Products Ltd., Toronto

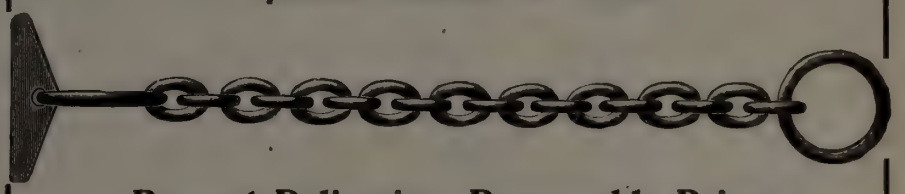
Plants:—Belmont, Ont., Brownsville, Ont. Head Office:—Mail Building
Montreal Office—New Birks Building

CHAINS

for the Lumbering Trade

Conveyor, Boom, Steel Loading Chains, etc.

Special Chains to order

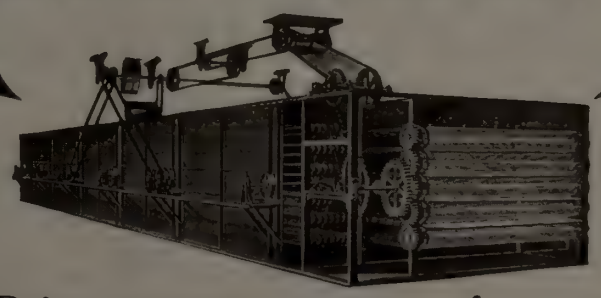


Prompt Deliveries—Reasonable Prices

The Columbus Chain Co.
Columbus, Ohio Lebanon, Pa.

Address communications to Columbus

PROCTOR VENEER DRYER



Dries enormous amount of veneer perfectly flat and pliable at minimum cost, without checks or splits

Send for catalog and list of users

The Philadelphia Textile Machinery Co., Philadelphia

CLARK BROTHERS COMPANY, OLEAN, N.Y.

MANUFACTURERS OF

Saw Mill Machinery

Our line consists of all machines required for the equipment of a modern saw mill.
Also we are prepared to make the drawings for your new plant showing the proper arrangement of the machinery and the correct construction of the saw mill building and power plant.
We have designed and furnished the complete machinery equipment for many Canadian saw mills, and we ask, if you are considering the development of a timber tract, that you write asking for our Canadian representative to call on you.

CLARK BAND MILLS AND RESAWS

are to-day being operated by some of the largest lumber manufacturers in Canada.
We can refer you to plants cutting from 30,000 to 200,000 feet of lumber per day.

RUBBER GOODS FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable.

Hose for Steam, Water, etc., in various grades, made especially to give satisfactory and economical service under different conditions.

Fire Hose One or more of our twenty brands of Fire Hose will be found, not only in the best equipped Factories, Mills, etc., but in almost every Fire Department in the Dominion.

Gutta Percha & Rubber, Limited

TORONTO MONTREAL WINNIPEG REGINA SASKATOON CALGARY EDMONTON VANCOUVER

Pink's Lumbering Tools

The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

Long Distance Phone, No. 87

Send for Catalogue and Price List.

Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants.

MADE IN CANADA

It's a Pink anyway you take it, and it's the best Peavey made.

The Thomas Pink Company, Limited

Manufacturers of Lumber Tools

PEMBROKE - - - - - ONTARIO

Lumbermen's Tents and Clothing

Pure wool, Waterproof Mackinaw Coats, Pants and Shirts,
the kind you have been looking for.

Repellant Brand Army Duck Tents

The best duck that money can buy.
We can equip your van complete.

Pure wool Blankets, Sweaters, Underwear. Hand Knit Mitts and Socks. Palmers Shoe Packs, Buck and horse hide Moccasins, etc.

Grant-Holden-Graham, Limited

Factory and Warehouse

147 to 151 Albert Street, Ottawa, Can.

Run Easiest
Cut Fastest
Last Longest

"The Saws with a Temper"

Labor Saved Is Time Saved

When to this is added increased durability we have the economy that naturally results from larger output and long service.

These are some of the strong points in favor of

Disston Cross-Cut Saws

They are ground to a true taper all the way from cutting edge to an extra thin back. Being ground on lines that conform exactly to the breast of the saw, the blade is absolutely uniform in thickness throughout the entire length of the cutting edge. This special method of grinding gives the maximum amount of clearance with the minimum amount of set, without sacrificing elasticity and stiffness. You know that all these points are good points, and substantiate our claim that Disston Cross-cut saws are unexcelled.

You will find a lot of valuable information in our Cross-Cut Saw Booklet. Sent free on request

TRADE MARK

Reg. in U. S. Pat. Office

Henry Disston & Sons Ltd.

Keystone Saw, Tool, Steel and File Works

2-20 Fraser Ave.

TORONTO, ONT., CAN.

Established 1840

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"Wilson Bros." Hardwood Flooring

is the Flooring that is manufactured expressly to supply the demand for the best. It is made by modern machinery from carefully selected stock, and every precaution is taken throughout our entire system to make it fulfil the requirements in every particular. Write us for prices.

Wilson Bros., Limited - Collingwood, Ont.

The Three Goodhue Belts

"EXTRA" "STANDARD" "ACME WATERPROOF"

These three brands are made for three different services and each brand is the best quality made from selected hides with the stretch taken out.

"Goodhue Belts" stretch less than any other belt by 15 to 25 per cent. This quality effects a great saving because it is unnecessary to be continually shortening the belt to keep it taut.

"Acme Waterproof" brand is made for the wet places in a mill and will give a remarkable service under the most trying conditions.

When you buy a belt—buy a Goodhue. Prices and particulars on request.

J. L. Goodhue & Co., Limited

DANVILLE, QUE.

WINNIPEG AGENTS—Bissett & Webb, Ltd., 151 Notre Dame Ave. East.
VANCOUVER AGENTS—Fleck Bros., Ltd., 1142 Homer St.

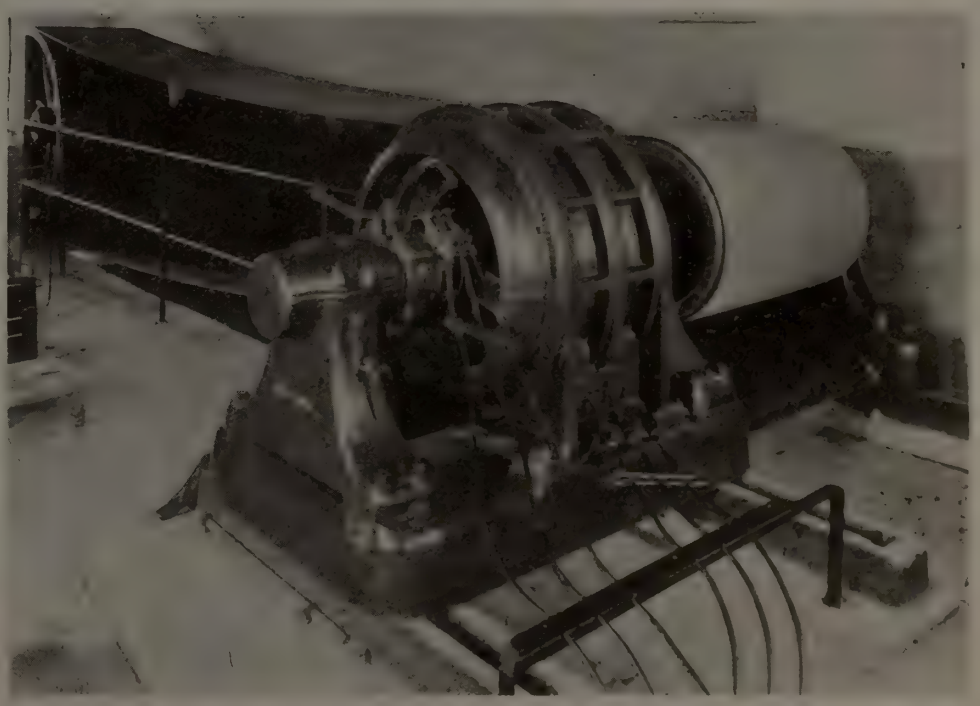
Leviathan or Anaconda

Belts do not stretch, there is no upkeep cost or loss of production by having to shut down to take up the belt.

This belt drives a line shaft that has fourteen dry pans; all these dry pans are equipped with 16" x 8-ply LEVIATHAN belting. There is no other brick plant in Canada or the United States that has fourteen dry pans on one line shaft.

Another ANACONDA 48" x 10-ply in this same plant replaced triple leather that was only in service two years. The upkeep cost of that leather belt was so expensive that they replaced it with ANACONDA.

Are you willing, is your Power Department willing to stop thinking of belting in terms of material and consider it in the light of power delivered, strength, tractive qualities, economy of upkeep, length of life, and after these are considered, cost of installation?



The above photograph is 75 ft. x 48 in. x 10-ply Leviathan belt installed at St. Lawrence Brick Co., Limited, La Prairie, August, 1914.

The motor is a Canadian General Electric 500 H., 3 Phase, 60 Cycle, 2300 volts, 600 R.P.M. The joint is made with ¾ in. Indian Tan Lacing, what is known as a hinge joint. The belt has never been taken up or relaced since it was installed, August, 1914, over one year's service.

MONTREAL **MAIN BELTING COMPANY OF CANADA, LIMITED** **TORONTO**

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:

1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	31 00	32 00
1 x 12 common and dressing	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and c. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00

Hemlock No. 1:

1 x 4 and 5-in. x 9 to 16 ft.	17 00
1 x 6-in. x 9 to 16 ft.	20 00
1 x 8-in. x 9 to 16 ft.	21 00
1 x 10 and 12 in. x 9 to 16 ft.	22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.	19 00
1-in. No. 2, 6-ft. to 16-ft.	16 00
2 x 4 to 12, 10 and 16 ft.	19 00
2 x 4 to 12-in., 12 and 14 ft.	19 00
2 x 4 to 12-in., 18 ft.	22 00
2 x 4 to 12-in., 20 ft.	24 00
2 x 4 to 12-in., 22 ft.	25 00
2 x 4 to 12-in., 24 ft.	26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.	16 00
Clear in B. C. cedar, kiln dried	50 00

Douglas Fir:

Dimension Timber up to 32 feet: 8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.	33 50
8x10, 8x12, 8x10, 8x12, 10x16, 12x16, 16x16, 16x18, 18x18, 20x20, up to 32 ft.	34 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.	34 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x20 up to 32 ft.	35 00
10x20, up to 32 ft.	35 50
6x18, 8 x 18, up to 32 ft.	36 00
6x20, 8x20, up to 32 ft.	37 00

Timber in lengths over 32 feet take the following additions: 33 to 35 ft., 50c; 36 to 40 ft., $1; 41 to 45 ft., $3; 46 to 50 ft., $5; 51 to 55 ft., $7; 56 to 60 ft., $9; 61 to 65 ft., $12.50; 66 to 70 ft., $15; 71 to 75 ft., $18; 76 to 80 ft., $22.

Fir flooring, edge grain	35 00
No. 1 and 2 1-in. Fir rough	38 00
No. 1 and 2 clear 1¼, 1½ and 2-in. Fir rough	40 00
1½-in. No. 1 4-ft. pine lath	5 00
1½-in. No. 2 4-ft. lath	4 75
1½-in. 32-in. pine	2 65
1½-in. No. 1 4-ft. hemlock lath	4 00
1½-in. mill run hemlock lath	3 75
XX B. C. cedar shingles	2 25
XXX 6 butts to 2-in.	2 95
XXXX 6 to 23-16-in.	3 15
XXXXX	3 35

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	39 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1sts and 2nds, 4/4	39 00
Birch, No. 1 com. and bet., 4/4	30 00
Birch, 1sts and 2nds, 6/4 and 8/4	42 00
Birch, 1sts and 2nds, 10/4 and 12/4	45 00
Birch, 1sts and 2nds, 16/4	50 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4	30 00
Basswood, No. 2 and 3 common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet.	28 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	28 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4.	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1sts and 2nds, 4/4	37 00
Hard maple, common and better, 4/4	28 00
Hard maple, 12/4 & 16/4, 1sts and 2nds.	46 00
Red oak, plain 1sts and 2nds, 4/4	59 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	65 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain, 1sts and 2nds, 4/4.	59 00
White oak, plain, 1sts and 2nds, 1½ and 2-in.	65 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	75 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	85 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	88 00
White oak, ¼ cut No. 1 common	55 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$52 00	54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	25 00	26 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	17 50	18 00
1"x3" to 6", 12'-16'	19 00	20 00
Pine mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine mill culls stock 1 x 12	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	15 00	17 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1¼-in.	19 00	21 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
Mill culls, white pine, 1"x7" and up	20 00	21 00
Mill run Spruce:		
1"x4" and up, 6'-11'	17 00	18 00
1"x4" and up, 12'-16'	18 00	20 00
1"x9"-10" and up, 12'-16'	22 00	24 00
1¼"x7" 8-9" and up, 12'-16'	22 00	24 00
1¼"x10" and up, 12'-16'	22 00	24 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1¼-in. x 4-ft.	4 25	4 50
No. 2 White Pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
White Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	70	75
According to average and quality, 30 to 35 feet	50	60

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00

Birch Planks

1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00

Cuts and Better

4/4 x 8 and up No. 1 and better	55 00
6/4 x 8 and up No. 1 and better	65 00
8/4 x 8 and up No. 1 and better	65 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00

No. 1 Cuts

1 in., 8 in. and up wide	42 00
1¼ in., 8-in. and up wide	55 00
1½ in., 8-in. and up wide	57 00
2 in., 8-in. and up wide	60 00
2½ and 3 and 8-in. and up wide	75 00
4 in., 8-in. and up wide	85 00

No. 2 Cuts

1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	47 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in.	25 00
1 in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00

No. 1 Barn

1 inch	31 00	45 00
1¼, 1½ and 2-in.	36 00	45 00
2½ and 3-in.		45 00
4 inch		50 00

No. 2 Barn

1 inch	28 00	36 00
1¼, 1½ and 2-in.	30 00	36 00
2½ and 3-in.		38 00

No. 3 Barn

1 inch	21 00	28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00	25 00

Box

No. 1, 1, 1¼, 1½, 2-in.	22 00	25 00
No. 2, 1¼, 1½, 2-in.	19 00	23 00

Mill Culls

Mill run culls, 1-in.		19 00
1, 1¼, 1½ and 2-in.		20 00
No. 2	17 00	18 00

Lath

No. 1, 32-in. pine	1 75
No. 2, 48-in. pine	4 25
No. 1, 48-in. pine	4 75
No. 3, 48-in. pine	3 75

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension S. 1 S. and 1 E.

	6 ft.	8 ft.	10 ft.	14x16 ft.
2 r 4, 6, 8	14 00	17 00	20 50	18 50
2 x 10	18 00	18 50	21 50	19 00
2 x 12	18 00	19 00	23 50	20 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	18 50
2 x 4-10-18-20	20 50
2 x 6, 8 to 16	18 50
2 x 8, 8 to 16	18 50
2x4-6 and 8-in.; 24,26,28, 30, 32 ft.	26 50
2 x 10 and 2 x 12; 8-16 ft.	23 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	25 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	27 50

No. 1 Common Boards

4 inch	19 00
6 inch	21 50
8, 10, 12 inch	23 50
Mixed widths	22 50

Flooring

4 or 6 inch No. 1	33 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00

Shiplap—Finished

6 inch	20 00
8, 10 and 12 inch	21 00

Siding

6 inch No. 1	33 00
6 inch No. 2	31 00
6 inch No. 3	21 50

Lath

No. 1 Cedar, pine, spruce (not mixed)	4 00
No. 1 Cedar, pine, spruce (mixed)	3 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	25 10
3 x 8 in.; 8 to 16 ft.	22 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	25 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	27 00

BRITISH COLUMBIA COAST FIR

Dimension S 1 S, and E.

2 x 4 in.; 6 and 8 ft.	17 50
2 x 4 in.; 12 x 14 ft.	18 50
2 x 4 in.; 10 x 16 ft.	19 50
2 x 4 in.; 18 x 20 ft.	20 50
2 x 4 in.; 22 x 24 ft.	21 50
2 x 4 in.; 26 x 32 ft.	23 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	20 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	22 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	23 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	25 00
2 x 14 in.; 10 to 16 ft.	25 00
2 x 14 in.; 18 and 20 ft.	27 00
2 x 14 in.; 22 and 24 ft.	28 00
2 x 14 in.; 26 to 32 ft.	30 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	21 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	22 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	23 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	24 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	26 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	24 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	24 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	25 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	25 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	32 00
Nos. 1 and 2, 1 x 4 in., E. G.	31 00
Nos. 1 and 2, 1 x 6 in., E. G.	29 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	23 00
No. 3, 1 x 4 in. or 6 in.	20 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	19 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft.	20 00
No. 2 Shiplap, 6 in.	19 00
No. 2 Shiplap, 8, 10 and 12 in.	20 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	19 00
Common Boards, 8 to 12 in.	20 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 75

LATH

Fir lath, 3/8 x 1 3/8 in. x 4 ft., bundled in 50's	4 00
Cedar lath 3/8 x 1 3/8 in. x 4 ft.	4 50

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$94 00
Uppers 5/4 to 8/4	92 00
Uppers 10/4 to 12/4	97 00
Selects 4/4	84 00
Selects 5/4 to 8/4	82 00
Selects 10/4 to 12/4	92 00
Fine common 4/4	61 00
Fine Common 5/4	65 00
Fine common 6/4	65 00
Fine common 8/4	67 00
No. 1 Cuts 4/4	51 00
No. 1 Cuts 5/4	57 00
No. 1 Cuts 6/4	59 00
No. 1 Cuts 8/4	61 00
No. 2 Cuts 4/4	32 00
No. 2 Cuts 5/4	43 00
No. 2 Cuts 6/4	45 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	33 00
No. 3 Cuts 6/4	34 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	46 00
Dressing 5/4 x 10	51 00
Dressing 5/4 x 12	52 00
No. 1 Moulding 5/4	58 00
No. 1 Moulding 6/4	58 00

Continued on page 66)

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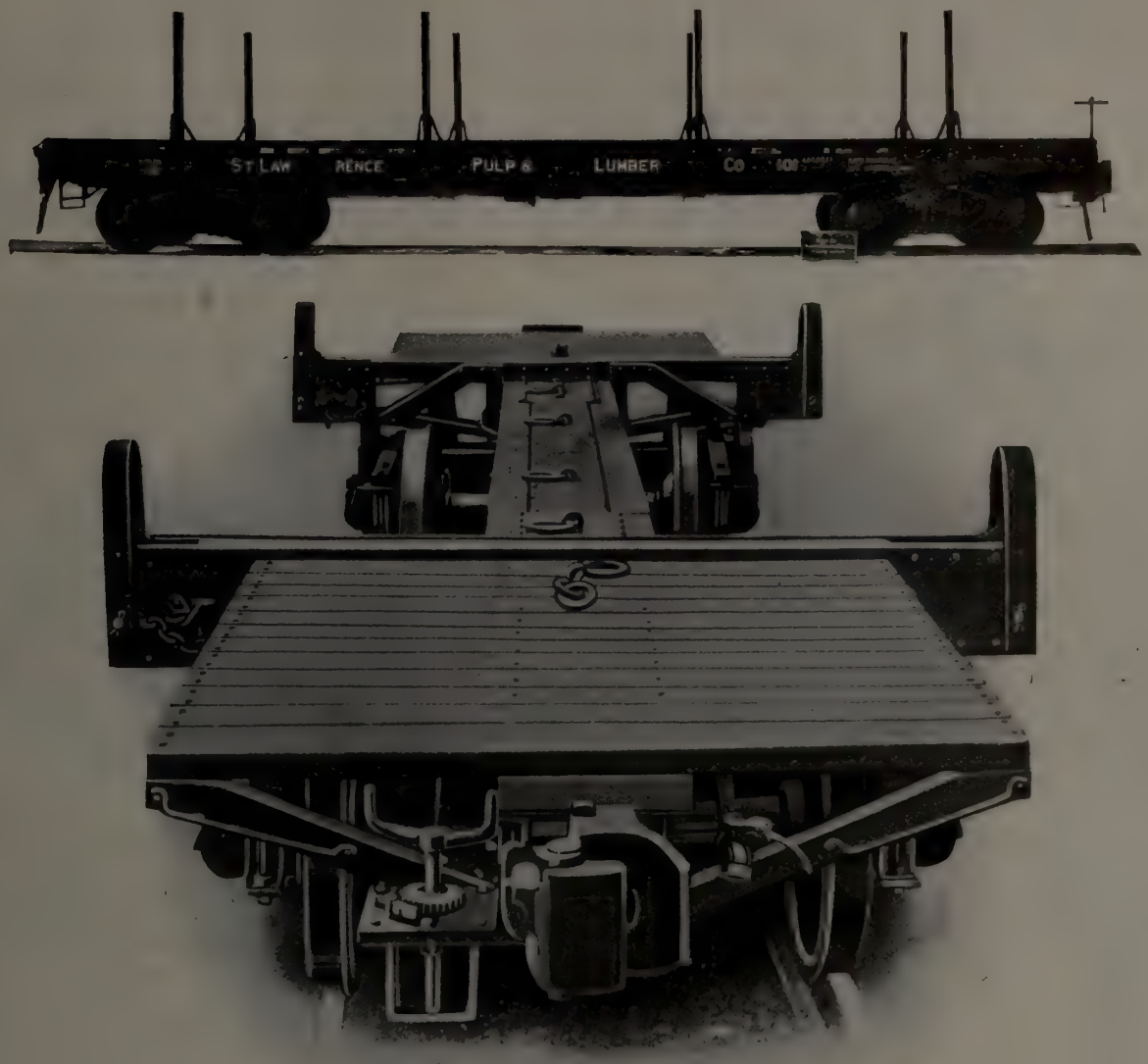
Made in Canada



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CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	58 00
No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	32 - 33	21 - 23	13 - 15
5/4 to 8/4	34 - 36	23 - 25	13 - 14
10/4 to 16/4	39 - 41	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	35 - 37	22 - 24	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	34 - 36	23 - 25	14 - 16
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	32 - 34	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	44 - 46	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	60 - 62	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in.	92 00	98 00
Selects, 1 to 2 inch	80 00	88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	70 00	72 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	36 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 00	34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	28 00	29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		23 50
Spruce, 8 in. and under dimen.		26 00
10 and 12 in. random lengths, 10 ft. and up	25 00	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	23 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	23 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	20 00	21 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	21 00	22 00
1½-in. spruce laths	4 15	4 25
1½-in. spruce laths	3 55	3 75

New Brunswick Cedar Shingles

Extras	3 30	3 40
Clears	2 75	2 90
Second clears	2 40	2 60
Clear whites	2 25	2 30
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.	3 45	3 50
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfection, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear		3 30

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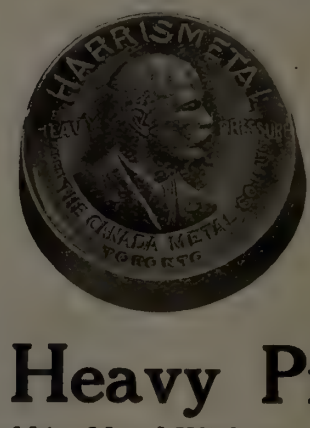

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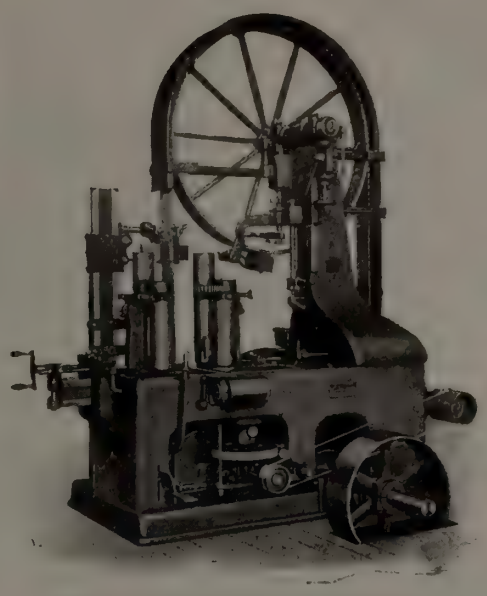

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Park Falls, Wis.,
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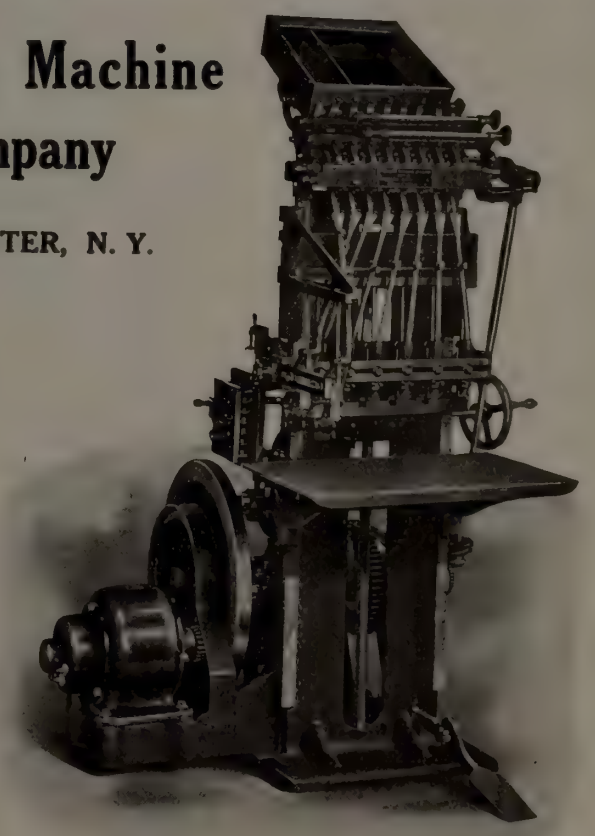

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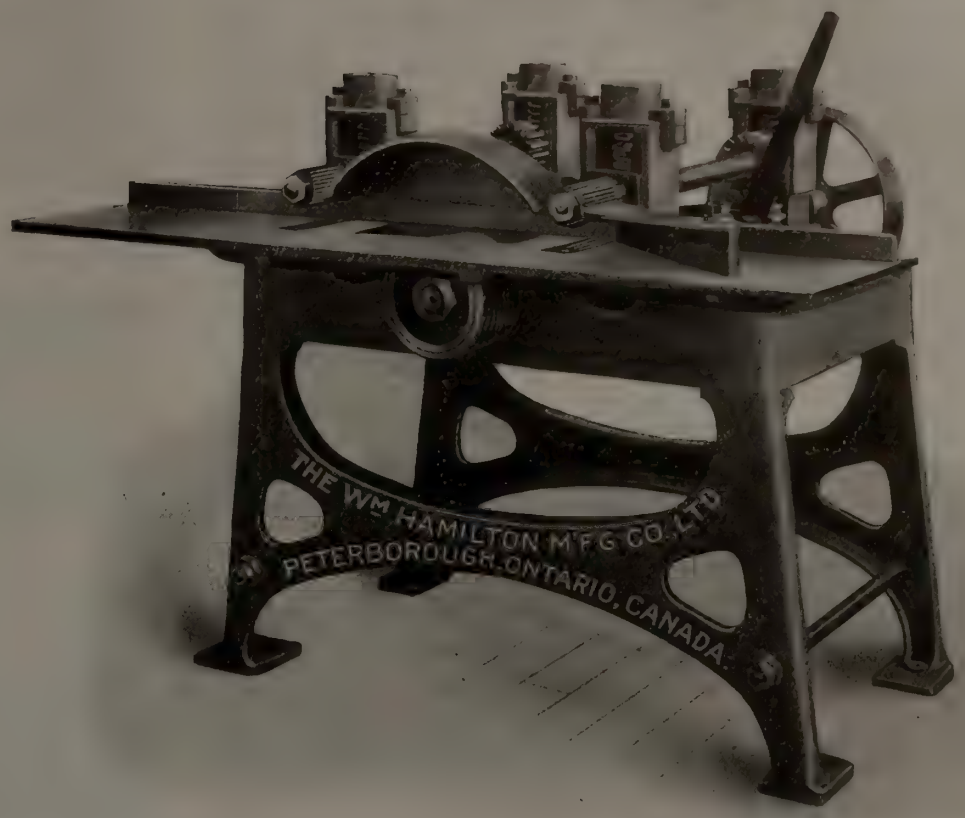

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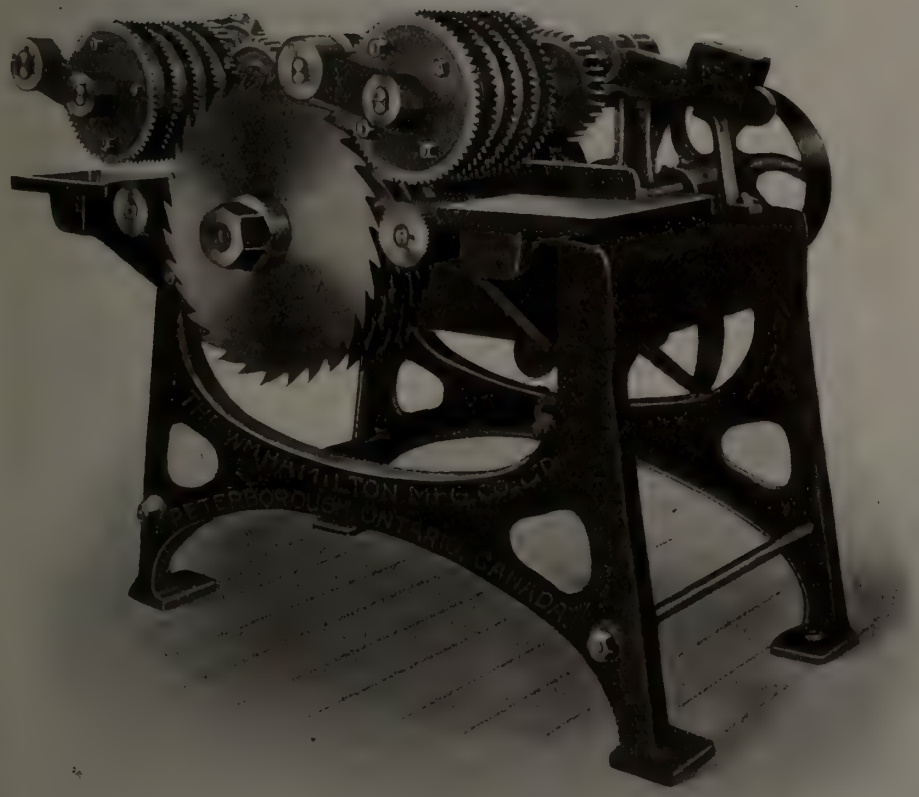

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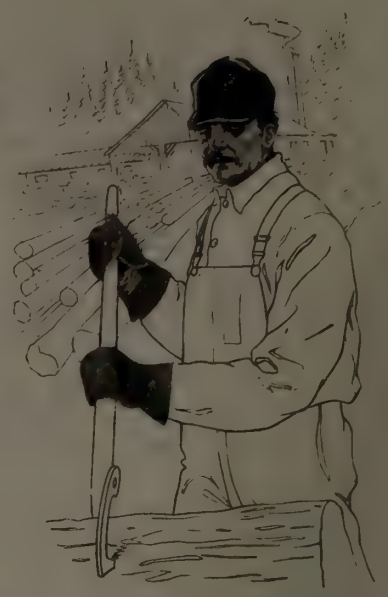

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Waterous Engine Works Company

RAILS
Gartshore, John J.

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Turner Bros. Canada, Limited

ROPE
Plymouth Cordage Company

RUBBER GOODS
Gutta Percha & Rubber Company
Turner Brothers Canada. Limited

SASH
Batts Limited
Haeberle Lumber Company

SAWS
Atkins & Company, E. C.
Disston & Sons, Henry
Hoe & Company, R.
Shurly-Dietrich Company
Simonds Canada Saw Company
Wood & Son, Fred

SAW SHARPENERS
Rogers & Company, Samuel C.

SAW MILL MACHINERY
Berlin Machine Works
Clark Bros.
Hamilton Company, William
Huther Bros., Saw Mfg. Company
Jeffrey Manufacturing Company.
Long Manufacturing Company, E.
McLennan Foundry & Mach. Works
Parry Sound Lumber Company
Payette & Company, P.
Waterous Engine Works Company

SHINGLES
Bartram Brothers
Campbell-MacLaurin Lumber Co.
Canadian Western Lumber Company
Can. H. W. Johns-Manville Co., Ltd.
Christy-Moir Company
Fesserton Timber Company
Fraser Limited
Gillespie, James
Harris Tie & Timber Company
Long Lumber Company
McGibbon Lumber Company
North Shore Shingle Association
Timms, Phillips & Company

SILENT CHAIN DRIVES
Canadian Link -BeltCompany

SHINGLE & LATH MACHINERY
Dunbar Engine & Foundry Co.
Hamilton Company, William
Long Manufacturing Company, E.
Payette & Company, P.
Waterous Engine Works Company

SHOEPACKS
Gendron Shoepack Company, P. T.

SNOW PLOWS
Pink Company. Thos.

SOUTHERN PINE
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Cameron & Company
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Hobart & Company
Mason, Gordon & Company
Southern Lumber Company
Stout Lumber Company
Valley Lumber Company
Wilson Lumber Company
Wisconsin & Arkansas Lumber Co.
Wuichet, Louis

SPRUCE
Auger & Son
Bartram Bros.
Blair & Rolland
Bourgouin, H.
Brown Corporation
Donogh & Company, John
Fesserton Timber Company
Fraser Limited
Fraser-Bryson Lumber Company
Gillies Bros.
Grant & Compbell
Hart & McDonagh
Laferte, J. A.
Mackarell & Company, Thos.
Mason, Gordon & Company
New Ontario Colonization Company
Quebec & St. Maurice Industrial Co.
Rideau Lumber Company
Spencer, C. A.

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STEEL CHAIN
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Columbus Chain Company
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Pratt & Whitney Company
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Cant & Kemp
Farnworth & Jardine
Hillas & Company, W. N.
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Sewall, James W.
McInnis, A. D.

TIMBER CRUISERS
Campbell Lumber Company. L. E.

TRANSMISSION MACHINERY
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Boving Hydraulic & Engineering Co.
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Canadian Blower & Forge Company
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Write for our free book "C. L." It gives details about our entire line of Saws for all purposes. Let your next order for Saws specify ATKINS. We'll make good.

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Makers of Sterling Saws

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A Test In Your Workshop

will convince you of this fact:

That it is cheaper to use two files where you now use only one.

Take a certain piece of work and give one man a new file, and another a half worn file on a similar piece of work.

The man with the new file is doing what you are paying him for. The other man is filing away your time.

The man with the new file takes a pride in his work.

The man with the old file starts with a grouch, and the work suffers.

When the inefficient point in the files is reached it is good policy for you to have your men discard them.

And they should be replaced with the five famous brands:

KEARNEY & FOOT
GREAT WESTERN
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ARCADE
GLOBE
(Made In Canada)

Made in Canada by a plant controlling 90% of the file business.

Backed by 50 years' experience in the making of efficient files.

Send for your FREE copy of "File Filosophy" NOW.

Nicholson File Co.

Port Hope, Ontario

DEALERS EVERYWHERE.

Plymouth Cordage Stands The Test

These men are testing a piece of 2½" (dia.) Plymouth Manila Rope. It has just withstood a 45,000-pound strain, though sold to hold but 43,000.

If this surplus strength were an isolated case, it would mean little. But Plymouth Cordage in general tests "higher than card." The instance cited here is typical.

This is an important fact, for it means that whenever you buy Plymouth you secure cordage that offers a comfortable margin of safety.

Because of this margin of safety—this surplus strength—Plymouth stands up under the most severe strains of service where other kinds fall down.

And since much the same factors which make a rope strong make it durable as well, Plymouth's length of service is as superior as its strength.

Actual service is the real test and proof of the superiority of Plymouth Cordage, and that is the test we ask you to put it to.

PLYMOUTH CORDAGE COMPANY
NORTH PLYMOUTH, MASS. WELLAND, ONT.

INDEPENDENT CORDAGE COMPANY
TORONTO, ONTARIO, CANADIAN SALES AGENTS

PLYMOUTH TRADE MARK 1824

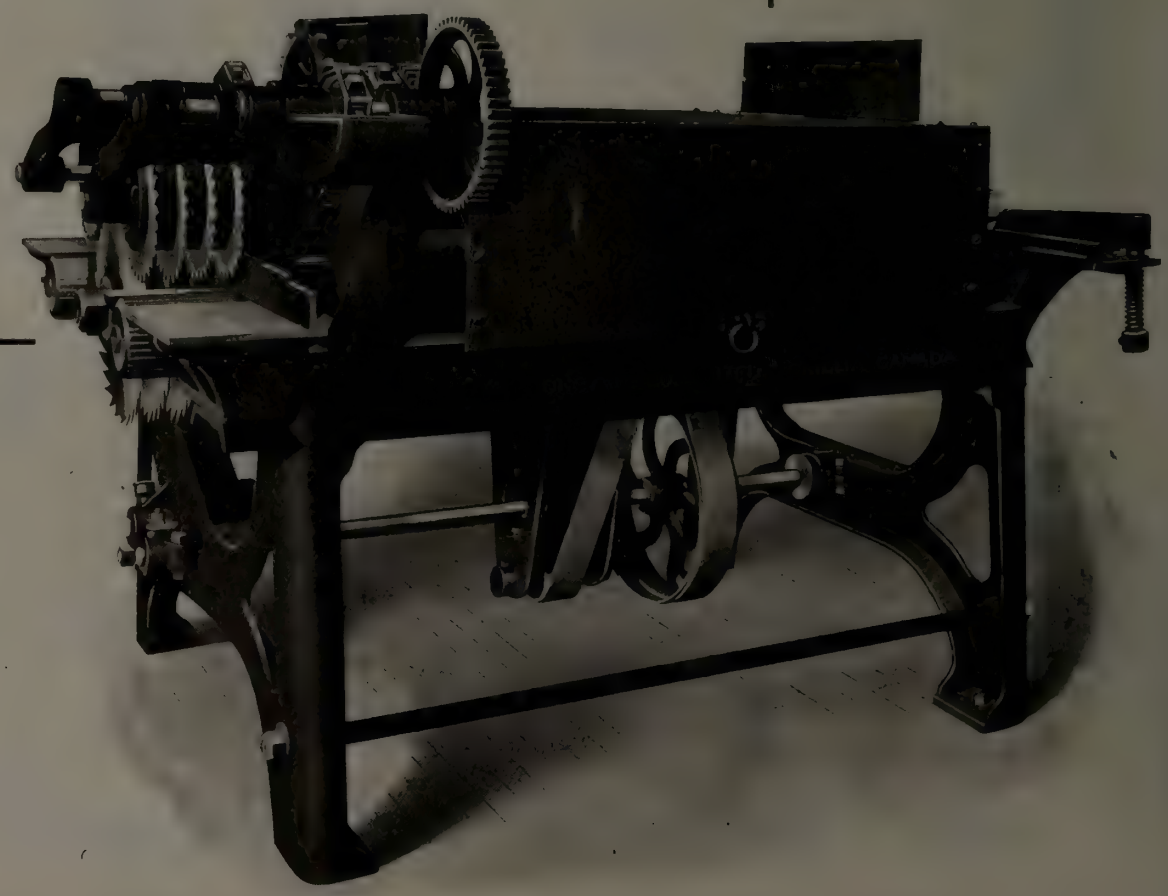
Lath Machine and Bolter

This machine is a combination of our No. 2 Bolter and No. 2 Lath Machine mounted in a single frame. The lath machine is made the opposite hand to our single machine. The illustration shows the bolter side of the combination. In mills where the floor space is limited and the output must be large this machine is an ideal combination. The details of construction found in our No. 2 Lath Mill and No. 2 Bolter apply to the combined machine.

When you overhaul your mill get in touch with us about new equipment.

The E. Long Manufacturing Company, Limited

Orillia - Ontario



If Your Mill Capacity is not More Than 60,000 ft. a day

For Best Results

Use

WATEROUS STEEL GIRDER CARRIAGES

For medium power mills Waterous Steel Girder Carriages have no superior. They are built with knee opening of from 30″ to 50″ and are adapted for Band or Circular Mills and for Steam or Rope Feed.

They are turned out with exceptional care. A sturdy, well put together frame, knees and log-seats of great strength, with dogs, setworks and accessories identical to those supplied on the heaviest carriages built in our shops.

A good many hundred of them are in use.

Improvements That Count

Combination Setworks.—Setworks and receder combined in one machine, operation by two levers only. Will set by 1/32 of an inch up to 3″ for one throw of lever. Cannot develop lost motion. The strongest, quickest acting setworks in use.

Non-breakable Headblocks.—Knees extra high, extra long, extra heavy. Provided with cushioned, self-aligning 4″ taper set. Log seats of heavy steel girders, with wide nigger nose, centre and rear castings. Fitted with steel facing strips, reversible when worn.

Sure-grip Dogs—that will handle logs, both large and small, square cants and the last 1″ board safely, certainly and rapidly. Strength and toughness are obtained by proper selection of materials and careful workmanship.

Double Axles under each logseat. Wheels of extra large diameter, of cast iron; tracks, heavy section of steel—the metal on metal wear reduced to a minimum. Bearing surfaces everywhere much larger than is usual practice.

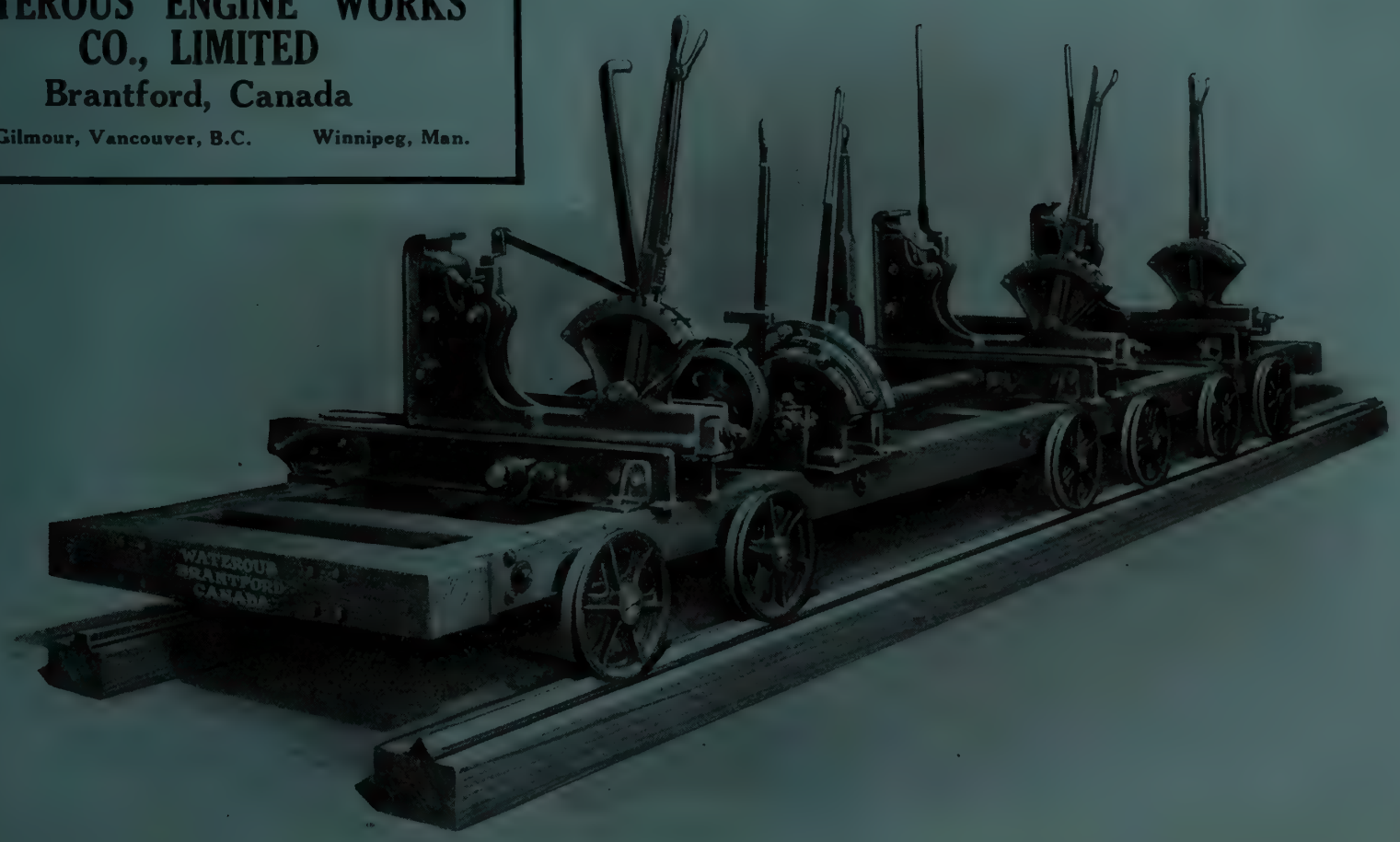
You can add a good many thousand feet to your daily cut and saw lumber of better quality by handling your logs on a Waterous Carriage.

Bulletin No. 111 on request.

WATEROUS ENGINE WORKS CO., LIMITED

Brantford, Canada

H. B. Gilmour, Vancouver, B.C. Winnipeg, Man.



$5,000,000.00
worth of mixed metal sold annually.

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Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price 30c per lb., Fort William and East; West of Fort William 35c per lb., delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, 40c per lb.; West of Fort William, 45c, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

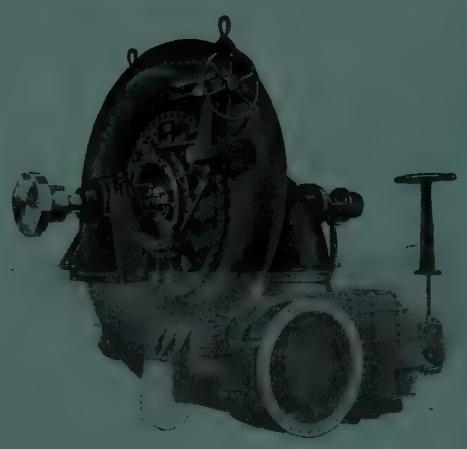
Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Smith Hydraulic Turbines

for driving the

Paper Mill and Pulp Grinder



This type of equipment specially designed for high head developements.

Our particular claim for these turbines is service, the kind of service that responds to the demand

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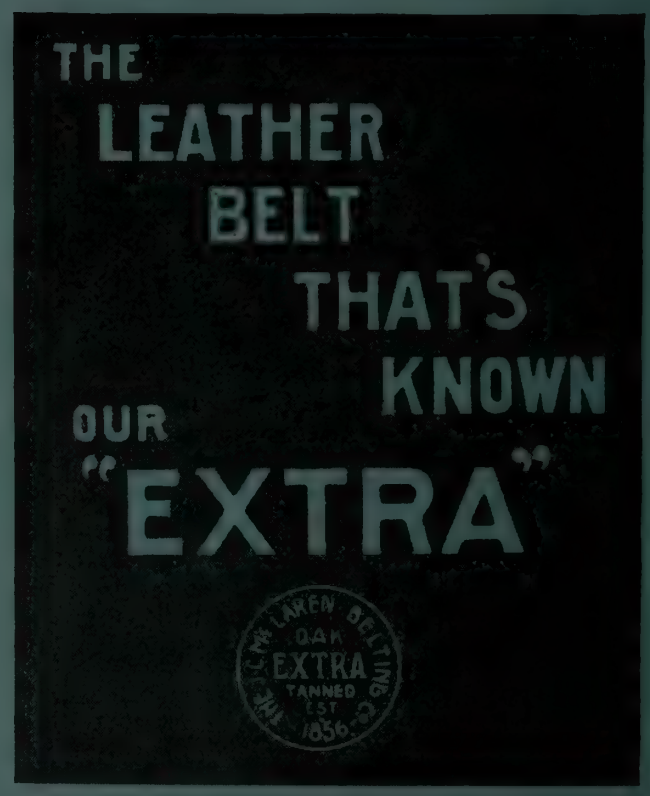

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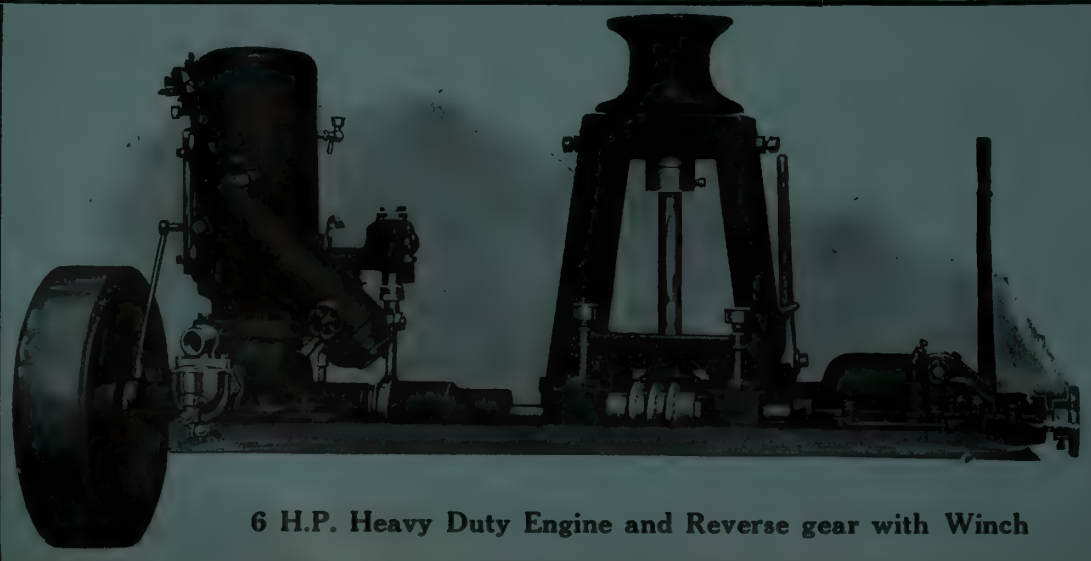
The J. C. McLaren Belting Co.
Limited
General Mill Supplies MONTREAL



6 H.P. Heavy Duty Engine and Reverse gear with Winch

River Driving Costs

will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

Adams Launch & Engine Co.
Penetang, Ont.

Vol. 36 Toronto, March 15, 1916 No. 6

Canada Lumberman & Wood Worker

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Highest quality

Boving Hydraulic & Engineering Co.
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Made in all styles

Electric-Welded Boom Chain

We also specialize
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Made in Canada Write to Fully Guaranteed

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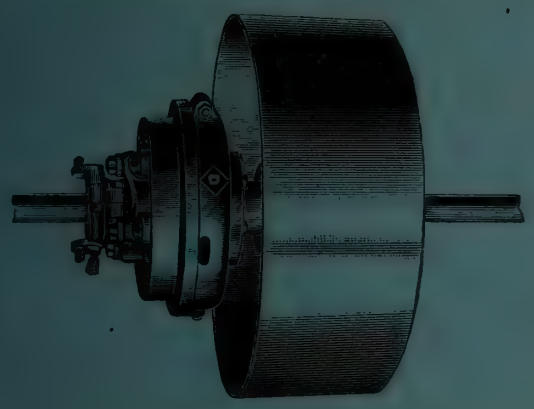

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For Saw Mills and Planing Mills

A simple, positive, durable clutch! Every Friction Clutch Pulley we sell is guaranteed suitable and satisfactory for the work or money refunded. All sizes split or solid for quick shipment.

Dodge Manufacturing Company, Limited
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We manufacture practically every article that can be made of Asbestos—including

Asbestos { Packings, Boiler Gaskets, Pipe and Boiler Coverings

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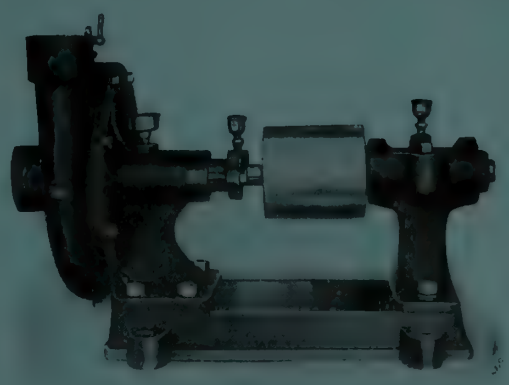

When next in the market for

PUMPS

let us figure on your needs.

The Smart-Turner Machine Co., Ltd.
Hamilton, Canada

J. M. T. VALVES

Globe Angle Check Safety

All parts proportionately accurate. Materials and workmanship of the highest grade. Guaranteed to give excellent service under conditions for which they are recommended.

Price Lists on Request

Measure Every Order

The Morrison Lumber Register, as illustrated, is bolted to your planer, molder, etc. It records each stick as it is fed under the wheel of the register. It is absolutely accurate and dependable.

Write for explanatory literature.

Morrison Lumber Measuring Register

The James Morrison Brass Mfg. Co., Ltd.
93-97 Adelaide St., West, TORONTO

Alphabetical Index of Advertisers, Page 58 Classified Directory to Advertisements, Page 64

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AMPHIBIA BELTING

COSTS LESS PER DAY

Put Good Belting

on your

Good Machines

Your machines are expensive, and naturally you expect them to turn out the quality and quantity of work commensurate with their cost.

Then why harness them with belting which cannot begin to do them justice?

Use

"AMPHIBIA"

Planer Belting

and get the most work from your machines, in the quickest time, at the lowest cost per day of service.

Try a sample run of "AMPHIBIA" Planer and prove its merits.

"Leather like gold has no substitute."

Sadler & Haworth

Established 1876

Tanners and Manufacturers

For 40 Years Tanners and Manufacturers of the Best Leather Belts

MONTREAL, 511 William Street

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The FLEXIBLE WATERPROOF BELT

"AMPHIBIA"

Geo. Gordon & Co., Limited

Cache Bay, Ontario

RED and WHITE PINE

Cross Arms, Shaped, Bored and Painted

3¼ x 4¼ x 3′ 6″	2000 pcs.
3¼ x 4¼ x 4′	1600 "
3¼ x 4¼ x 6′	2300 "

Cross Arm Material D 4 S

3¼ x 4¼ x 4	12000 pcs.
3¼ x 4¼ x 6′	9000 "

All Selected Norway.

Dressing done on short notice. ***Send us your inquiries.***

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited,

26 Ernest Ave. Toronto, Can.

QUALITY LUMBER

We have now resumed shipping from British Columbia after having been practically tied up for two months on account of severe weather conditions.

LET US QUOTE YOU UPON:

"T & G Quality Brand" Red Cedar Shingles
" " " Douglas Fir and Cedar
" " " Dressed Lumber and Bill Stuff
" " " Silo Stock and Mouldings

Ontario White Pine, Norway and Jack Pine, Spruce and Hemlock Lumber and Bill Stuff, Lath, Shingles, Posts, Ties.

WE WILL MAKE IT WORTH YOUR WHILE TO TRADE WITH US.

Branch Office
852 Cambie Street
Vancouver

Terry & Gordon
Wholesale Lumber Merchants

Head Office
704 Confederation Life Bldg.
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Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

HEMLOCK

CACHE BAY

48,000 ft. 2 x 6 No. 1 Hemlock, 10-12-18 ft.
40,000 ft. 1 x 4 and up No. 1 Hemlock, 10 to 16 ft.
300,000 ft. 2 x 4 and up No. 2 Hemlock, 42% 4", 20% 6", 16% 8", 16% 10", 6% 12"
37,000 ft. 1 x 4 and up No. 2 Hemlock, 60% 4", 21% 6", 17% 8", 2% 10"
60,000 2 x 8 14 ft. No. 1 Hemlock

LONGFORD

350,000 ft. 1 x 4 and up No. 2 Hemlock
350,000 ft. 2 x 4 No. 2 Hemlock
400,000 ft. 2 x 6 and up No. 2 Hemlock

The Long Lumber Company

HAMILTON, ONT.

Mobilized

Have you all your resources and available means mobilized for a drive to capture bigger business? In mobilizing don't forget

Hocken's Hemlock

We are mobilized and are running double tower to fill our orders. Better get our prices.

Hocken Lumber Co., Limited

Otter Lake Station, Ont.

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Messrs. J. K. Muir, F. A. Kirkpatrick and E. P. Sharpe desire to announce that they have established offices at Nos. 1123-24 Traders Bank Building, Toronto, to conduct business as WHOLESALE LUMBER MERCHANTS under the name of

MUIR, KIRKPATRICK & SHARPE

Our Special List of British Columbia Products

5/8 x 3, No. 1 and 2 Clear Fir Ceiling Dressed 7/16 x 2½ Face.
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1 x 3, 8/18 ft. No. 1 and 2 Clear Fir V. Joint Drsd. to 12/16 or 13/16 x 2½ Face.
1 x 4, 8/18 ft. No. 1 and 2 Clear Fir V. Joint Drsd. to 12/16 or 13/16 x 3½ Face.
1 x 3, 8/18 ft. No. 1 and 2 Clear, angle and F. Grain Fir Flooring, Drsd. to 13/16 x 2½ Face.
1 x 4, 8/18 ft. No. 1 and 2 Clear angle and F. Grain Fir Flooring Drsd. 13/16 x 3½ Face.

NOTE FACE MEASURE OF CEILING AND FLOORING

Our flooring is not hollow backed, we deduct 50c off flooring prices for 13/16 x 2¼ and 3¼ face dressing.

British Columbia Shingle Special

5 to 2¼—12 in. Clear Butts 18 in. Perfections 220 lbs.
5 to 2 in.—12 in. Clear Butts.....180 lbs.
5 to 2 in.—XXXXX 16 in.....180 lbs.
6 to 2, 3/16—XXXX 16 in.....170 lbs.
6 to 2 in.—XXX 16 in.....160 lbs.

We are quoting low prices on all 12 in. Clear Butt Shingles.
We carry good stocks in White, Red, Jack Pine, Spruce and Hemlock.
We solicit your enquiries.

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MUIR, KIRKPATRICK & SHARPE

Head Office 1123-4 Traders Bank Bldg., TORONTO, Can.

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British Columbia Douglas Fir

The World's Best Structural Timber
Stronger Weight for Weight than Longleaf Pine
Obtainable in the Largest Dimensions
Strikingly Beautiful for Finish.

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Telephone Number M. 1188

Call or apply to the above address for copies of free illustrated booklets, and for information of any nature concerning British Columbia Forest Products.

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Red Pine

Spruce

White Pine

Shingles——————Lath

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WHITE PINE NORWAY PINE
SPRUCE
All Sizes

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Also
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Rough and Finished

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Sounding Board Stock, etc.

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Manufacturers of

SPRUCE

Lumber Lath Pulpwood

Head Office and Mills at:
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On I. C. Ry. 75 Miles East of
Quebec City

Also Mills at:
Crown Lake, Powerville, Riv. Manie
On Nat. Transcontinental Ry.

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We offer for Immediate and Spring Shipment ***dry stock 1915 cut*** in all grades.

Our production is the largest in Canada.

Our Shingles are uniform in quality, being well manufactured and graded.

White Cedar Shingles are Good Shingles

Prices and Terms alike to all buyers

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HARDWOOD LUMBER

Dimension Stock, Mattress Frames, Hard and Soft wood slabs cut to lengths required. Hemlock, Cedar, Posts.
Orders receive prompt attention.
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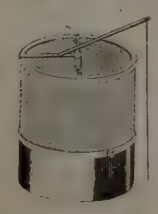

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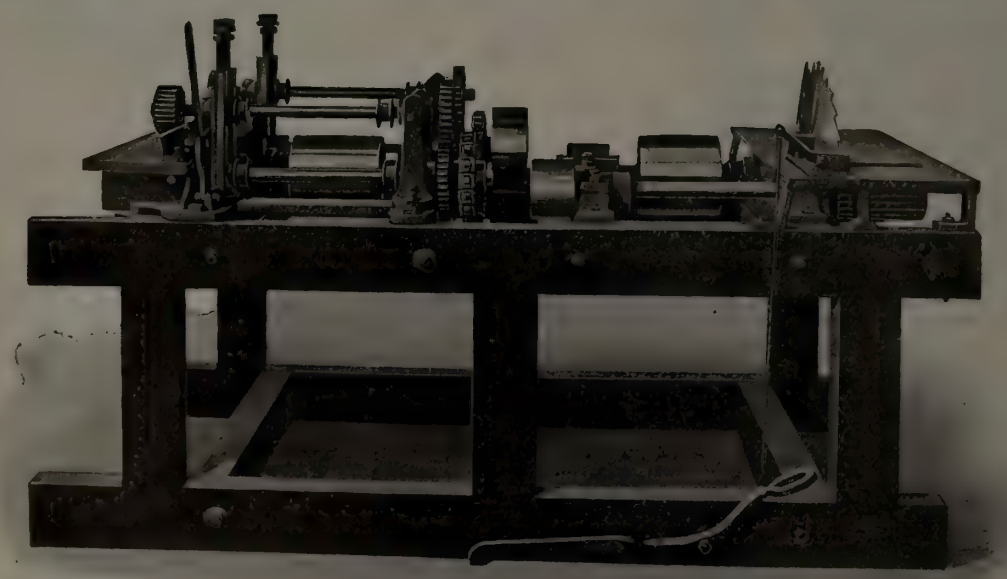

THE capacity of this machine is 45,000. The other specifications are, lath machine pulley 7 inches diameter by 9 inches face, bolter pulley 18 inches diameter by 9 inches face. Floor space 7 feet 6 inches by 3 feet 6 inches.

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The story back of the "Two Hands" trade-mark—the phenomenal expansion of the business, the widespread character of the demand—will appeal to every Canadian from the Atlantic to the Pacific.

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While the name "Dunlop" in every part of the civilized world is associated with tires, the Dunlop Company manufactures practically everything compounded of rubber, and has a special experimental department devoted to the perfecting of established lines and to the creating of new ones.

* * *

The Dunlop Company is a thoroughly Canadian institution, controlled by Canadians, and financed entirely by Canadian capital. For approximately one-quarter of a century this Company has successfully carried on the business of rubber goods manufacturing.

* * *

Some conception of how the Dunlop idea, applied to general rubber-made goods, has been popularized can be gleaned from this statement:—

"The factory additions for 1912 were alone nearly as great as the entire floor area of seven years previous; and in 1915 the additions were just double those of 1912."

Though the Head Office and Factories of the Company are located in Toronto, Branches, carrying complete stocks, are situated in the following cities:—Victoria, Vancouver, Edmonton, Calgary, Saskatoon, Regina, Winnipeg, London, Hamilton, Toronto, Ottawa, Montreal, St. John, Halifax.

* * *

Following along the best established custom for obtaining the most accurate estimate of Canadian conditions, the Branch Managers of the Company, from coast to coast, assemble at the Head Office periodically, and there in conclave present their viewpoints.

* * *

Officers of the Company regularly make tours of inspection from the Atlantic to the Pacific.

* * *

Thus, while the Company is essentially Eastern, each Branch, with its efficient staff, is a connecting link with the people of the different territories, an assurance that the Dunlop business is continental in its scope and national in its character.

Dunlop Rubber Belts

A judicious selection of Main Drive Belts will cut your belt bills in half, as well as minimize mishaps from belts going wrong.

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All of our best experience in belt-making is represented in **"Gibraltar Redspecial"**—a friction face, main drive belt—a radically different, most unusual belt. No service is too exacting; no condition is too abnormal; no load is too heavy for "Gibraltar." Will not dry nor rot, and is practically immune to stretching, as it is made by a process that automatically removes this evil.

* * *

Dunlop **"Gibraltar Redspecial"** (Heavy Duck) is essentially a saw or lumber mill belt. It is giving wonderful service under most abnormal conditions. Its endless fund of toughness and great tenacity make it the ideal belt when constantly exposed to the elements.

* * *

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* * *

We, also, make rubber-faced belts in any grade for main drive purposes. Two of these brands—**"Peerless"** and **"Record"** are well-known for their superior qualities.

DUNLOP TIRE & RUBBER GOODS CO., LIMITED

Head Office and Factories: TORONTO, CANADA

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Rubber-Made Goods

DUNLOP

Dunlop Hose

Fire Hose is a necessary adjunct to the equipment of every saw or lumber mill, because the risk of fire in these industries is very great.

* * *

Adequate and efficient fire protection is secured only through the use of reliable hose—hose that is always ready for use when necessity arises—hose that will stand the utmost power and give the greatest wear.

* * *

These are two of the main characteristics of **"Dunlop" Double Jacket and "Imperial" Solid Woven Jacket Fire Hose**—two brands that are the pride of the largest fire departments in Canada. They, also, possess straight and smooth waterways, and the weight, grade and texture of the cotton jackets are always right.

* * *

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* * *

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* * *

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THE WILLIAM DAVIES COMPANY LIMITED

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Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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Free Trade Thrown to the Winds

One of the most revolutionary results of the war, so far as the British Empire is concerned, will be the utter uprooting of the old ideals of free trade which have been so great a factor in the political and industrial life of Great Britain. Already the chief exponents of free trade in Great Britain have thrown their former beliefs to the winds and come out definitely in favor of radical changes of fiscal policy, so as to enable the Empire, after the war, to maintain the objects for which it has been fighting and to make it impossible for Germany ever again to obtain that international industrial and commercial preponderance that has enabled her to plunge the world into war.

There is now no room for doubt that Great Britain will never again return to the position she occupied before the war as an isolated free trade nation. Her eyes have been opened to the dangers of free trade so long as there are, among others, nations like Germany that will take advantage of it to increase their strength and preparedness for war. The rulers of England today are working out the details of this problem and getting ready for the changed conditions which will follow the war. Even now, these changes are to some extent in effect. By the time the war is over, England will have much of the necessary machinery in operation, a good deal of the legislation worked out, and the public mind well prepared for the new fiscal policy.

In many ways these changes will work out to the advantage of Canada and the other overseas parts of the Empire. For Canadians the duty is to consider what this change will mean to us, and to see to how great an extent we can co-operate so as to produce, under the new conditions, the greatest advantage both to ourselves and to the Empire. The outstanding business features of the period following the war will be reconstruction and readjustment; reconstruction of the countries which have been devastated and readjustment of the business relationships and industrial activities which have been shattered by the war. A great deal of consideration has been given to the reconstruction problem. Readjustment of the business and industrial situation, however, has not been considered by the press in general to anything like the extent that it warrants.

In connection with Great Britain and Canada, and to a large extent also in connection with the allied countries and Canada, the readjustment of business relationships will be of great and vital importance. No single country in the whole world will be in the same advantageous position as Canada. When the war is over, having borne her share of the struggle she will be favored by the allied countries whenever there is a possibility of conducting trade with her. In the markets of Great Britain and France this will be a great advantage to Canadian manufacturers. It will give them the whip hand in all transactions in which Canadian goods can stand any chance at all.

Even when one looks at this question in a broad and general way he cannot fail to be convinced that of all the countries in the world, the one which will develop most rapidly and most substantially after the war will be Canada. Our agricultural and manufacturing products are nearly all of a class that will be in demand in Great Britain. France, Belgium and other European countries. Our manufacturing and producing capacity will be strained to the utmost, and those who have foreseen the situation and placed their affairs in such shape as to take part in Canada's great expansion will reap a greater harvest of business prosperity than they ever dreamed of in the days before the war.

To put the matter in as brief and simple a form as possible, Canada will, more than ever before, be the Land of Promise and the Land of Fulfillment. Her plants will be running night and day, her merchants will be busy from morn till night. Her farmers will be able to sell at good prices everything that they produce, and this prosperity will attract to the shores of Canada a great tide of immigration. From all parts of the world people will set out for Canada to share in its expansion. The immigration from the United States to Canada which started on an extensive scale only a comparatively few years ago will be renewed and greatly increased. Moreover, from the United States we will then draw not only farmers in large numbers, but a far greater number of merchants and manufacturers than we formerly drew. Manufacturers in the United States will be quick to realize that, if they want to share in the trade of Great Britain and the allied countries to the fullest extent, they must establish plans in Canada so as to be entitled to the preferential treatment which Canada will then obtain.

These are no idle dreams dictated by desire and unfounded on fact. Anyone who reads what is appearing daily in the press of Great Britain regarding the fiscal problem, knows that these views are warranted by the trend of public opinion in Great Britain. Free trade has been killed. The Manchester Chamber of Commerce, the historic hot-bed of free trade has voted against it by 998 to 527. The greatest exponents of free trade in Great Britain have thrown it overboard. From now on, every man who thinks about the fiscal problem in the Old Country will think of it in terms of tariff protection. The working out of protection will involve many differences of opinion, but the great change has come about. The war has made protection the only logical policy for Great Britain. After the war, and to a considerable extent during the war, protective tariffs will come into effect and they will unquestionably include preferential treatment for the Overseas Dominions and reciprocity between the Allied Nations.

Lumber and Timber Markets

The average lumber manufacturer, and the wholesalers and retailers to an even greater extent, are, as a rule, so closely tied up with the actual transactions involved in their daily business, that they do not give as much time as they might to a consideration of the connection between the ups and downs of the lumber market and the activity of the market for standing timber. Unfortunately, the public at large takes even a less definite interest in the connection between the timber market and the lumber market, and for this reason a great deal of misapprehension has grown up, and become accepted as fact, in regard to supplies of standing timber, and also in

regard to their ownership. One of the most interesting discussions of this matter that we have seen of late is contained in a bulletin which reached us recently from the firm of Jas. D. Lacey & Company, Timberland Factors, Portland, Ore.

Activity in the timber market, they say, follows the lumber market, halting when production is curtailed and ascending when business is active. As in the case of real estate of all kinds, speculation and buying for development ceased in 1913. Owners who were financially unprepared for the long period of depression through which the country has passed have been compelled to offer their properties at prices much below recognized values. Buyers were over-critical, uncertain as to the future and influenced by the common feeling of insecurity. Few purchases were made. Capital was not available.

Lumbermen are the principal buyers of timber. Returns from mill operations are re-invested when balances accrue, but during the year low lumber prices left no balances with which to acquire future stumpage supplies. Timber held by strong owners did not depreciate. Only a few desirable large properties were offered below former prices. Two or three makers of bonds defaulted in their payments and the security passed to the bondholders. Some operating concerns failed but the number was small considering the stress of the times and the long-continued sale of lumber at prices below the cost of production. A number of mills stopped and some remain down. In British Columbia conditions were particularly bad. Practically all the mills were stopped. The pinch of the war was felt by license holders in the province and in England. Forced liquidation brought about transfers at low figures. A tendency toward stability in the industry was shown by the erection of new producing plants in California, Oregon and Washington by well-financed companies whose organizations are capable of finding markets for their output. This is the beginning of the elimination of operators who have not developed marketing with manufacturing.

The lessons learned from the experiences of the year should be helpful. Need for co-operation and better understanding is seen by lumbermen and sentiment in favor of association work has crystalized. The West Coast Lumbermen's Association has become energized and it is proving the helpfulness of organized constructive effort. Its scope has been broadened to include timber owners, shingle men and allied industries in its membership. Timber owners have come to see that their interests are interwoven with those of manufacturers and that joint effort must be made to maintain the place and value of wood. Manufacturers have learned that unrestrained production does not increase demand and that destructive competition can bring only distress. The self-inflicted punishment has been severe; it should be sufficient for all time.

The economics of lumbering have received more thoughtful study than ever before. Forest economists—a new type of lumbermen—have been developed and their influence is being felt. They are men of vision who are able to see the things for which there is need and define the way to them. Government itself has learned from proprietors that forest ownership is not synonymous with the accumulation of unearned and undeserved increment. It has seen the error of its former attacks and it is now seeking to aid in the reconstruction of the industry. It has seen that the concentration of ownership, so alarmingly proclaimed in reports of earlier years, is essential; that lumbering is big business requiring large capital to give it stability, large-scale production to give it economy and scientific management to make it profitable. The progress of the world has loosened the grip of the lumber maker upon his business and demanded that more than mechanical ability shall be applied in its conduct. In lumber producing states there has come to be better understanding upon the part of the public of the importance of the industry to all the people and the prejudice engendered in earlier years by people, press and government unfamiliar with the facts has disappeared in part. The public has come to have respect for an industry that yields eighty per cent. of its receipts to labor.

The only cause for misgivings regarding the conditions which may prevail during the year is the past failure of manufacturers to regulate their business so that the industry shall not suffer from itself. There should be a demand for lumber sufficient to give a fair volume of business to existing mills, but double shifts and new operations developed without corresponding development of markets, would again result in over-supply, price cutting and distress. This is a critical time for lumbermen. If they follow the bucket to the bottom of the well again many will never return. They now have an opportunity to rehabilitate the industry and restore its credit. Simultaneously they could controvert the frequent assertion that lumbermen are the poorest business men in the country.

Timber owners should not expect an immediate advance in stumpage values. One or two years of real prosperity among manufacturers will be necessary to stimulate purchasing for speculation tracts held at normal prices. Future purchasing will be for operating purposes at required prices or for speculation at bargain prices. The long period during which the industry has been prostrate has discouraged some owners or extended beyond their ability to hold. Until all such timber has passed into strong hands there will be competition among sellers and no new levels of trading prices will be reached. Manufacturing must be stabilized or stumpage will go back.

None can confidently predict the events that may take place during 1916, but it may be expected that it will bring co-operation tending toward stability in manufacturing, closer relations between timber owners and manufacturers, sales of many tracts of timber available for development, some speculative buying of cheap tracts and more or less readjustment in all directions. Speculators will be attracted to British Columbia by low-priced timber, fixed carrying costs over a long period of years and a disposition upon the part of the government to support the industry rather than destroy it. The year should be a profitable one for lumber manufacturers and timber buyers who see beyond the present.

Exports and Imports for 1915

Exports of Canadian forest products during the calendar year of 1915 amounted in value to $49,779,509. In the three previous years the values were as follows:—1914, $41,871,383; 1913, $42,532,673; 1912, $43,586,853.

Imports of wood and manufacturers of wood for the year 1915 were valued at $8,273,456, whereas during 1914 the total was more than double that of 1915, being $17,138,648. The imports of wood and manufactures of wood during 1915 were divided chiefly as follows:—from the United States, $7,798,237, from the United Kingdom, $170,419.

Details of the exports of wood and manufactures of wood during 1915 are as follows:—

Articles Exported	Twelve Months Ended December. 1914	1915 Total	1915 To United Kingdom	1915 To United States
Wood and manufactures of—				
Logs	$ 902,650	$ 1,315,284	$ 51,940	$ 1,263,004
Lumber—Deals, pine	1,190,851	1,288,422	1,209,851	48,201
Spruce and other	6,160,922	9,843,717	9,069,525	262,202
Laths, palings and pickets	1,880,309	2,356,824	11,268	2,331,572
Planks and boards	18,740,936	22,005,396	1,988,126	18,463,402
Shingles	2,814,087	3,624,218	.....	3,6[illegible]6,178
Timber, square	722,527	478,958	467,055	11,903
Wood blocks for pulp	6,680,490	6,164,113	.....	6,164,113
Wood-pulp	8,865,436	9,279,414	324,032	8,357,747
Total	51,470,356	59,951,741	14,817,288	41,887,558

During January, 1916, exports of Canadian forest products were valued at $3,243,360. During the two preceding years the exports in the month of January were valued as follows:—January 1915, $1,811,049; January 1914, $2,159,088. During the 12 months ending January the exports of Canadian forest products were valued as follows:—1916, $51,211,820; 1915, $41,523,344; 1914, $42,707,781.

A report of Great Britain's imports during the calendar year 1915, published in the Weekly Bulletin of the Department of Trade and Commerce, states that the imports of sawn or split timber from Canada during 1915, amounted in value to $4,844,453 as compared with $2,579,992 during 1914.

Recruits for a Canadian Forestry Battalion (the 224th Overseas Canadian) are being called for by Lt.-Col. Alexander McDougall, for Forestry work in England, Ireland and Scotland. Particulars will be found on Page 54.

Government Will Use Canadian Timber Only

Ottawa, March 8th (Special to the Canada Lumberman):—The Dominion Government has decided to use Canadian timber only, to the exclusion of imported timber, in all public works. Southern pine, even in 1915, when Canada was at war and when there was a great decrease in the consumption of lumber, was imported to the value of over $3,000,000. In previous years very much larger quantities were imported, despite an adverse trade balance for Canada and in the face of a supply in Canada of better timber at an equal or lower cost, grown and manufactured entirely within the Dominion. The Dominion Government has in past years used many million feet of Southern pine in various public works, but henceforth Canadian timber will be used to the exclusion of the foreign article. Douglas fir will replace Southern pine in such works as Quebec and Montreal harbor improvements and Hudson Bay terminals. Douglas fir has been used entirely in the Toronto harbor works, as a clause was inserted in that contract calling for Canadian material.

A Woodsmen's Battalion From Canada

In connection with the formation of a regiment of woodsmen which was recently announced by Major Sir Sam Hughes, the statement was made by the Minister of Militia and Defence in the House of Commons recently that this regiment was being organized for the purpose of cutting timber and was being recruited from among lumbermen in Canada. Major-Gen. Sir Sam Hughes stated that these men were "very familiar with cutting timber into lengths of various sizes. The freight on timber from North America and other parts to Europe is practically prohibitive now; vessels cannot be obtained to carry it. Timber is being cut in Europe and these men are going over to cut it." Major-Gen. Sir Sam. Hughes also stated that Lt.-Col. Alex. McDougall has been chosen as the commanding officer and that he had selected two very distinguished members of the House of Commons as his seconds in command.

Lt.-Col. Alex. McDougall, Officer Commanding, informs us that this Battalion is to be known as the 224th Overseas Canadian Forestry Battalion and is being formed at the urgent request of the British War Office for the purpose of getting out timber and lumber for use in carrying on the war. It is the intention to have none but experienced bushmen connected with the Battalion. Recruits will be welcome who have this experience and are physically fit. It is earnestly hoped that all lumbermen will co-operate with the Military Department in trying to make this Battalion a success. Recruiting offices are to be opened immediately at Mattawa, Arnprior, Buckingham, Hawkesbury, North Bay and Sudbury. Offices at 43 Bank Street, Ottawa, and at Pembroke have already been opened.

As soon as this regiment has been mobilized, which is expected to take about six weeks, it will be sent over to start operations in the forests of the British Isles.

Credit Bureau Secretaries Organize

The first conference of lumber association and credit bureau secretaries was held recently at Cleveland, Ohio, and representatives were present from Chicago, Ottawa, Youngtsown, Toledo, Columbus, Akron, Rochester, Grand Rapids, Cleveland and Detroit. Mr. J. V. O'Brien, Cleveland, Ohio, was appointed temporary chairman and Mr. J. F. Deacon, Detroit, Mich., temporary secretary. Mr. O'Brien stated that the object of the conference was to bring the secretaries together so that they might exchange ideas in regard to methods of handling credits, etc., and to co-operate in all matters of mutual interest. He submitted a tentative list of topics for discussion including the following:—Plans to improve price conditions, Credit Machinery, Codes and Legislation, Advertising, Social Features, Ethics and unfair Competition, Costs and Efficiency, Statistics and Financial Matters. Mr. O'Brien dealt briefly with each of these subjects and a general discussion followed, in the course of which many new and clever ideas were brought out. As a result of the discussion it was decided that the extensive field could not be covered at an initial meeting. It was decided therefore to hold a later meeting, to which members might come fully prepared to take part in a formal discussion.

The temporary officers were appointed permanent officers and it was decided to form a permanent organization. The next meeting will be held on Friday, March 24th. Mr. Warren J. Duffey, Toledo, Ohio, was appointed a committee to draft a suitable constitution and by-laws, to be submitted at the next meeting.

P. Z. Caverhill, late of the B. C. Forest Branch, has begun his preparations for a survey and classification of the Crown lands of New Brunswick, having recently been engaged for this purpose. He expects that it will take four years to complete the survey. During the coming summer he will have about 15 men at work, divided into three parties.

A New Firm of Wholesalers for Toronto

The ranks of the wholesale lumber trade in Toronto have been added to by the formation of a new firm under the name of Muir, Kirkpatrick & Sharpe, who have opened offices in rooms 1123-24 Traders Bank Bldg., Toronto. The new firm are making a specialty of British Columbia products and in order to facilitate this end of their business they have opened offices also in the Central Bldg., Victoria, B. C. In B. C. products they are handling an excellent line of fir, cedar, spruce, white pine, shingles and lath, and making a specialty of 12 in. clear butt shingles, also fir, cedar and spruce lath. They have formed good connections in British Columbia and are able to guarantee splendid stock and satisfactory shipments. Their line of Ontario products includes white, red and jack pine, spruce, hemlock, lath and posts. They also have formed connections which will enable them to handle a good line of yellow pine, having been appointed general agents for Ontario for the Central Coal and Coke Company of Kansas City, Mo., one of the largest yellow pine firms west of the Mississippi River, who have a total capacity of 400,000,000 feet per year.

Mr. J. K. Muir is widely known throughout the lumber trade in Canada, having had a life long experience in the lumber business, both in the manufacturing and wholesale ends, and having been engaged during the past six years in the wholesale lumber business in Toronto.

Mr. F. A. Kirkpatrick has been connected in a selling capacity with a leading Toronto wholesale firm during the past nine years, and is well known to the retail trade throughout eastern and western Ontario.

Mr. E. P. Sharpe was connected with the fire insurance business for twelve years during which time he specialized upon sawmill and lumber insurance. Latterly he has been connected with a Toronto wholesale lumber firm whom he represented in the Toronto city trade and also in the Ontario trade.

The new firm are already making themselves known to the trade as progressive and successful business men. With the experience and reputation that the members already have we feel sure that they will be welcomed by the trade throughout Ontario and that they will quickly become important factors in the wholesale lumber business of the province.

The Swedish Timber Market During 1915

In spite of many difficulties, among these the declaration of timber as contraband of war, the year 1915 was a favorable one for the Swedish timber market. At the beginning of the year the prospects were very unsatisfactory, but later in January the market became firmer and by the end of the month the sales amounted to 100,000 standards. Still there was much unstableness until the end of March, when the negotiations with Germany were completed and the Swedish timber export made free. Up to this time only 25 per cent. of the year's output was sold, whereas 55 per cent. had been sold during the corresponding period of the previous year. After this the market became firmer and the prices went up, but other circumstances counteracted this gain.

The freight charges were greatly increased, and instead of agreeing to the f. o. b. terms the British buyers would accept only "payment on safe arrival" terms. However, the War Risk Insurance Company has been able to allow the exporters good terms. Twenty per cent. of the premium is paid in cash and a draft given for the remainder. This will not be collected unless the company finds this necessary at the end of the war.

Finland and Russia could not compete for the trade, as it was out of the question to ship from the Baltic ports and the freights were too high via the White sea. In addition, Austria-Hungary's export to the Mediterranean countries, usually amounting to about 600,000 standards, was stopped. The situation of the Swedish timber market was also strengthened because of the extension of the British operations to the Orient. Furthermore, the Netherlands, which country had formerly purchased most of its timber from Russia and Finland, placed large orders for spruce, which caused the price to increase so that it soon reached that of fir. In September the price was up to 132 florins ($53), and there was an additional gain because of the rate of exchange. When the rate of exchange on the pound sterling began to get low, the Swedish exporters demanded that they be guaranteed 18.20 crowns per pound, which the British merchants at first opposed, but later had to agree to.

In August, France began to order timber, and the market was very favorable. At the beginning the price was 175 francs ($33.78), but by the end of the year it had gone up to 200 francs. The unusually early winter and the great amount of ice in the northern ports hindered the traffic considerably.

In the middle of November orders began to be taken for 1916 and the prices were very favorable, compared with those received for the sales in the earlier part of 1915.—(U. S. Commerce Reports.)

Market for Canadian Timber in France

Imports Before the War Chiefly from European Countries—Rebuilding Period Will Present Great Opportunities.

By H. R. MacMillan*

Compared with Great Britain, France does not import large quantities of timber. The per capita importation of Great Britain for 1914 amounted to $3.60 per head. The annual consumption of timber in Great Britain for the year amounted to 14 cubic feet per head, of which 16 per cent. was grown at home and 84 per cent. imported. For the same year France imported timber valued at $37,380,000, an average of 93 cents per head, just one-quarter the per capita importations of Great Britain.

The importations of timber into France for 1913 amounted to about 1,775,000,000 feet board measure, reckoning all commodities in this measure. The varieties are not clearly separated in the Customs statistics, but the most important classes are shown approximately below:—

Classification of Imports	Quantity M. feet board measure.
Softwood, logs, deals, boards	844,724,000
Pitchpine	65,529,000
Oak	37,793,000
Railroad sleepers	12,131,000
Douglas fir	5,000,000
Other varieties	29,160,000
Softwood logs less than 7½ feet long, cubic feet.	12,943,000
Rough poles, props, faggots "	9,525,000
Match splints "	253,000

Countries of Origin

The chief countries supplying timber to France are given herewith, with the approximate quantities supplied by each, in 1913:—

	Quantity of timber imports into France 1913
Russia	1,020,552
Sweden	654,169
United States	194,281
Germany	102,269
Austria-Hungary	96,128
Belgium	25,578
Japan	23,978
Switzerland	23,062
Norway	14,232
Roumania	12,875
Turkey	8,091
Canada	529

An overwhelming proportion of timber imports into France are from European countries. That this should be so is due to the care paid to forest protection and management in Europe.

The only products of importance purchased by France outside Europe are pitch-pine and oak from the United States, oak from Japan, and Douglas fir from Canada and the United States.

Softwoods

The most important product imported into France is softwood from Russia, Scandinavia, Germany and Austria-Hungary. This timber is imported for general building purposes.

The lumber imported into France is chiefly cut in inch sizes, it is classified in the Customs statistics, however, for duty purposes according to the metric system.

Over 60 per cent. of the softwood lumber imported into France is between 1 2-5 and 3 1-5 inches in thickness, being 1½, 2 and 3-inch deals; 30 per cent. is lumber less than 1 2-5 inches in thickness and the remainder is timbers and logs.

The average price of this class of material imported was, before the war:—

Less than 1 2-5 inches .....34 cents per cubic foot.
1 2-5 inch to 3 1-5 inch.....36 " "
Over 3 1-5 inch .....23 " "
Rough logs .....25 " "

The sale of Eastern Canadian deals in the market would depend entirely on price.

When freights again become normal Douglas fir will also be able to compete in France for general building purposes. Up to the present it has been used only in comparatively limited regions where large timbers are required and as a building timber is not well known. The prospects for use in France will be improved by the great demand likely to be made on European forests after the war and the increased prices to be expected. The fact that during the war Douglas fir common lumber has been extensively used in trenches, military and commissariat buildings, railroads and temporary buildings will also prove an argument in its favor.

Pitch-Pine

Pitch-pine has long been used in large quantities in France. The United States is the only country supplying it. About 69 per cent. of the pitch-pine is imported in timbers 6 inches by 6 inches and larger, 18 per cent. is 1 2-5 inches by 3 1-5 inches thick, and 13 per cent. is in the form of boards less than 1 2-5 inches in thickness.

Pitch-pine is the timber commonly imported for industrial purposes, for public works, harbor and naval works, and has held the market to the exclusion of Douglas fir because it was cheaper.

The shipping of Douglas fir through the Panama canal will alter the situation. Douglas fir will, when conditions become normal, be cheaper than pitch-pine. It will have the further advantage of greater freedom from defects, a consideration highly appreciated in France.

The sales of pitch-pine to France are handled chiefly by brokerage houses and timber dealers in London, some of whom have branches in France. The shipments are handled both by parcels in liners and by full cargoes.

Should any of the regular lines operating between the Pacific coast and Europe arrange calls at French ports business would be facilitated.

Sleepers

There are 25,471 miles of railroad in France, in which are over 60,000,000 sleepers. Sleepers are used at the rate of 2,400 to the mile.

Five thousand six hundred miles of railroad are owned and operated by the State, the remainder is owned and operated by five different companies.

Hardwood sleepers are preferred. Beech and oak are the most commonly used. Maritime pine, Scotch pine and spruce are also used. No sleepers are used without creosoting. The average life of creosoted beech and oak is twenty to twenty-five years. The pines give a life of fifteen to eighteen years, and spruce eight years.

Very rough sleepers are accepted, particularly in oak, many of which are crooked, half round, irregular in shape and size.

The annual requirements of the French railways are 6,000,000 sleepers. About 5,500,000 are produced locally and 500.000 imported. The imported sleepers are chiefly beech from Austria-Hungary and Turkey. The domestic sleepers are chiefly oak, Maritime and Scotch pine.

The prices of the imported sleepers in 1912 were:—

Oak.....66 cents each (containing 3½ cu. ft.)
Others (chiefly beech) 58 " " " "

Until the war Douglas fir had not been used in France for sleepers. During the war large quantities have been used, both in maintenance and extensions of the established railway systems and in the building of purely military lines. Standard sleepers have in nearly all cases been purchased for the latter lines with the object of turning them over to commercial railroads when the need for the temporary military roads no longer exists. These sleepers are all used without any preservative treatment.

Untreated Douglas fir sleepers will have had a fair trial. Samples have also been sent to the various French railroads in order that they may be creosoted and given a trial. All sleepers imported into France are imported before creosoting.

The engineers of the French railroads give preference to a hard sleeper.

Immediately following upon the war there may be a demand for imported sleepers. Otherwise the market in France will remain limited to about one-tenth the annual requirements of the country. The other nine-tenths will continue to be supplied from the French forests, where only the poorer trees and the lower grades of timber are made into sleepers.

Before Canadian sleepers can compete in the French market it will be necessary to demonstrate that they have the necessary life. This can best be done by actual trial of the sleepers in France.

Sleepers from Eastern Canada would find a ready market in France if they could be delivered c. i. f. French ports to compete with the prices quoted. Beech and maple particularly would find a ready market.

A Canadian exporter wishing to develop a business in sleepers

with France should make arrangements through the office of the Commissioner General for Canada to secure as representative in France some one acquainted with the sleeper business and favorably situated for doing business with the State and private railroads. Both such representation and trials of sample lots of sleepers, are necessary to the developing of a successful business.

Douglas Fir

Pitch-pine has always been cheaper in France than Douglas fir, owing to the great difference in freight rates on the two timbers before the opening of the Panama canal. Douglas fir up to the present has only been purchased in large sizes and long lengths, for use near the coast. The forests of France furnish nearly all the large or long timber used in the interior of the country.

The Panama canal will certainly in a few years make a difference in the quantity of Douglas fir used in France. The annual consumption should within a decade increase by over 500 per cent. The chief uses are likely to be timbers for false work and dimensions for rough building purposes. Very little wood is used for interior finish in France. Such as is used is painted pine, spruce and balsam; oak is used in natural finish in offices and some public buildings.

Douglas fir is unlikely to be used industrially in France because of the great quantity of oak in the country. An interesting object lesson will be provided by the freight trucks, manufactured of Douglas fir, which are now being sent from Canada for the French railroads.

The imports of Douglas fir to France are handled in the same manner as pitch-pine by timber brokers in London working in conjunction with agents in France.

Duties

All timber entering France from foreign countries is dutiable. The rates of duty are based upon the sizes imported. The duties upon important classes of timber are given here:—

	Duty per 2,200 lbs. weight.
Rough logs	$ 1.30
Railway sleepers	2.00
Sawn 3 1-5 inch more in thickness	2.00
Sawn 1 2-5 inch, 3 1-5 inch thick	2.50
Sawn less than 1 2-5 inch thick	3.50
Match splints	3.00
Poles, props	0 60
Softwood logs less than 7½ feet long	0 04

The low rate of duty for short softwood logs is to allow the importation of pulp wood, a trade amounting to 17,000,000 tons weight per year.

The chief ports through which the import timber trade of France is handled are Havre, Dunkirk, Bordeaux and Marseilles.

Rebuilding After the War

The chief interest for Canadians in the timber situation in France is in the necessary rebuilding of devastated areas.

The population of the fireswept area in Northern France is 7,000,000. An equal number of people in Belgium have suffered a wholesale destruction of their buildings. Reconstruction at some period or other is inevitable. The effect that reconstruction on such a colossal scale may be expected to produce on the lumber trade can only be surmised. There are, however, certain well defined bases from which an estimate may be formed.

The population of 14,000,000 in Northern France and Belgium have lost a great proportion of their dwellings, industrial and commercial establishments and public works. The ruins will afford little salvage.

The restoration of peace will be the signal for a burst of rebuilding throughout the land. The people will immediately require shelters; temporary industrial, communal and public works will be matters of first concern for the Government in order to prevent emigration, start production and absorb the disbanding armies.

Wood has not been used to a great extent for building in the war-swept countries. Stone, brick, and cement tiles are the native materials. These lie ready at hand, the population is skilled in their manufacture and use, their manufacture will afford labor, their use will obviate sending money abroad to pay for foreign purchases.

Nevertheless the use of these materials on a large scale requires time; when Belgium and Northern France are rebuilt wood will be used to a greater extent than ever before. It is the only building material that can be quickly secured in large quantities.

Rebuilding on such a scale would at any time tax the resources of the forests of Europe, which do not suffice from year to year in normal times to meet the maintenance requirements of the continent.

Insufficiency of European Forests

There are two reasons why after this war European forests will not meet the demand.

During the war timber outside of Russia has been cut and destroyed at an annual rate hitherto unknown in Europe. The western battle line is stretched through one of the most productive forests of France. Elsewhere in Europe war has obliterated forests. Behind the lines of the enemy and the Allies timber has been cut for war purposes in quantities far exceeding the requirements of peace time. The European neutrals have greatly increased their cut to reap the harvest of high prices.

Nor will Belgium and France be the source of the only call for timber. Twice as great a population is homeless in Poland, East Prussia and Northeast Hungary as on the Western front. There only the naked land remains. The timber requirements will be enormous, particularly because it is a country where wood has always been the most important building material and where the instinct of the population will be to rebuild in wood.

The timber for rebuilding this eastern and interior region will not come from North America. It will be supplied from Russia, the Baltic ,and the enemy countries. The immense quantities of timber to be required in this, the most accessible market to their forests, will decrease the quantity of Russian, Scandinavian and enemy timber likely to find its way to France and Belgium, and will also tend to raise the level of European timber prices.

It is a safe conclusion, therefore, that large quantities of timber from North America will be required in France and Belgium. The general requirements will be for lumber suitable for portable buildings, common lumber for sheathing, studding, joists, rafters, cheap doors, sash, and timbers for falsework and temporary reconstruction of railroads, bridges and other large works.

Roofing will be in great demand. The competition will be between galvanized iron, prepared roofings and possibly shingles. The prospects do not look good for shingles, because the galvanized iron and felt roofings are cheap, quickly laid and on the spot, and because the European cannot think in terms of a wooden roof.

It has been considered by the authorities purchasing timber for the Allies that vast quantities of the timber taken to the front for war purposes will be available after the war for rebuilding the country. The quantity, were it available, is insufficient, and moreover the wastage has been enormous. In spite of all that may be done great quantities of timber will be necessary from outside Europe.

The present is the time to arrange for the supply. It is possible that, in order to keep prices down and to systematize the work of reconstruction, the purchases will be made through Government channels. If not, British and continental firms will buy on their own account in the usual manner. Canadian exporters should be prepared for either eventuality and should have arrangements made so that in any case they may receive inquiries through competent reliable sources the moment demand appears.—Trade and Commerce Weekly Bulletin.

Five Per Cent Decrease in United States Lumber Production in 1915

The United States Forest Service has made public the following figures upon the amount of lumber cut in 1915 compared with 1914 by 1,175 mills which manufactured 5,000,000 feet or more each.

Production of Identical Mills in 1915 and 1914

State	Number of Mills	1915 M Feet	1914 M Feet
Washington	119	2,921,908	2,723,277
Oregon	49	1,219,215	1,384,480
Idaho	19	519,219	572,964
Montana	7	233,065	199,001
California	43	994,639	1,109,733
Colorado and South Dakota	3	33,738	35,032
Arizona	4	74,023	76,305
New Mexico	4	31,745	41,192
Arkansas	63	1,123,174	1,168,319
Oklahoma	4	94,551	76,542
Texas	65	1,419,861	1,397,690
Louisiana	140	3,081,624	3,230,278
Mississippi	80	1,276,982	1,375,511
Alabama	39	602,550	663,648
Georgia	25	247,246	285,616
Florida	48	654,364	645,902
South Carolina	33	389,396	339,993
North Carolina	68	668,299	690,589
Virginia	26	314,449	310,574
West Virginia	52	579,743	635,770
Pennsylvania	19	267,887	250,215
Kentucky	15	114,633	129,282
Tennessee	23	159,868	211,496
Missouri	9	82,209	109,305
Michigan	70	777,664	1,001,831
Wisconsin	70	960,003	1,124,779
Minnesota	36	963,914	1,214,377
Maine	37	367,806	353,435
New Hampshire and Massachusetts	5	113,007	86,767
Total	1,175	20,286,782	21,443,903

The Reader's Viewpoint on Trade Topics

Workmen's Compensation Act in Ontario—Criticisms and Suggestions from Lumbermen

Since the publication of our March 1st issue we have received several more communications regarding the Ontario Workmen's Compensation Act. These are mostly along lines somewhat similar to the previous letters. Some of the more interesting letters we reproduce, as follows:—

The Workmen's Compensation Act is all right so long as the Board does not pay out money to injured employees who do not deserve it. Last year one of my employees was injured through his own carelessness and he collected $108.72 from the Board, to my knowledge. Recently, I understand, that he has received from the Board a cheque for $75 more. This man has not worked for me since he got injured, but is working on a section of the T. & N. O. Railway, and is receiving the regular wages paid to other ordinary men. It does not seem to me that it is just to the other men that this man should be drawing double pay. The Board should be careful not to pay compensation to employees who have been injured, but are well enough to work and are working and earning the same wages as they received before they were injured. As this Act has been in force only one year, it is almost impossible to have everything perfect, but we all hope that things will improve in time.

* * *

Operation of Act Too Expensive

I have only met one assessment for the Workmen's Compensation Act, and that only for four months of last year. I have not been notified as to my last assessment. I paid last year $1.80 per $100. My payroll I sent in, for the last year, is $5,083. I had one man lose his little finger with the cut of a saw cutting slabs. His compensation was about $40, being 55 per cent. of all time lost, and he was sent $45 for being disabled, so he had full wages for all the time he laid off at $2 per day. Now, on the other hand, that is the first employee I ever had hurt who would have come under the act. I never had a man laid off for one week in thirty years milling and bush work from an accident. Besides, I am the only mill here that I know of that has had an accident, and I expect it will average about the same through all the mills.

Now, you see, I will pay in, at the 1.80 per cent. in full for my employee, and the other mills I have mentioned will pay as much. If four of us pay enough for four employees being compensated, do you not think that the expense of taking charge of the act is far too much, when we only get one-quarter back for what we pay in? Now, in my case, the employee could not have come on me for any damage as my saw was fully guarded. Of course, it was a good thing for him. It would have been at my own option whether I compensated him or not.

I certainly have no objection to paying a reasonable insurance for the benefit of employees getting hurt, but if we have to pay three-quarters for the act to compel us, I do object.

* * *

Employees Ought to Contribute

Fortunately, we had no accidents in our operation during 1915. We were assessed on $8,000 at 2 per cent., making it $160. One-half we paid January 1st, 1915, or there abouts, and the balance, $80, on or about July 1st, 1915, with interest at 6 per cent. per annum $240. Owing to curtailed lumber operations we only paid out $5,000 and a few dollars, and up to date have not contributed any this year.

We were not at all pleased with the call one year ago (in the face of money stringencies) to enable the Board to accumulate a fund of $1,000,000, when the manufacturers of this country could have used this money to better advantage employing laborers who were worse in need of money than they were in need of compensation.

We hope to see many amendments to the Act in the next few years, and the first and most important, in our opinion, is to attach some of the responsibility to the employee where an accident occurs through his own carelessness.

We also think that an employee should be a contributor to the fund through his employer. This would help guard against paying compensation to the undeserving. This is an evil which will creep in in these days of graft, and will be like a millstone on the manufacturer's neck.

* * *

All Right for all Parties but Rates Too High

We paid last year $240 premium, and our mill contractor paid $108; this is about four times what we used to pay for liability insurance. We have had more accidents in 1915 than we had in the previous eight years. The writer, who has been sawmilling for over thirty years, and never got a scratch, just happened to walk into the mill on July the 12th and sit down, when he got a thigh smashed with a board from the edger, and was in the hospital for two months. Altogether, the employees have drawn from the fund about $319.27, and there is one man who is still drawing compensation who got hurt since the first of the year. We think that it is all right for the men and also for the employer, as the men are sure of something, and it does away with any trouble between employer and employee; but we think that the rate is too high.

* * *

Compensation Premiums Excessively High

We are pleased to see you advocate a discussion of the Workmen's Compensation Act, and its application to the woodworking industries. We believe there is much room for constructive improvement, and extend you our best wishes and co-operation.

Allow us to state a few of our experiences, with the sincere hope that it will help lead to the betterment of the Act.

We are manufacturers of white pine lumber, lath and pickets, starting our process with cutting the timber in the woods, taking it to the mill, manufacturing it into rough lumber, lath and pickets, and piling the product on the docks ready for shipment. In our mill and yard we employ about two hundred men, and in our logging department we have from four hundred to one thousand men, depending on the extent of our operations.

In the past eight years our total payrolls, we estimate, would aggregate over $1,250,000. For casualty claims we have paid to our employees an amount not to exceed $2,500, or about one-fifth of one per cent. of our payroll. Every claim has been settled amiably and to the satisfaction of the employees or their heirs. Not one case has been taken to the courts for adjustment.

Last year, in our logging department, the payroll was $60,042. Our Workmen's Compensation tax was $1,200, and the compensation paid was, in round figures, $80. Our tax was at the rate of 1.80 per cent., and compensation amounted to less than one-seventh of one per cent.—a difference in this particular case of over 1.60 per cent., or $1,120. We paid as premium more than fourteen times our paid out compensation.

In our mill department the payroll last year was about $74,500. Our Workmen's Compensation tax was $1,343, and we paid out for compensation $355. Our claims were less than one-half of one per cent., and our tax was at the rate of two per cent.

Our total compensation paid last year was, based on our payroll, approximately one-third of one per cent. We paid to the Workmen's Compensation Act at the rate of over 1.90 per cent.

The above percentages and comparisons throw a fairly clear light on the situation from our viewpoint.

The lumber industry is the largest industry in Canada. It ranks first of the manufacturing industries in the number of employees. It is the largest industrial consumer of farm products. Its tonnage given to the railroads is among the largest. It is estimated that from seventy-five to eighty per cent. of the cost of lumber goes to labor, farm products, and freight.

An industry of this magnitude and universal benefit can afford to be given deep consideration, and deserves the support of the Government and people in the framing of a Compensation Act which will be just and equitable. We believe the lumbermen, as a class, are in favor of some form of compensation for their workmen, and that they will be liberal, and not niggardly, in their expenditures for the support of such an act. At the present time it seems as though the lumber industries have been paying too dearly for compensation. We hope they have not been carrying the burdens of other industries, that their equipment is modern and safe, and has the necessary preventives, and is not causing unnecessary accidents.

At present, in case of indemnity to an employee, the employer has been given little consideration. He simply files a statistical report, giving name of employee, time and place of accident, also nature of injury, together with other minor details. He, the employer, has no voice in the adjustment of compensation, although he is the only representative on the scene of accident, the one most familiar with the personal character and home surroundings of the injured, and last, but not least, furnishes the funds by which compensation is made possible.

We believe the Compensation Board is working industriously and earnestly in its endeavor to make the Act adequate, but permit us to present a few suggestions.

Put the Workmen's Compensation Act on a mutual basis. At the beginning of the year levy an estimated tax on each class—one believed to be sufficient to cover all expenditures in the class. After a few years' experience this estimate should be quite accurate. Then, at the end of the year, take the total indemnities and expenses in each class and divide them proportionately, on a payroll basis, among the companies in the class, and refund or charge the difference between the estimated and actual tax.

In case of accident to an employee, have report submitted to the Board of supervisors, the same as at present, but permit the employer to make adjustment of the claim, if he can do so satisfactorily to the employee and himself, within a reasonable time, and providing such adjustment meets with the approval of the Board. If no adjustment can be made by the employer, allow the case to come before a tribunal for decision, as in the present system.

In order that we may understand how the present Act is working, we

would be interested in a report of the Workmen's Compensation Board for the past year, showing the total payroll, with amount of premium and rate charges for each class, in the different schedules, also the compensation paid by each, and total cost of maintaining the Act, showing expenses for salaries, doctors, travelling, office, etc., and the amount of funds on hand.

We thank you for this opportunity, and hope we may assist you in your good work.

* * *

We paid into the Workmen's Compensation Board $180 for last year, and so far, we have had no accidents. We can give you no information as regards compensation costs with other insurances as we have not carried any. Our employees seem to be satisfied, and we do not object to the act, but think the rate somewhat high.

* * *

Likes the Act But Not the Rates

So far as it has to do with relieving us of the responsibility and inconvenience, to say nothing of the disagreeable feature of settling with the men, the Workmen's Compensation Act is more than a success. As to whether or not its cost compares favorably with the insurance charged by liability companies, we have only to say that the Act has not been in operation long enough to afford a proper basis for comparison. During the first year, of course, the premiums charged were away above what a liability company would carry them for.

* * *

At one of our mills the assessment was $540, and the amount paid out for accidents was $187.58. The workmen have been treated liberally indeed; far more liberally than any insurance company would treat them, but the cost is excessive.

Pitch Pine Exports Will Benefit B. C. Fir Trade

Editor Canada Lumberman:— Vancouver, B. C.

The situation in the Southern pitch pine market today is one of interest to all lumbermen—even those on the Pacific Coast. With a large foreign order that was taken on by the mills last fall still uncompleted, we now hear of another for the French Government for 200 million feet being placed in Savannah, Georgia. This order is for early delivery and carries with it the proviso that shipping facilities will be guaranteed by the French Government. There are other enquiries out for foreign shipment, including one for 75,000 pitch pine ties; nor is this the only gleam of sunshine that is illuminating the pitch pine market. The scarcity of steel, owing to the enormous foreign orders the steel mills have undertaken, has turned the attention of the railroad engineers to pitch pine. In short, yellow pine seems to be fairly in for a season of appreciable prosperity. Nor is the season of prosperity likely to be soon over. From every port that a pitch pine stick of timber ever went out of, comes up the cry for tonnage. There is any number of export orders unfilled. The shortage of vessels and the rates of ocean freight are something inconceivable to anyone who has had no experience in the export lumber trade. The latest steamer charters from Gulf ports to Great Britain show a rate of 450/- per standard. Similar charters were made in June, 1914, for 70/-, and even with this increase in rates it is only occasionally that boats can be secured. If the war were to cease tomorrow freights would fall—somewhat— but the unfilled demand for exportable lumber in every country that has been unable to get it for the last 18 months would keep every mill near the Coast busy for an indefinite period. Nor is it probable that prices would fall; for the very high price of imported woods in England, for instance, is four-fifths freight charges. The f. o. b. price of lumber could easily be advanced without comment from the buyer, were freights anywhere near normal.

Now, many of the Pacific Coast forest products enter the same markets as yellow pine. Douglas fir, for instance, is equally available for construction timbers. With so much yellow pine diverted into unaccustomed channels, the demand for Pacific Coast woods increases. It is felt already; another feature favoring the latter is that car shortage and embargoes are being much more severely felt in the yellow pine district than in the West.

The southern pine is a valuable wood: it enjoys a great reputation, both at home and abroad, and those interested deserve their success because of their energetic campaign, lasting over so many years. But if statistics and business facts mean anything, the time is not far off when the Pacific coast men may reap where the Gulf coast man has sown. For the supply of standing pitch pine is being very raidly depleted. Whole tracts of it have been ruined by windstorms. During the business boom reaching over the period of 1900 to 1907, the demand for sawn timber experienced a significant change. At the beginning of that period there was little difficulty in obtaining for export an average cubic standard of 40 feet to the stick. But so large was the output of the mills, that towards the end of that disastrously prosperous era, considerable difficulty began to be felt in maintaining the 40 foot standard.

We owe a good deal all round to the yellow pine operators. They have by their energy and ingenuity introduced their product into almost every out-of-the-way spot on the globe, and by doing so have incidentally opened the way for other sorts of lumber manufactured here. We congratulate them on their present favorable position.

Yours truly,

FRANK FOSTER.

of Mainland Lumber & Shingle Company, Vancouver, B. C.

British Columbia's Production and Prospects

The production of lumber in British Columbia during the past year was 1,151,903,000 board feet. The cut exceeded that of the previous year by nearly two million feet. The value of forest products totalled $29,150,000, as compared with $28,650,000 the previous year, approximately ten million dollars being paid direct to wage-earners in mills and woods, and a similar amount for transportation, of which labor received a large proportion, and over four and a half million dollars was expended in supplies.

The shingle business exceeded other years, the production being valued at about $3,500,000. Sawn lumber produced about half of the total production, and various woodworking manufacturers, pulp, box-making, shingle, etc., produced eight million dollars.

Hon. Wm. R. Ross, Minister of Lands for British Columbia, referring to the present state of the lumber industry says:—

"During the depression of the last three years no industries have suffered more severely than the logging and sawmilling industries. Many mills and camps have been shut down and even among those which survived it has been impossible in many cases to cut down standing timber and make a profit out of manufacturing it. The decrease in the demand for lumber during the period referred to was most serious and statistics show that a sawmill capacity of considerably over three hundred million feet a year has been put out of action by the closing of mills around Vancouver, Victoria and New Westminster. This meant four million dollars or so of money which these mills could have circulated in these cities last year had they been in operation."

"Speaking generally, the outlook for an export lumber trade for British Columbia is excellent, once the shipping difficulty is surmounted. Last summer several hundred thousand dollars worth of business was secured by the Provincial Government acting as agents for British authorities. As soon as the Panama Canal is definitely opened that United Kingdom business will be resumed if shipping can be secured. In India and South Africa there is business awaiting us—held up for the time being by the lack of shipping, but awaiting us nevertheless. In both these countries, just as in Australia, there is a strong feeling created by the war, a feeling which is shared by Canada—that trade within the Empire must henceforward be a fundamental principle for the British Empire. As far as lumber is concerned, British Columbia is the natural source of supply for Australia, South Africa and India. A fair share of the Australian market alone would mean prosperity for our tide-water mills, if only a reasonable tariff preference be given our products. That such preference is certain to come, even our American competitors admit, and the special investigator whom they despatched to the Australian market sorrowfully confirms this fact; the whole lumber export question is being systematically pushed by every means within our power, and only the lack of shipping stands between us and the immediate results.

"Before leaving the question of lumbering reference should be made to the subject of further manufacture. In the lumber business we ship material that should be worked up here into manufactured products—we pay freight on shavings and sawdust and waste to factories elsewhere. This is all wrong. These woodworking factories should be located in the province itself, giving employment to skilled workmen in cities like Vancouver and Victoria. We should manufacture our own goods. I am glad to notice in this connection the progress that has been made towards a better state of things. For instance, the box industry is becoming an important one in Vancouver and Victoria and here we ship the completely-manufactured product. In the government's lumber market campaign this question of home manufacture is being studied carefully, for it has a very important bearing on our business future."

The Trade Extension Department of the National Lumber Manufacturers Association has completed the first of a series of engineering bulletins for architects and builders, the title being "Timber for Structural Purposes," and E. A. Sterling, Manager of the Trade Extension Department is the author. All the bulletins will be written by experts on technical topics, and give practical data to builders. This series of bulletins will probably comprise one of the most valuable series of building documents ever published.

Annual Meeting of Western Retailers

Good Progress Shown in Reports Presented—W. D. Galvin Re-elected President—Uses and Limits of Associations

The twenty-fifth annual convention of the Western Retail Lumbermen's Association, representing the lumbering and woodworking interests of Manitoba, Saskatchewan, and Alberta, was held at Winnipeg recently. Almost 300 delegates were in attendance, being from districts as far apart as Victoria, B. C., Fort Frances, Ont., and St. Paul, Minn., U. S. A. For the first time for many years the retailers invited the manufacturers and wholesalers to partake in their convention. A further feature of the meeting was the fact that for the first time in the history of the Association, the retail lumber dealers from Alberta had a voice in the proceedings owing to the affiliation of this Province at the twenty-fourt annual meeting of the Western Retail Lumbermen's Association.

President's Address

The President, Mr. W. D. Galvin, of the Galvin Lumber Yards, Ltd., Winnipeg, in his annual address said in part:—

Events of profound and colossal importance have stirred the world during the past twelve months,—events in which Canada is particularly concerned. Yet at the close of this memorable year we find, upon taking inventory, that in this country we have much cause for gratification. This is shown from a material view point in an abundance of crops of all kinds and an increased output of manufacturers, in themselves evidence that there may be found resources of sufficient adequacy to supply a self-supporting nation.

To be recognized as logical distributors of lumber supplies, we in turn must recognize and meet the various demands of the public, even where part of such demands must be supplied in a manner unlike that with which we have been accustomed.

In other words, we must meet the varying demands of ADEQUATE SERVICE if we hope to keep the business at home. The lack of such service shows the lack of progress on the part of the dealer. Unquestionably this is recognized as the guiding principle in the conduct of his business, by nearly every dealer.

It means that having obtained a contract, we have not rendered adequate service to our customer by selling him the abstract forms of dimension, boards and shiplap, unless we have entered into the transaction by supplying necessary suggestions and aid for completing the concrete form as exemplified in a finished house, barn, or other building, to the satisfaction of the customer. This thought has been supplied and emphasized in a most thorough manner by the activities of the Western Retail Lumbermen's Association of the Western States.

It means, that in order to accomplish things, you should continually make use of your building department devised for this purpose, or some other good building plan system, if there is any reason why you cannot use that of the association.

It means that you should use constantly and conscientiously, all of the devices which are supplied by the Association, and which cannot succeed unless they have the support of your co-operation.

It means loyal support for the undertakings of your Association both active and financial.

It means, that we should devise a more adequate system of credits throughout the country, and, having been devised, it should be constantly adhered to:—a system that will establish a proper relation between the man who is entitled to credit and the one who is not, affording a measure of adequate service to the worthy man, and a means of protection to the dealer.

A progressive and constructive policy means that the retailer should ever bear in mind the fact that his co-relation with the manufacturer is fundamental; that a greater co-operation should exist between the two branches of the one industry to the end that the greatest economic good may be accomplished for the public as well as the producer or dealer. This can only be done by proper measures of distribution rendering adequate supply service to the public, and by proper manufacturing methods with a view to elimination of waste; both with due regard for forest conservation.

It means an earnest endeavor to correct economic abuses within our industry, one of the most flagrant of which is inordinate overcrowding of competition at many points, bearing definite illustration in itself by necessity of the old saying, that "the consumer must pay the tax." Where two or even three yards at some points would suffice to afford abundance of competition, the existence of five or six yards, as is often found, creates a burden of overhead expense without adding one iota of service, and affords good cause on the part of the public for the suspicion, that as a result of this abuse, someone other than the dealer must pay. The fact is the stage of "diminishing" returns has been reached, and many communities as well as the industry would be far better off if this evil could be corrected.

What more does a progressive and constructive policy mean?

It means above all, that our activities should always be made clear and above public suspicion. They should be conducted on a basis of broadminded business administration free from deserved reproach or criticism, and in such a manner as to make sure that our business occupies an honored position before the public, second to that of no other industry. This may be accomplished by throwing open the methods of our business to public scrutiny at any time, so that the oft repeated opprobrium, "Robber lumber dealer," and such other mendacious fallacies may no longer be used, even by a minor uninformed portion of the public.

Secretary's Report

The secretary's report presented by Mr. N. G. Neil stated that out of a total of 1,400 yards, 55 per cent. were now members of the Association and 70 per cent. were actually affiliated with it in some shape or form. The membership during the year had increased by 350 yards or 80 per cent. The secretary then outlined the various

W. D. Galvin, re-elected President of the Western Retail Lumbermen's Asaociation

Alan M. Stewart, re-elected Sec.-Treas. Western Retail Lumbermen's Mutual Fire Insurance Company

F. E. Sine, Calgary, new Director of the Western Retail Lumbermen's Association

departments of the Association, all of which have been doing splendid work during the past year. These include a lost and found department for locating debtors whose addresses are unknown; a publicity department furnishing articles and illustrations for the newspapers; a bulletin department which issued 18 bulletins during the year; a building department, furnishing plan books which were used by 60 per cent. of the Association, 25,000 copies having been distributed and 1,250 additional ones ordered, and a department for special drawings.

The Value of Plan Books

An address by Mr. Geo. F. Robertson on "The Value of a Permanent Building Department" was one of the features of the meeting. Mr. Robertson spoke in part as follows:—

We, as lumber dealers, have been for years feeling the necessity for a plan book and an Architectural Department, which would bring assistance within the means of the smaller builder and meet the peculiar requirements of Western farm and village. Producing plans to meet the searching climatic conditions and which, in style and form, would conform to good taste and the carrying out of which would not be beyond the ability of the local mechanic and the local trades to supply.

In passing my opinion on this present plan book I wish to call your attention to the limitation of conditions which should be taken into consideration, such as that there are only about thirty-five house plans in the present book and about twenty farm out-buildings to meet the many different resources and the housing requirements. Thirty-five house plans cover houses in price from $500 to $5,000 to meet the various pocket books, in size to fit the bachelor, the childless family, or the family in numbers. In selecting house plans the difficulties would be simplified could we order the family to fit the house or make the pocket book fit the family.

Now we come to what are our particular and peculiar demands to be met in a plan book and here it might be helpful to state in what way the numerous plan books in print do not meet our demands. Practically all such plan books cater to the city business, which has made up the clientele of most of the architect's offices in the past, and these books illustrate the narrow house for the restricted city lot, the small kitchen, intended to provide the work room for a maid with the limited style of house-keeping sufficient for the city, a dining room not quite so small, and a very large parlor or living room. These architectural plans may have originally been intended for the locality of the particular architect, possibly Tennesse or California and construction planned accordingly. Other objectionable features are that the carrying out of the plans are unnecessarily expensive for our country business, with special detail work, odd stock and other features, to make the house, especially different and distinctive from any other house, needlessly expensive, and making the plan often beyond local mechanic as well as causing a great deal of worry in trying to get odd stock without unnecessary delays.

In our country houses and particularly the farm house we want large kitchens and dining rooms sufficient to accommodate the more complicated housekeeping of the farm, into which the family may gather in their interest to keep near the centre of all activity of the farm household. The strictest attention in planning must be paid to the kitchen and dining room. What is required is a house with outside door openings guarded as much as possible by vestibule and entrance ways; a house well lighted with plenty and sufficient windows. In this particular respect we have in the past probably been going to an extreme in cutting out as many windows as possible in trying to save fuel, making the rooms often cheerless and not so healthful for the want of the wholesome light and sunshine. As to the construction, our department has not erred in specifying insufficient material and details for warm construction, and the houses as specified may not be too good but may be a little better and more expensive than many of those which the local contractors are used to building. Sometimes in hurried comparison the plans may look too expensive according to estimated cost.

As to outbuildings and barn plans, particularly barn plans, there is so much more variety and detail to this class of planning than is the popular impression. We need improvement in this class of building quite as much as in the house building and much education is needed along the line of ventilation systems.

There is variety of requirements such as barns for accommodation of different classes of stock, or buildings for mixed stock. There is also to be taken into consideration the arrangements of feed passages, whether central or side passages or a feed stall shall have preference to a passage. All have their advocates and call for representation.

The barns represented in our plan book were planned by a practical farmer of long experience, one who has built up a successful barn from smaller beginnings and has taken advantage of the opportunities of learning scientific agriculture.

Do not think that these plan books or the plan department are alone going to get you business. They are only instrumental, a help to new business and unless you know how to use them you will not profit very much. Believe in them, talk about them, discuss building plans with every prospective customer and find out just what he is planning for and to accommodate. Then try to post yourself in a way to advise him and get the help from the books or the architectural department.

Centralized Advertising

Centralized Advertising was dealt with in an address by F. W. Hess, who said:—

"In introducing the subject of "Centralized Advertising" I am not recommending it, but bringing it before you for your thought, discussion and decision, and it is entirely with you for disposal.

We all recognize the advantages and the power of advertising and spend, each year, part of our earnings for same, and consequently wish to obtain the best results for our efforts and the money expended.

It is a business matter so we should have the best service and results that our money will buy.

Some of you advertise by novelties, such as lead pencils or carpenters aprons, others by calendars, sent out monthly or yearly, others by posters drawing the attention of the prospective customer to the plans, blut prints and service you give, others by advertisements in your local newspapers, (some well written and very attractive) which no doubt bring good results. Others, indifferently worded and unattractive are consequently unproductive.

Most lumbermen are poor advertisers. Seldom do their advertisements appear as live, catchy and attractive, as do those of other merchants in the same town. Most lumbermen are contented to merely mention the word "Lumber" and then give their name, while other merchants advertise their wares by displaying cuts, pertaining directly to them and their business, as well as briefly lauding their uses and merit. Take the advertisement of a musical dealer. He will advertise a piano by showing a piano, a Victrola, or diamond disc by showing the machine itself, and the pleasure enjoyed by those who own one. Such an advertisement creates a desire to possess one.

Why should not the lumberman in his advertisement show an up-to-date home with its comforts by being built right, or that of a modern barn and thereby draw attention to his wares and their uses.

A retail general store merchant uses display cuts of shoes, hats, coats, clothing and of hardware, stoves, kettles, pans or hammers, which undoubtedly must be helpful, so why should not lumbermen use display cuts of houses, barns, shingles, fence posts, and other commodities. s

Are these desired and can they be best obtained, and can better advertisements be written or suggested through a Central Advertising Department?

This is for you to consider and Secretary Neill will be pleased to explain what he could likely offer you, if you desire such a Bureau."

The Modern Lumber Association—Its Uses and Limits

By A. L. Porter, Secretary of the Western Retail Lumbermen's Association, Spokane, Wash.

I have considered this subject of such importance that I have carefully written it at length. Each statement represents mature thought on the subject. I am not being carried away on the moment by any impassioned utterance, and I wish to guard against the danger of overlooking any important phase in the enthusiasm of impromptu speaking.

That you may not charge me with advancing any Utopian theories, desirable in themselves but impracticable of realization, I shall state here that, in the outline of the Ideal Modern Trade Association I shall give you, I do not offer a "dream child"—it is not a mere word picture of a "consummation devoutly to be wished"—it is the detailed plan of organization and action of the Western Retail Lumbermen's Association.

And this detailed statement I judge necessary at this time, because so many of our own members are not as fully conversant as they should be with the work of their own organization. One of our directors made the statement some short time since that we were ten years in advance of the industry. Be that as it may, I shall state definitely now that we are no more than keeping pace with the demands and with the legitimate requirements of him upon whose favor our industry depends—THE ULTIMATE CONSUMER.

A Trade Association is an incident, arising from the conditions of the industry whose name it bears. Therefore, a proper discussion of the Opportunities and Responsibilities of a Retail Building Material Merchants' Association must be based on a clear knowledge of the history of that industry and a knowledge of its relations to other industries.

The Lumber Industry Has Three Eras

Historically, there are three eras in our industry.

These are clearly marked and defined by commercial epochs, the culmination of conditions inaugurated externally and received passively. And these changes have all taken place within quite recent years.

The first era was that of the LUMBER YARD.

This extended from the time when the first man agreed to supply another man WOOD FOR BUILDING PURPOSES, down to the year when the first maker of ANOTHER BUILDING MATERIAL began to aggressively attempt to increase the demand for HIS goods.

Accustomed methods of distribution—the bulky nature of the materials—and other allied conditions—indicated the lumber yard as the logical point for local concentration and distribution.

The desire for more profits—for more volume—for increased lines and larger fields—perhaps mere inertia—influenced the lumber yard manager to stock and handle these other materials in conjunction with WOOD.

Line after line was added, as recent inventive effort found openings; constantly increasing varieties of goods came on the market and eventually to his yard; until at last, by an easy and natural transition, he entered the second era—that of the BUILDING MATERIAL DEALER.

From that time things moved rapidly, and the coming of the third era was upon us. This was marked by the first offer TO SELL A COMPLETED STRUCTURE FOR A FIXED AMOUNT.

This epoch is the real dividing line between the past and the present, for it evidences, for the first time, the correct understanding of the basic principle which underlies all successful business—THE TRUE RELATIONSHIP BETWEEN BUYER AND SELLER—BETWEEN MERCHANT AND CUSTOMER.

It put into the commercial language of our industry the thought that we must offer to the consumer—ON WHOSE PATRONAGE OUR VERY BUSINESS LIFE DEPENDS—NOT MERELY WHAT WE HAD TO SELL, BUT WHAT HE WANTED TO BUY.

And what he wants is NOT MERE BUILDING MATERIAL: it is a THING MADE OF THAT MATERIAL. The building material merchant himself—you—are the only men who buy building material AS MATERIAL.

In other words, we had been conducting our business under false pretenses; we had been offering a THING when what our customer really wanted was a SERVICE RENDERED BY THAT THING.

He did not, for example, want a BOARD. He wanted, rather the PROTECTION, in the form of a home, which the board would give him.

For thirteen years we have been trying to do as WE wanted to do. I have never heard a paper nor an address made at any conference bringing up the question of WHAT WE COULD DO FOR THE CONSUMER.

"Wood doesn't get out of style" has been a BY-WORD in the industry

for many years; but "Styles change in the THINGS MADE OF WOOD," will be the BY-WORD of the future.

It is not especially flattering that this great basic idea should have come to us as it did and as late as it did. But nevertheless we must accept it and we must act on it. We must march with the times; we must recognize conditions as they are, not as we would like to have them be; we must realize that OUR CUSTOMERS ARE BEGINNING TO DEMAND THAT WE ADEQUATELY SUPPLY THEIR WANTS.

And if we do not do what is demanded of us, we will be eliminated; we will be forced out of business; and if that happens, it will not be because the public did not WANT those services but because we did not GIVE them.

We are ostensibly in business to perform a certain necessary part of the scheme of distribution and that work will be done. It is merely a matter of choice whether we decide to do it ourselves or allow it to be done by some other agency.

And this is the third era—the present era of the PROFESSIONAL RETAIL BUILDING MATERIAL MERCHANT.

I use that name because I believe that we who are now engaged in this business can adopt the name, accept the duties and properly perform them. I HAVE FAITH IN US.

But remember, gentlemen, THAT SERVICE WILL BE RENDERED TO THE PUBLIC IRRESPECTIVE OF WHO EVENTUALLY PERFORMS IT OR UNDER WHAT NAME.

As Retail Building Material Merchants of the Third Era, you have three classes of problems to solve.

Trade Problems to Solve

1. Individual questions of trade, arising in the course of your personal business, which, in the nature of things, you, alone, can solve.

2. Matters affecting your business but of local importance and affecting other men in the same line in your territory and to some extent in other lines as well.

These include such questions as local lien laws, community development, sociability, credit arrangements, and, to some extent, transportation. Such things belong properly to the determination of all men in a given locality, and, for the best interests of all, should be handled by an organization of all parties in interest.

This points to the organization of local associations, which shall assume consideration of, and, to the extent permitted by law, action thereon. Such associations will benefit their members in direct proportion to the limitation of action to the proper subjects and to the energy and ability of their executives.

3. General industrial methods and services affecting your business regardless of location; problems that come under the universal laws of commerce; services that you must render and be rendered if you would retain, much more improve, your standing in the business world.

Such services necessitate the retaining of men who are highly skilled in their several lines of endeavor:—Traffic, Advertising, Insurance, Building, Legal, Editorial, Architectural, etc. And all of these services, TO BE OF THE VALUE THAT YOU REQUIRE, must be the very best obtainable in the open market.

For such services high wages must be paid, for they are a commodity as is your own stock of materials. This primary question of COST places such services beyond the reach, not only of the individual, but of the small organization with a limited membership income.

And yet these smaller merchants are the most in need of just such services in order that they may be better able to compete fairly with their more powerful business rivals from a distance; and the consumer—the customer of these small merchants—is just as much entitled to receive such services as is he who is located where patronage of the very large and highly equipped merchant is practicable.

The solution of this third class of business problems indicates the formation of an organization large enough and comprehensive enough to take care of the several contributing factors and to provide these REQUIRED SERVICES IN THE PROPER QUANTITY AND QUALITY.

These being recognized as the conditions, the next question is, naturally, how to provide them.

If any industry in existence should logically work along proper plans, it is ours; for "plans" are a requisite for the proper ultimate use of the materials we handle.

Develop Your Community

In the planning of an Ideal Association, therefore, I shall begin at the first of things. I shall start with the acknowledged commercial axiom that YOU CANNOT DO BUSINESS NOR HAVE BUSINESS WITHOUT BUSINESS.

To have a business you must have a community which is producing or can be made produce that business. You cannot sell even tombstones in a dead community; and repair work and wagon trade alone will not keep your books always in the "black."

This indicates the necessity for assisting you to develop your community —thereby CREATING BUSINESS. In other words it indicates the necessity for a Community Development Service that will suggest ways and means by which you can stimulate the life of your community and thereby cause an INCREASED DEMAND FOR YOUR MATERIALS.

Such a service must be able to advise along the lines of FARM service as well as TOWN SERVICE. It should show the member how TO ADD HIS TOWN TO HIS SALES FORCE, through the formation of Boys' Clubs, Girls' Clubs, Commercial Bodies of all kinds. It should instruct him how to get the farmers together as well as the townspeople. It should give him practical instruction on How To Sell Homes, How to Sell Silos, and should in a word, equip him to take a leading part in the development of his com munity.

Ten main avenues, each with many details, of trade increase through community development, are described in the series of Service Bulletins published by our Association.

Lumbermen Must Advertise

Still, if your public does not know WHO nor WHAT nor WHERE you are nor WHAT YOU CAN DO FOR THEM, you will not profit. You must let them know these things—you must MAKE THEM KNOW—in a word, you MUST ADVERTISE.

Some dealers complain that mail order houses are injuring their business. They say that people in their territory have bills shipped in before the dealer even knew that a building was contemplated.

And Why? BECAUSE THE MAIL ORDER HOUSE ADVERTISED. And the mail order houses' advertising was better than yours when you did advertise. IT HAD TO BE, for it had to counteract your reputation for square dealing, your service, the power of your presence, your personal argument, your extension of credit, the quality of your materials;—that is, providing you had all those things.

And more than this, the mail order house kept right after your customers. Not for a day or a week or a month—but for years. One of the largest mail order houses in the country said last year, by the mouth of its general manager, that they often followed-up a prospect for three years, but finally landed him. Ever do that yourself?

And still more; these houses keep on suggesting NEW COMFORTS, NEW CONVENIENCES, NEW USES FOR THEIR MATERIALS, to those prospects, until, by force of repetition, the prospect becomes an active customer for that article. And from whom will he buy that article if not from the people WHOSE NAME HE NATURALLY CONNECTS WITH THE THINGS HE WANTS?

Quite true, say you, but you cannot afford to hire such a man; a man capable of producing such appealing advertisements.

Exactly;—and that's where your association comes in. ALL OF YOU TOGETHER CAN AFFORD SUCH A MAN—SEVERAL OF HIM.

One thousand of you together can each hire such a man at one-thousandth of the price an individual would have to pay. You get the same ideas, the same suggestions, and the only difference is that you will have to look after working out of those ideas yourself.

One of our members put conditions into a novel statement when he said, recently; "Your selling advice enables us to get the business BEFORE IT REACHES THE STAGE OF COMPETITION." And we really felt a little more hurt than pleased with his remarks, for, in his enthusiasm over his individual benefits, the writer of that letter had missed the great, basic idea of the Associational work.

We had NOT eliminated competition, as he understood the work. We could not, for, as it happened, we were doing the very same thing, as we had to do, for another member in the same town.

We had NOT enabled either to profit at the expense of the other; that would indeed have had destructive trade effects, and would have meant "competition" as it exists today.

What we had actually done was to point out to each one, the possibilities for CREATING NEW BUSINESS AND HOW TO CREATE AND SECURE IT; and each, following his individual trend, had moved towards the same goal along different roads. Both had CREATED BUSINESS; neither had taken business away from the other; of course, each "got the business before it reached the stage of competition," FOR THERE WAS NO COMPETITION AT ALL.

But now, in order to supply the demand that the Advertising and Community Development departments have helped you CREATE and SECURE, you must get your material to your yard in time, at the lowest rates and classifications and free from all claims from damage, shortage, etc. Or, when such unavoidably happen, you must have those matters so adjusted as to prevent the losses from eating up your profits.

Should Employ a Good Traffic Manager

Here is where you need a good traffic manager. And you need just as good a traffic man as the largest firm in the country; nay, more, for losses that would not affect them in the least would, by the very difference in your size, mean a most important loss to you.

Here again the Association offers relief. The combined resources of all of you can secure the best traffic man open for engagement. And the fact that your Association covers such a territory and with so many shippers, gives that traffic man a better and stronger standing with the carriers and enables him to deliver better service to each of you.

Our traffic department has succeeded in inducing probably half of our membership to use its services. A part of this number, aggregating possibly one-third of the total membership, sent in expense bills for auditing. We collected and remitted some $5,000 last year to those people, an amount which averaged three years dues to every man using the department. And that mony was practically picked out of the waste basket.

We have treated the carriers fairly; we aim for simple justice, not for special favors. And as a result, we have such a standing with the carriers of our territory that each has appointed one man whose special duty it is to attend instantly to any matters we present to him, and to see that they are carried to the most rapid and satisfactory conclusion.

So far, I have spoken only of the ordinary business. There is yet that intensive cultivation that really produces the cream. The profit is made, as a rule, not in the ordinary business, but in the construction of buildings whose beauty, artistry, and convenience, make those structures and those qualities take precedence in the mind of the prospective customer over MERE PRICE.

Must Use Plan Books

THIS, of course, indicates the use of a Plan Book SYSTEM.

Naturally, in speaking of such a service help, I think of the one now in use in this Association, known as the Porter-Ballard Plan Book SYSTEM.

This, as you know, has been opened to legitimate retail building material dealers outside of our own Associational territory, and, though it is only some three years old, the SYSTEM is now in active use in no less than thirty-one states, and has been officially endorsed by eight retail lumber dealers associations.

In this SYSTEM I believe we have paved the way for perfection of dealer service; though, of course, it is to be expected that changes of many details will be made to meet changing conditions.

The SYSTEM is intended to be a complete SALES SYSTEM, and includes not only beautiful books of modern designs for all sorts of buildings but itemized material lists, full directions for using the SYSTEM, advertising helps of all sorts, and a choice of 50 sets of full sized working blue prints and specifications, from 250 different designs; all of this being offered to the retail merchant FOR A SINGLE PRICE.

Remember that the MEANS OF MAKING THE SALE must be just as comprehensive as the SALE ITSELF—all elements must be covered. The Plan Book SYSTEM therefore is intended to enable you to answer all questions and many of the arguments that may arise concerning the structure itself. It is intended to avoid the mistake of offering just the type of houses that PEOPLE ARE NOW BUILDING. Of course, it is necessary to include

some of these designs to meet immovable demand, but you have an educational duty that is paramount, and the bulk of the designs therefore are of HOMES THAT YOUR PEOPLE OUGHT TO HAVE, AND OF HOMES THAT THEY ARE GOING TO HAVE SOME DAY.

MAKE THAT "SOME DAY" NOW.

Failure to provide a seemingly unimportant detail of the sales element may be like the legendary horse shoe nail that lost a kingdom. Take no chances. It's better to be sure than to be sorry. Remember, there is no "second best" in making a sale. It is FIRST or just an "also ran." It is ALL or NONE.

By this time, if you have made proper use of the services provided for you, you will realize that you have a business worth while, and you begin to think of what would happen if you had a fire.

Fire Insurance for the Retailer

Of Fire Insurance Companies there are many; but in line with a COMPLETE SERVICE to the individual, we, in this Association, have covered this item through our own splendid Lumbermen's Mutual Society, which, though under separate management and organization, is handled in the interests of our members, who, alone, are eligible to secure indemnity.

By limiting our hazards to the one high-class type of fire risks, we can provide ample indemnity at the lowest possible rate; this again being an advantage secured through association that the individual could not obtain.

Remember also, that insurance history shows that no strictly contractural society, specializing in a single hazard and with honest executives and proper safeguards, such as obtain in our own Society, has ever failed in business, has ever failed to adjust and pay promptly and fully all losses, has ever failed to carry indemnity at a lesser rate than had been charged by (so-called) "Board" companies prior thereto.

It needs no great office or field force; no elaborate accounting department; it handles preferred risks so widely scattered that any severe loss is practically beyond reason, and its cost per unit of doing business will decrease with its growth; a very substantial reason for your patronage.

The Value of a Good Cost System

By this time, unless you have been exceedingly fortunate, you will have accumulated some bad debts. Here, again, through an Accounting and Collection Department, the Association comes to your aid. Experts in cost accounting will aid you to know WHAT YOUR BUSINESS IS REALLY DOING. AND a Collection Agency, backed by the power of an Association covering a large territory, has a better chance of finding debtors and bringing them to time, than any individual.

And this question of COST ACCOUNTING is of such extreme importance that I hope to see the day, in the near future, when every individual in every industry will handle his business along accounting lines devised and formulated by the brightest brains in that industry.

The foregoing are, of course, general subjects which appeal to all retail building material merchants; but there will be many questions involving local and personal matters that you will want solved.

Here again, is an advantage of an association. Constant communication with members all over the entire territory and constant study of multitudes of questions, gives an outlook of a breadth no individual could possibly secure.

While business varies in the item, yet, in the same industry those matters run along similar general channels, and the experts at your headquarters will become familiar with those channels so that they will be able to give you specific aid on practically everything that is in the least liable to happen.

For instance, some of you might want to improve your ability to read plans or to make estimates, and so forth. Not to become architects but better merchants. When that question was posed to us we spent several months, in collaboration with one of our largest correspondence schools, and perfected a special course, backed by our practical knowledge and the school's superb corps of instructors.

A pleasingly large number of our members are using this course, and we have received a number of inquiries from the managers of retail yards outside of our own territory—men who wanted to know better how to show the consumer the way to get the value from the material after it had been sold. These we referred direct to the International Correspondence Schools, with the result that Vice-President Foster, in a recent letter, said: "It begins to look as if it would be well for us to prepare and issue considerable printed matter regarding it." It is evidently a matter of interest and value to the INDUSTRY and not alone to your ASSOCIATION.

Some members wanted to become better salesmen. We secured a lecturer on Scientific Salesmanship, of international reputation—Dr. Stanley Krebs—to write a series of articles specifically adapted to our industry. This series, with appropriate illustrations, we published in our monthly magazine; besides giving our members the opportunity of hearing Dr. Krebs in person on several occasions.

An Association should be able to advise its members WHEN, WHERE and HOW to buy the goods they carry in stock. Not necessarily to favor one manufacturer at the expense of another equally good, but to provide information which will ENABLE OUR MEMBER TO GET WHAT HE WANTS.

Then, to bind all together, some sort of means should be provided for keeping in touch with each member; of sending to each member the information gained each month, or other suitable interval, on matters of interest to the industry at large, and especially in the territory of the Association.

This condition we have met by the publication of a monthly magazine, which, I might say in passing, is the only magazine in existence, the official organ of a lumber organization, which is entered in the U. S. Post Office Department.

What a Lumber Association Represents

I have apparently devoted more time to the individual than to the Association; but bear in mind that the individual is the really important factor. The Association exists only because of the individual and for the purpose of enabling him to do, through associated effort, what he, alone, could not do. The Association, therefore, represents, and can properly only represent, the combination of the energies, abilities, experiences and knowledge of all of its members.

The INDIVIDUAL comes first, and his needs brings forth the ASSOCIATION.

And let me emphasize the fact that no Association can do what I have said it SHOULD do, unless every unit which composes that association is individually equal in PREPAREDNESS to the Ideal of the Association. There must be no "specked apples" in the barrel.

When the members fail to do their duty in the matter, there should be no blame attached to the Secretary or Manager. The conquests and triumphs of Napoleon depended on the equipment, the fighting ability and the loyalty of the single soldier standing guard on the lonely outpost.

In Iowa the citizen soldier who fails to attend the meeting of his company is sought for and conducted to the place of his duty by the sheriff. It may be humiliating, but it is the right thing to do.

An Association, if it attempts to carry on a policy of militant effectiveness in the interests of its industry, must be composed of trained and willing soldiers.

It would be far better to send the sheriff to compel a member to attend the annual conference of his trade association than to send the sheriff to close up his place of business.

"But," you will say, "now that I have all of those services my competitor will have them too. How is that going to affect or alter competition?"

Why, bless you, if you have to ask such a question, it's an indication that it will not help you very much.

What is Competition?

COMPETITION!

To paraphrase Madame Roland: "Oh, Competition, how many business crimes have been committed in thy name!"

Is it not somewhat amusing to see the wonderful attempts that have been made to bolster up this economically unsound condition?

Competition has been made the theme of serious addresses and weighty books by learned and famous economists.

Our legislatures have passed statutes in its favor and the courts have been biased in its behalf.

No. Let me modify that last statement. Not ALL of our judges have been biased. One, at least, has indicated that he realized we were all working in a blind alley.

Justice Holmes, of the United States Supreme Court, in his minority opinion in the case of Dr. Miles Medical Co. vs. Park & Sons Company, reports in 220 U. S. 373, said:

"I think that we greatly exaggerate the value and importance to the public of competition in the production or distribution of an article as fixing a fair price. WHAT REALLY FIXES THAT IS THE COMPETITION OF CONFLICTING DESIRES. We none of us can have as much as we want of all the things we want. Therefore, we have to choose. As soon as the price of something we want goes up above the point at which we are willing to give up other things to buy that, we cease to buy it and buy something else."

It may seem strange that this great lesson of modern merchandising should have come, not from a merchant, but from a lawyer; but please remember that the business of that lawyer was to study business conditions so that he might more capably interpret the law of the land.

Justice Holmes had made a thorough study of the conditions which underlie all business and he had the inestimable advantage of getting facts, on which to predicate that study and his conclusions, from actual conditions and relations as shown by the big men in business, through cases submitted for his consideration.

And at that, how many people who read that decision, really grasped the great big idea?

Only four little words—that was the gist of his opinion. But those four little words locate, define and limit modern merchandising.

"COMPETITION OF CONFLICTING DESIRES."

Let me translate that thought of Justice Holmes' into the phrase which, enunciated some three years ago, has become almost a slogan for our own Association:

"Competition of Conflicting Desires."

"The right way to sell lumber is not to try to sell it at all but to do those things which will create a demand for what you have to sell."

Competition? Competitor? When you speak of your "competitor" just what do you mean?

Your only competitor can be that merchant in your own industry, in your own distribution territory, who has the same stock, the same knowledge, the same energy, the same financial strength, as you. If there is any difference in any of these elements, then the balance of results will sway towards the better equipped and true competition will become, in the vernacular, a "cinch."

Competition is possible only on horizontal lines, just as combination moves on vertical lines. The higher you rise in the scale, the less competition you will have.

Let me illustrate. Successive steps in our industry, in the working out of a sample transaction may be represented in this matter.

The illustration represents a town with three yards; a fairly good average of the entire country.

If you are ONLY a material man, the only competition you will have will be with OTHER MERE MATERIAL MEN.

If, however, you add to your equipment, by combination, a knowledge of your materials and their uses, you rise above the "Material" plane of former competition and your only competition will then come from some one equally well equipped.

The higher you rise—the more of the necessary elements of the complete transaction you assume to supply—the more independent you become of any one who would supply what you lack—the smaller becomes your field of competition and the greater your chances to secure the trade.

And that rise in the scale depends entirely and absolutely on each one of you, individually. And because you do differ individually, the results will differ; though through Associational services you can at least be assured of an even start.

You will eventually differ, no matter how evenly you start; but the better you are equipped to serve the public, the more the public will come to you to be served. That's what they want and that's what they are going to have—somehow.

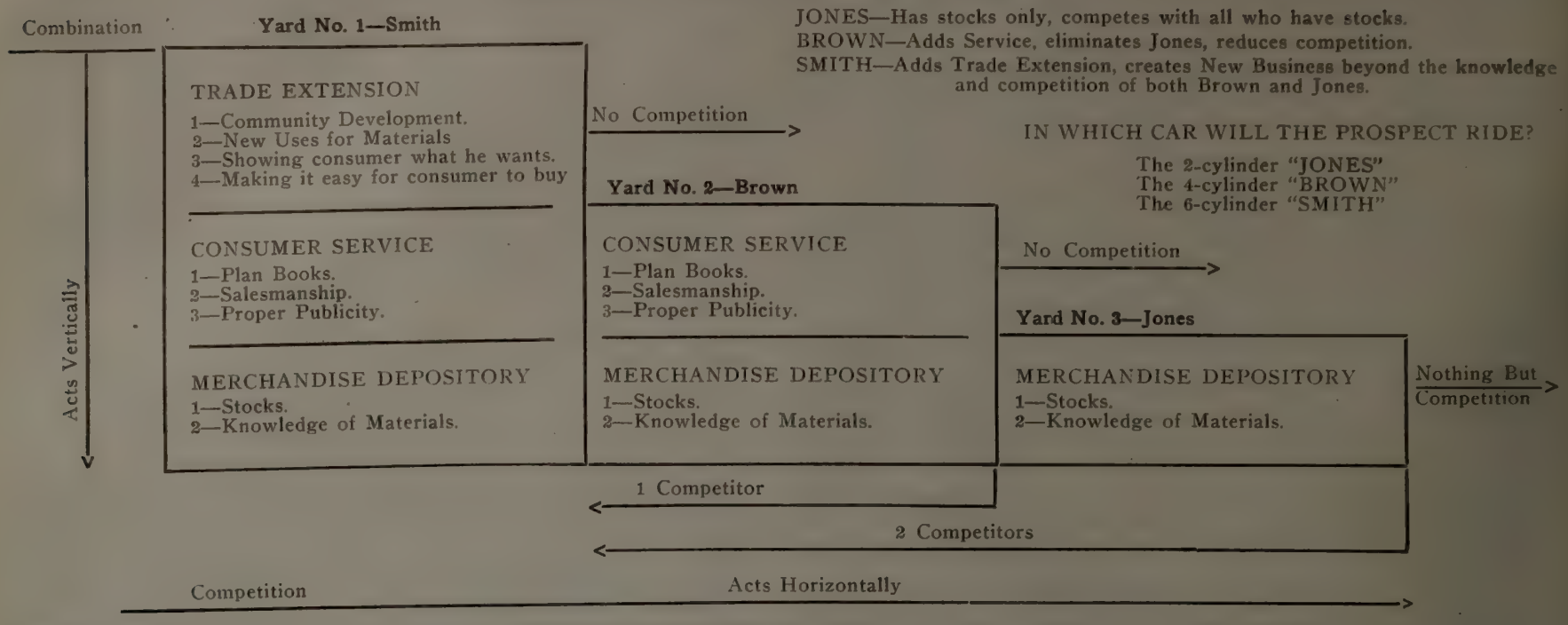
One retail lumberman said not long ago that he was going to stop "talking service," because he didn't see where it did him any good. It didn't—simply because that's just exactly all he did—TALK SERVICE. He didn't GIVE SERVICE.

Service—adequate service—is your only hope of salvation.

But it is not Servile Service. No—it is a man-to-man, face-to-face, equal exchange of what each has for what the other has, to the satisfaction and profit of both.

And let me once for all put a bomb under the hideous old idea of "master

GRAPHIC VIEW OF 3-YARD TOWN



and servant." In the olden days, when human bodies were made chattels by law, that relationship existed; but in these present days of legal, moral and political freedom, it has no place.

I acknowledge no man as my master—I accept no man as my servant. I acknowledge only that relationship of joint interests in which each gives what he has that he may receive what he wants.

I acknowledge your right as a consumer to deal with my competitor, but I just as firmly claim the right to offer my goods or my services to you on an equal footing with my competitor.

And I especially and emphatically deny to my competitor the right to hazard my own good name as a fellow member of this industry by doing something which is not legally right nor economically sound, and which will thus reflect on ME on account of my being in the same business.

There is no force to compel anyone to enter or remain in this business. If you do so, it is your official notice to the world that you believe you are better equipped to succeed there than in any other business.

When you entered this business, you said to the world: "I will make a better retail building material merchant than anything else." And in how many cases will the world reply: "Well, if that's the best you can do, thank goodness you didn't try something which might have affected my welfare more."

Competition? When I see some of our present day lumber dealers—peddlers of plank—talking of "competition," it makes me think of the man who jumped from the top of his house believing an umbrella would do as well as a parachute. You admired his nerve but you had a mighty small opinion of his brains.

Competition? Suppose that every retail building material merchant in this territory would pose himself THIS question:

"Where is the good, the value, the economic necessity, of HAVING THE OTHER FELLOW COMPETE WITH ME?"

Imagine the several companies of a regiment fighting among themselves to see which should attack the enemy.

You don't have to imagine several retail lumbermen in a given town fighting each other to see which will "land the order." You see it everywhere—everyday—YOU ARE DOING IT YOURSELVES.

And isn't it supremely foolish? ISN'T IT PLAIN BAD BUSINESS?

Here is a prospective customer, WHO WANTS SOMETHING YOU HAVE FOR SALE AND WHICH YOU WANT TO SELL.

Instead of aiding that prospect to get what he wants—or as Justice Holmes would say in his delightful way, aiding him to clarify his conflicting desires—what do you do?

You forget all about that prospective customer and you put your best thought, your best ingenuity, your very reputation as a good business man, to the task of determining, NOT HOW TO SATISFY THAT CUSTOMER BUT HOW TO PREVENT THE OTHER FELLOW FROM DOING IT.

The business, or rather what should be called the possibilities of the retail building material industry have not been more than touched. A very small percentage of visible trade has kept the industry alive to date.

If the same energy was put into DEVELOPING THE TRADE POSSIBILITIES that is now being put into trying to KEEP THE OTHER FELLOW FROM GETTING A SHARE OF THE VISIBLE TRADE, every man in the industry would prosper.

And that would be but the smallest effect, for when the retail building material merchant in a community is HONESTLY AND LEGITIMATELY PROSPEROUS, then that community must also be prosperous; and that condition of communal prosperity will necessarily re-act in turn on an INCREASING PROSPERITY FOR THE RETAIL BUILDING MATERIAL MERCHANT.

Possibilities for Trade Extension

Developing trade! A man in Spokane was called on one morning by a youth with a sample case. It was early fall. The agent told this man that he had seen a notice in the local paper of the new occupancy of the house and wanted to interest him in screens. His goods were right—his prices were right—and the man gave the order. The screens were delivered and put in place on the man's house. Now, the point of this story is that those screens came by water around the horn from Portland, Maine, to Seattle, and then to Spokane by rail. Also that man had not before, nor has he since that time had a single word said to him about screens on his house by any of the local dealers in Spokane. And I can vouch for the truth of that statement—FOR I AM THAT MAN.

Does that indicate any POSSIBILITIES FOR TRADE EXTENSION?

Just think for a moment of the result if only you members of this Association should honestly decide to become MODERN MERCHANTS, with all that those words signify. Just think of the tremendous wave of prosperity that would spread over the Associational territory—over the entire country.

And this is not a dream. It can be done.

It will take time. It has taken years of drilling to get some of these supposedly clear conceptions of real, modern merchandising home to some people, but the leaven works.

Every day I note where some one has created business where it was not seen before.

Every day I see the old-fashioned cut-throat competition giving place to the modern emulation.

And in every case the retail building material merchant has prospered financially.

As Elbert Hubbard said: "I am an old man and I have had many troubles—most of which never happened."

Competition is all right in its place, but that place is NOT where it has been. Compete with your own PAST BUSINESS METHODS instead of with your PRESENT FELLOW MERCHANT, and you will find that most of your business troubles "never happened."

Again, me thinks, I hear a still, small voice:—

"That's all very fine. But suppose someone ships into my territory or suppose some other dreadful thing. How are those fine ideas of yours going to stop that? HOW IS THE ASSOCIATION GOING TO PROTECT ME?"

I still get an occasional letter like that, though they are getting quite few of recent months; but it still has a bad effect on my temper.

Should the Retailer be "Protected"?

PROTECTION. Is this a Sunday School class of children, or is it an organization of red-blooded men? Is this the great Caesar crying pitifully from the waters: "Help me, Cassius, or I sink?"

Last December, President Wilson said at Columbus, Ohio:—"American business men have been timid. They have constantly run to Washington and said: 'It looks like rain. For God's sake give us shelter.' You do not need Washington. There is genius enough in this country to master the enterprise of the world and not to ask odds of anybody. I would like to have the thrilling pride of realizing that there was nobody in America who was afraid to match his wits with the world."

Why, gentlemen, just suppose for a moment that this Association could do, under the law, what is asked of it in this matter—could build a Chinese wall around each of your trade territories and "protect" you against all outside competition. What would you be willing to pay for membership and what would it be worth? $12 a year? $100 a year? $1,000 a year and on up and glad of the chance.

But it cannot be done—not that way. And besides, the very idea should be repugnant to a real MAN. There is no law compelling him to be in this business. I am in it because I feel that I can do better in this line of work than in any other. But I can quit. And so can you. I play golf because I like it; but I can play tennis if I want to.

I AM BOSS OF MY OWN ACTIONS.

No association can do this "protecting" act, but each member, or each individual outside of the association, can "protect" himself. You can do so by making your services so valuable to the only power on earth which has the making or breaking of your business—the CONSUMER—the Man-With-

The-Money—that no outside business, man or firm, can break the bonds which tie the consumer to you and to your business.

THAT way is legal; THAT way is the glorious way of beating the other fellow in a fair, honest, smiling, man-to-man fight.

To have the Ideal Trade Association, you must first of all make yourselves individually fit and worthy to belong to such an Association.

You must make yourselves, gentlemen, so strong in your own line of business that you will take your proper standing in your communities, honored, respected, prosperous. And then only can you make of your Association such a body that you will be proud to place in your windows, where all may see, your certificate of membership.

The Ideal Association should be a real getting-together; it should be the accredited and official representative and mouthpiece of the industry.

It should act in harmony with all other industries, with the STATE and Federal Governments, with the educational institutions and commercial organizations.

All Branches of Industry Should Co-operate

And above all it should co-operate with every branch of the industry itself. Remember that the owner of the primary raw material is the first link in the chain, the last link being the yard clerk who receipts to the Ultimate Consumer for the last payment on the little Home; and each link depends on every other.

IT TAKES THE COMBINED ACTION OF EVERY BRANCH OF THE INDUSTRY TO COMPLETE THE SALE ON WHICH THE LIVELIHOOD AND PROSPERITY OF ALL AND OF EACH DEPENDS.

A sale is never made to the "people"—to the mass—but to the individual. And as that sale is the exchange of money for a board, cut by the logger, surfaced by the manufacturer, stored by the wholesaler, and delivered by the retailer, it follows that each is a necessary and interested link in the SALES CHAIN.

The logger should be just as much interested in the way you meet a customer as you should be in the way he cuts his trees. The manufacturer should be just as much interested in the care your yard man gives to the stocks as you should be in the way those boards are made, graded and shipped.

A strain on any link weakens the entire chain. A failure of any branch to fully and properly co-operate with the others for the real object of all—THE SALE TO THE ULTIMATE CONSUMER—jeopardizes the business welfare of everyone connected with the industry. And accordingly, everyone is interested in seeing that the others DO THEIR PROPER SHARE IN THE WHOLE WORK. Lack of real co-operation is, to put it the mildest way, just PLAIN BAD BUSINESS.

Now gentlemen, to sum up briefly what I have said:

What Constitutes the Ideal Trade Association

1. THE Ideal Trade Association of the future must officially represent the highest ideals of its industry;

2. It must assist its members to attain a standard of merchandising and of citizenship which will make them fit and worthy to be retained as members;

3. It must act for the people by aiding the industry it represents to properly meet—and anticipate—public demands in the class of goods or services in which it specializes;

4. It must co-operate with the public and all other industries in order to better take its proper place in the general scheme of commerce and of life;

5. It must be composed of men who are proud of it and of whom it is proud; men who understand the powers and limitations of association; men who will work to make it better and stronger and nobler, year by year; MEN, REAL MEN.

6. It must be an ASSOCIATION and not a JUNTO, A Uniting for a Common Good and not an Agreement for Private Gain; it must be a source of ispiration and growth and not a means of trade strangulation and depreciation.

Gentlemen, the day of the old Association has passed. Your work in the New Association has just begun. You have before you the most marvelous opportunities ever vouchsafed to any industry since the beginning of time. I believe that you have the ability and the energy—I earnestly pray that you have as well the desire and the intention—to accept the Responsibilities and to take advantage of the Opportunities that lie before you.

The Inch Board

The inch board is the most important single item in the lumber industry, and the general prevalence of the inch board together with the cast with which it may be obtained has led to its adoption for many uses that primarily called for other thicknesses, says Hardwood Record. For example there is nothing unusual today about seeing church pew ends, barber chairs, frames and other thick work made from inch boards glued together in whatever thickness is desired. This is especially true in oak. In birch one may find thick stock used for arms and frames more commonly than in oak, and now and then one finds the thick stock in oak, but there is enough use of inch boards built up into thick stock to cause some wonder as to just why it is.

During the winter there have been calls for thick oak, which have brought out the fact that as a rule there is a very limited quantity of thick oak made, the greatest percentage being inch boards. Buyers seeking wagon and implement stock have cleared up in some of the hardwood lumber centers such items as 2½, 3, 3½ inch oak plank, and while this created a little flurry in the lumber situation, it is found after a thorough investigation that demand that would clean up all of such thick oak would really take up only a small percentage of the oak lumber stock on hand.

The inch board is a much more important item in the lumber trade today than it was ten or twenty-five years ago. In the days gone by there were periods when inch oak was made only in limited quantities and most of the accumulation came from siding and from reducing logs to specific dimensions. In the earlier days many of the boards were made two inches thick and three inches and a fair percentage 2½, 3½ and 4. Today when one compares the total of thick planks with the lumber cut, the item is rather insignificant.

There are several explanations for this change in lumber stock dimensions and for the general prevalence of the inch board. There is not so much call for thick oak as formerly. Thick oak was used for all kind of tanks, tubs, hogsheads and vat work much more extensively than it is today. When this call was general nearly every oak mill cut much of its best stock into thick oak planks, and a fair percentage of the common stock into two inch oak and even a fair share of three inch oak for bridges and railroad crossing planks.

Today the best demand for high-grade thick oak is for flitches to be made into quartered veneer. Naturally the man who has good stock for thick oak is inclined to reduce it to quartered flitches and market it green to some veneer mill, or put in a veneer saw and work it up himself. This demand consumes much oak that originally went into thick planks. Meantime the market for thick oak has been so erratic and uncertain from year to year that some millmen have become afraid of it. At certain periods in the past those who have had a stock of thick oak at the right time have made a sort of killing with it, but this happens only once in a while and between times it is often found expensive to carry. The result is that people turn more to inch oak and today the inch board is easily the biggest thing in the oak lumber market.

Whether the inch board should continue in this prominence or whether other thickness should be used is a question that needs serious attention on the part of the lumber fraternity. This question may take in many other hardwoods than oak. The inch board has become such a habit in all lines of hardwood that when there is a slow period and an accumulation of stock it is always found that the biggest part of this burden is in inch boards.

It is time for the lumber manufacturing fraternity to make a careful study of the consumption of lumber in the various lines of importance to the end that there may be obtained some guiding light as to the comparative quantity which should be made in inch boards and in other thicknesses. Now and then we see evidence of a need for various other thicknesses which give a hint that profit might accrue from a more careful study of the needs of the country.

The inch board is an easy thing to make and it is so standardized that it is sure of a market at some price some time or other. This is easily the explanation of why we have so many inch boards, but it is not a good enough reason in this age of analytical study and specializing. The first advance scored in the lumber market the past fall was in 5/4 and 6/4 gum boards, not inch boards. The box factory trade needed boards for resawing that were a little thicker than the regular inch stock, and those who had been thoughtful and forehanded and had cut a fair percentage of 5/4 and 6/4 boards found the first and best market, and even today where there is a demand for this thickness it generally carries with it a better price comparatively than is offered for inch boards.

An arrangement has been made between the B. C. Electric Railway and the Transcontinental Railway which will give lumber and shingle mills in the Fraser Valley the same out-going freight rates on forest products as are enjoyed by mills at Vancouver. It is understood also that the Canadian Northern Railway is a party to the agreement. Hitherto Fraser Valley mills have paid an arbitrary rate over and above the terminal rates charged to mills at Coast points such as Vancouver. This arbitrary rate, in the case of Fraser Valley forest products, was from 1½ to 2 cents above the straight Vancouver terminal rate. On a car of average capacity the extra cost thus figured out at from $6 to $12. The reduction applies to all mills connected with the Transcontinental by the B. C. E. R. and its subsidiaries, extending from Steveston east as far as Chilliwack, but is confined at present to shipments consigned to eastern Canadian points. It is expected that a similar reduction will be arranged on shipments to Eastern United States points, in the near future. The understanding is that steam lines concerned will absorb the arbitrary rate, themselves paying the cost of hauling over the B. C. E. R. to their nearest connecting lines. This concession will enable Fraser Valley mills to compete with Vancouver mills on a basis of quality.

W. Mark DeCew of the Western Pine Lumber Company, Grand Forks, B. C., in a recent interview, said that the lumber situation in B. C. is excellent, with the prospect of a large volume of business during the present year. The mill at Grand Forks, he said, was being put in shape for operation, after being closed down since 1914. The cut of the mill will be about 6,500,000 feet. A number of orders are already on hand for immediate shipment. Mr. DeCew believes that similar conditions exist throughout the whole lumbering district in the interior, the bulk of the orders being for the prairies, for the construction of farm buildings.

Summing Up Business Progress

Are you sure that you are, at all times, in possession of sufficient accurate and detailed information regarding the inner workings of your business to allow of your knowing exactly where you are at?

Do you know positively whether or not your business is in better shape this year than it was last? Are you sure you are a better lumberman now than you were two years ago; a better one two years ago than you were three years before that?

Or are you only guessing when you say to yourself that the conditions surrounding your own particular business are better or worse than they used to be? Are you taking too much for granted when you assure yourself that you are a better man than you were formerly?

Are you judging your business and yourself almost solely by the fact that your bank account is larger at the close of each succeeding year, and finding it substantially so, are you allowing yourself to be content with the knowledge of that fact instead of setting to work to find out just why it is so?

Or, perhaps your business is one of the other kind. Perhaps you find that, in spite of your most diligent efforts; in spite of the fact that you are working and worrying yourself ill, your business shows little or no profit at the close of the year, or showing a profit you find it is each successive year a decreasing one. Perhaps, realizing this, you have about made up your mind that the retail lumber business is not what it formerly was, and that you would perhaps be better off out of it.

If you are one of the latter, are you positive that it is the business and not yourself that is at fault? Are you positive that you are correct in your surmise that the business has "gone to pot?" Are you sure that under your present system of doing business, you know exactly what the conditions obtaining in your business are? Are you sure that you are in possession of sufficient accurate information regarding your business to allow you to formulate an intelligent opinion regarding same?

In either case, whether your business is or is not fulfilling your ideas of a proper profit-maker, you of course feel that you are not overlooking anything. It is but natural that you should feel so. But have you sufficient grounds to warrant the stand you are taking?

How Much Have You Advanced?

In the matter of your being at the present time a better lumberman than you were a few years ago, undoubtedly you are so, but are you enough better? You were bound to improve with added experience. Have you improved as greatly as you should have? Has your progress been as marked as that of your competitor?

Figures, properly handled, do not lie; improperly handled, they do lie, and notoriously. That they do so, however, is not their fault. They are made to do so. And they are made to do so by the mental processes of those very ones for whose benefit they were intended. And nine times out of ten, they are made to do so because of the fact that they are not, of themselves sufficiently complete to enable their owner to attribute to them their true value. They are so incomplete that they lend themselves naturally and readily to that warping and distortion which eventually results in the drawing of entirely erroneous conclusions.

To express it in another way: Too few figures are almost as bad as none at all; in fact, they are sometimes worse.

Figures regarding your particular business can be made to answer the double purpose of enabling you to determine what, if anything, is the matter with your business and to establish the fact, beyond a doubt, as to whether or not you are a better man than formerly. But to do so they must be complete. They must cover every phase of your business.

And they must cover the same points, in the same manner, year after year. For, bear in mind the fact that such figures become increasingly valuable each successive year. For they afford comparisons, and by comparisons everything in your business should be regulated.

What About Ledger Accounts

To start with, how about the accounts in your general ledger which have to do with all the expenses incident to the handling of your business? Are you sure that you have enough of them? In the matter of salaries and labor, have you these items so divided that you can place your finger immediately upon a sudden increase in any department? Do you know, at all times, what it is costing you to run the office end of your business? Do you know whether or not the amount paid in salaries, to those upon your monthly or yearly pay roll, is responsible for the increase or decrease in your pay roll, or whether the amount of day labor hired for the yard end of your business is responsible for such increase or decrease?

Do you keep your stationery account separate from the other incidental expenses of your business, so that you may at a glance know whether or not yourself or your force have contracted extravagant habits regarding the use of this article?

Do you keep a separate account to which all expense incident to the unloading of incoming stock is entered? This should be done and the total taken from the ledger at the end of each year, and divided by the total of board feet unloaded into the yard during the period. When this is done, it is possible to arrive at the unloading cost per thousand, and so compare with that of the previous year with a view to determining whether or not it is becoming excessive.

If you make deliveries about town, how about your teaming expense? Do you keep this in a separate account? If so, there should be included in this account all items of expense incident to the maintenance of teams, wagons, harness, or, if such are used, of automobile trucks. All monies expended for hay and fodder together with teamsters' salaries should be included in this account. At the close of the year this should also be figured on a per thousand basis.

How Much Does It Cost?

Is your labor account in such shape that you can figure out the total cost of the labor incident to the handling of your lumber on a per thousand basis, after you have closed your books for the year? If not, it should be so kept as this item is one of the largest individual ones entering into the cost of doing business at the average retail yard.

Do you post all amounts expended for maintenance and upkeep of your yard, including repairs, etc., to a separate account?

If your heating bill is of such a size as to merit serious consideration, do you keep it in such a manner that you can readily determine whether or not it is increasing.

Your insurance and taxes may be included in one account inasmuch as these necessitate the making of but few entries during any calendar year, and the vouchers therefor are at all times readily available.

Do you keep a record of all donations made, in such a manner as will allow you to determine whether or not this expense is fast becoming a burden?

If you rent property, year after year, instead of owning, the rental may be included under the same account with your ward maintenance, inasmuch as it is usually a fixed lump sum and can be readily separated if so desired.

Do you charge depreciation upon both plant and personal property against your gross profits at the end of each year? This is important and just as correctly a charge against your business as are your other expenditures.

Are you charging against your gross profits for any one year interest at the going rate upon all capital, either owned or borrowed, which you may be using in your business? This should be done inasmuch as it is a perfectly legitimate charge and because of the fact that your failure to do so might lead you to believe that you are actually making money when you are in fact losing.

The number of general ledger accounts necessary for the proper handling of your business, will of course vary according to the manner of business you are doing. To attempt to stipulate just how many and how they should be kept so as to cover all the varying conditions incident to different yards, is of course an impossibility. A very good rule to be guided by, however, is that you should have your operating expenses posted to enough different accounts in your general ledger, so that the amount of each item of expense can be readily arrived at.

How About Your Stock Account?

Passing from the matter of your general ledger accounts to that of your stock, do you keep a piece tally in connection with your business, so that you may know at all times exactly how many pieces of each item of stock you have on hand, what your purchases of each item during a certain period of time have been, and what your sales of each have been? Personally, the writer believes that a piece tally, should be kept in connection with every well regulated lumber business. Having this at hand, you are able at all times to judge accurately of the condition of your stock, and to compare the quantities on hand of each item with those of any other month during the existing year or with any other month of previous years. This affords you an opportunity of knowing very quickly as to whether or not the stock you apparently find it necessary to carry in the conduct of your business is increasing. Being able to determine this, quickly and accurately, you are in a position to set about to find a remedy for existing conditions in this department of your business. As an aid to buying the piece tally is most desirable.

Do you make a practice of figuring up the average value of your lumber stock per thousand at the close of each year's business? Also of arriving at an average value for your other items, such as doors, windows, etc? This information is valuable chiefly in a general way and should be used for comparison with values of previous years; in order that it may fully serve its purpose, it should be worked into a comparative statement.

Do you keep an accurate record of sales of different items of your

stock? You of course keep your lumber sales separate from all others, so that you may determine at a glance what percentage of your total business is lumber. But how about lath, shingles, posts, lime, cement, plaster, windows, doors and millwork? Mill work may all be included in one account, but the others should all be kept separate and the percentage the sales of each bear to the total for the year, should be figured out at the close of the year's business. An average selling price per thousand should also be figured out on your lumber and an average price upon all other items.

How about your side lines and the substitutes for lumber that you may be handling? Do you keep an accurate record of your sales of each of these? This must be done in order that you may pro rate your costs of doing business.

Separate purchase accounts should also be kept for each of the items mentioned above. Thus having separate purchase accounts and your separate sales accounts and having your inventory at the close of the year you are in a position to figure your gross profit upon each without a great deal of difficulty. Having done this, be very sure that you pro rate all your expenses, and charge its proper share against each one of the items. By doing this you know at a glance which has made you the most money and which, if any, are losing you money. Do not attempt to make your lumber carry more than its just share of the expense. If you find that it is necessary to do this in order that you may delude yourself into the belief that certain items are making you money when in reality they are not, keep away from it. Either make these items show a profit, after carrying their just share of expense, or discontinue the handling of them.

Do you keep an accurate record of all sales, month by month of each year, and work this into comparative statements, employing similar data from the preceding years? By doing this you are able to tell at a glance what, if anything, is wrong with your volume of business.

Do you keep an accurate record of your outstanding accounts and bills receivable at the close of each month's business, figuring the percentage these bear to your total sales for the year and then compare the results with similar information obtained from your records of other years? This is important if you are to know how you stand upon the credit end of your business.

Do you figure your percentage of expense based upon the volume of business done at the close of each month, and compare it with similar percentages of previous months? This is of course most important. Having your different items of expense in such shape that they are readily available at the close of the year's business you are in a position to figure each of them out upon a per thousand basis, after deducting a proportionate amount for items other than lumber. Thus you are able to figure exactly what it is costing you to merchandise your lumber and how this cost is apportioned. Any serious fluctuations as compared with previous years can thus be readily seen and steps taken to remedy any adverse conditions.

Considerable of what has been said may appear to many of you to entail the employment of much useless red tape. Such, however, is not the case. In order to conduct a retail lumber yard successfully in the future it will be necessary to do all the things mentioned and many more. And the sooner those of us who are handling a yard get into the habit of doing these things, the easier it will be when the time really arrives when not to do so will spell failure.

—I. B. Hanks, in the Mississippi Valley Lumberman.

To Be One of the Largest Plants in the World

Work was started early in February by the Vancouver Creosoting Company, Limited, on its large plant for the treatment of lumber products, which is being erected on the Lonsdale Estate property, North Vancouver. The piling and bulkhead work is being done by Palmer Bros., contractors, Vancouver, and the filling by the Pacific Dredging Company. The site comprises 500 feet of water frontage with extensive foreshore rights. The buildings, tanks, etc., will be erected on piling and about twelve acres will be immediately utilized according to the present plans, but the area actually available is about 22 acres. It will be a treatment plant exclusively—there will be no sawmill in connection, it being the intention of the promoters to purchase lumber, timbers, ties, etc., from the established waterfront mills and tow same to the factory to undergo the various creosoting processes. The concern in a few years is expected to expand into one of the largest of its kind in the world, and starts off with a fully subscribed capital of $300,000. The estimated initial outlay on property and plant is $200,000, which will leave ample working capital, the lack of which, as pointed out by Mr. J. B. Johnson, one of the local members of the new firm, is the rock on which so many new concerns come to grief within a short period after starting up. One and one-quarter million gallons of creosote have been purchased in Japan, and work on the holding tanks will be rushed so as to be ready to handle the first shipment, which is expected to reach Vancouver early in May. The company expects to do some rail trade, but the great bulk of their output will be shipped by water.

Briquetting of Sawdust on a Commercial Basis

By R Thelen, Forest Products Labratory, Madison, Wis.

The utilization of waste sawdust, chips and shavings in the manufacture of the artificial fuel commonly known as sawdust briquets has been carried out on a small scale in several European countries for a number of years, but it has been only recently that this industry has gained a foothold in America. There are now at least three concerns upon the Pacific coast engaged in the manufacture of sawdust briquetting machinery, and at least three plants for the manufacture of this fuel have been established there.

In general, the sawdust briquet is made by compressing previously dried sawdust or shredded wood in a heavy press, the hardness of the briquet depending upon the process used and upon the pressure applied.

In some systems, especially those intended to operate upon the sawdust of resinous woods, the resinous material in the sawdust serves as a binder to hold the briquet together, and a very heavy pressure produces a very firm and hard briquet. In other systems, some sort of binder is mixed with the sawdust before compressing, this binder often being coal-tar pitch, petroleum refuse, or waste liquors resulting from the manufacture of paper pulp by the sulphite process. Still other systems rely entirely upon mechanical binders; one company uses a wire tie which encircles the briquet, and another uses a tarred jute cord which runs throughout the length of the briquet.

The preliminary drying of the sawdust is a very necessary step, since it is practically impossible to make wet sawdust cohere properly, and the problem of drying has been a stumbling block of serious proportions in more than one installation. The actual drying of small quantities of sawdust is a very simple matter, but it has been the design of a mechanism for the continuous drying of large quantities which has presented the difficulties. Either live or exhaust steam is used almost exclusively in the drying operations, the sawdust passing over steam heated plates of floors being carried along in a stream of air which has been heated by forcing it through steam-heated coils or pipe or in some similar manner. If a binder is to be added to the sawdust, this is usually mechanically mixed in just before the final heating takes place, the mixture being fed into the machine through steam-heated hoppers and pipes.

Operation of Different Machines Similar in Principle

Although the various presses differ greatly in the details of their construction, most of them work on the cylinder and plunger principle, the plunger being driven by means of crank and connecting rod or by some toggle joint system of levers so designed that it is capable of exerting a very great pressure at the end of the stroke. Practically all of them, also, are automatically fed, the only attention required being to provide a supply of raw materials and to attend to the power removal of the finished briquets. In systems in which binders such as pitch are used, and in those in which the resins of the wood serve as binders, it is necessary to provide a long cooling trough for the finished briquets. These troughs are sometimes as much as 150 feet in length. In systems using mechanical binders these cooling troughs are unnecessary.

Practically all of the European machines use some kind of binder mixed with the sawdust or rely upon the resinous material in the wood to hold the briquet together, but American and Canadian inventors have apparently preferred the mechanical binders.

One company in Los Angeles, which seems to have reached a satisfactory solution of the difficulties encountered, is now building machines for the manufacture of briquets of the wire-bound type, and a company in Vancouver is perfecting machines for making the rope-core type. As far as can be ascertained, both of these types give promise of satisfactory service under conditions of continuous operation. Another Vancouver company is manufacturing machines for the production of briquets composed of sawdust, coal dust and binder in about the following proportions: sawdust, 65 per cent., coal dust 25 per cent., binder (coal-tar pitch, petroleum refuse or sulphite waste liquor) 10 per cent. These briquets are hard and firm and resemble coal briquets in general appearance.

Fuel Value and Burning Qualities of Briquets

There seems to be a wide range of opinions concerning the fuel value and burning qualities of sawdust briquets, some ardent enthusiasts claiming all the virtues for them, and other, cynical pessimists declaring them quite unfit for many purposes. Certain German-made briquets are reported as unsuited for use in the tight porcelain stoves so common in that country, on account of the rapid combustion. Rapidity of combustion is also claimed to be a distinct disadvantage in places where it is desired to bank a fire over night.

It seems reasonable to suppose that the more loosely formed briquets will burn more rapidly than those formed under greater pressure or with firmer binding material; and it is believed that it may be possible to regulate the speed of combustion to a certain extent by varying the conditions under which the briquets are made. It is

pointed out by one of the manufacturers of briquetting machinery that briquettes made by his machines can be used for kindling wood by breaking the the binder. This bears out the deduction just drawn, since kindling must make a quick, hot fire to be satisfactory.

The fact remains, however, that, notwithstanding the failure of a number of German and French wood briquetting plants, there are certain conditions under which the industry flourishes, and it should not be very difficult to find out, in a general way, what those conditions are.

Before analyzing outside conditions which may have a bearing upon the success or failure of a briquetting plant it will be well to look at the briquet itself for a moment, and study its fuel value.

It seems rather peculiar that it has been found necessary heretofore to lay especial emphasis on the fuel value of briquets. It is quite logical to suppose that since, except for the binder, the briquet is merely wood, one pound of briquet should have as many heat units stored up in it as one pound of the same species of wood has, moisture conditions being equal. As a matter of fact, the meager data at hand uphold this view perfectly. Another peculiar thing about wood, which is borne out by tests made by the Forest Products Laboratory, is that, neglecting the heat value of the resins which appear abundantly in various species, a pound of absolutely dry wood has a very nearly constant fuel value (heat units) irrespective of the species of the wood.

We are led to believe, therefore, that in general a pound of wood briquet, irrespective of species, will have a nearly constant fuel value. The fuel value of dry wood is about, in round figures, 6,000 or 7,000 British thermal units per pound, and we would expect a pound of dry briquet to have about the same; probably a little higher, if anything, on account of the heat value of the organic binder (if one is used), which may have a greater unit heat value than the wood, thus raising the average slightly. If the resins in the wood are used as binders the same result may be expected on account of the higher heat value of the resins.

In comparing briquets with cordwood or stove wood it must be remembered that the briquet it usually much the dryer, and that, therefore, it will generate more heat per pound of material than the wood.

Necessary Conditions for Successful Sale

Having an insight into some of the properties of the briquet itself, we can understand more rapidly why certain conditions are needed for its successful sale.

In the first place, the fuel value per pound is much less for wood than for coal, so that to obtain the same amount of heat much more wood (dry) than coal must be used. If the wood is green instead of dry, still more must be used, because all the water in the wood is useless from a heating standpoint, and some of the heat of the wood is used up in converting this water to steam during combustion.

This means that if one is buying primarily on a heat unit basis he can afford to pay much more for coal than for wood or wood briquets, usually from one and a half to two times as much for coal as for wood when both are dry. If the wood is green, it is quite possible that the coal will have three or four times the effective heating value of the wood.

If the kindling properties of the briquet are of value, as in domestic use, the price obtainable will be proportionately higher.

In the second place, the cost of manufacturing briquets is not inconsiderable, conservative estimates placing the figure at not less than $3 a ton.

In the third place, the bulk of the fuel prevents its economical shipment over long hauls. This applies to the finished briquet and to the raw sawdust alike.

It is believed that the ultimate consumer will have to pay at least $6 a ton for the briquets to make the success of their manufacture assured, and on that basis it can be figured out with ease, under normal conditions, what the minimum price of coal must be to allow competition. Assume, for convenience, that the coal under consideration is bituminous, or one and one-half times the heat value of the briquet. Then, that coal must sell for at least $9 a ton before the briquet at $6 can offer the same heat value for the same price.

The main market for briquets will probably be for domestic use, so the cleanliness and easy kindling qualities of the briquet will be a fine asset, and it might be able to compete with the coal at only $8.50 a ton, the housewife being willing to pay a little more for the same heat value on account of other desirable properties.

In competing with cordwood the briquet has certain advantages, such as less labor in preparing for the fire, less moisture, hence more wood per pound, and less need for kindling wood. The almost total absence of ash and the absolute absence of slinker are great advantages in favor of briquet or wood over coal, and the lack of smoke is also pointed out as an advantage.

In conclusion, it may be stated that the best chances for the success of the wood or sawdust briquet are in those regions where sawdust is abundant and coal is expensive. The region fulfilling those conditions best in this country is the Pacific coast region; and it is a significant fact that the companies now establishing the industry in America are all, as far as the author knows, on the Pacific coast.

The Prime Factor in High Speed Planer Work

IF the "man with the wrench"—should be asked to point his greasy finger to the prime factor in modern high speed planer work, he would, in all probability point to the little automatic grinder as it smoothly glides back and forth across the machine removing the accumulated heel, and other things that have no business there—doing its work quickly and accurately, writes M. C. Cantrell in Berlin Quality. Changing knives has, from the day of the planer's birth, been a piece of work always dreaded, and too often, avoided by the planerman and his helper. It makes little difference how much time we have to "burn," that particular work is nothing short of drudgery to us. But when things are humming and everything keyed to a high pitch, and a set of knives must be changed, it gets on ones nerves, and it matters little how long they have been on. The point of exasperation comes, however, when a set of four or six knives, as the case may be, has been put on, jointed, and run an hour or maybe two or three hours, and a nick develops that cannot be taken out with the whetstone—and in hard knives it does not take much of a nick either.

Now when there is not a grinder at hand with which to remove this nick without removing the knife, it means a change all round. At this time, noise is charitable. It drowns from human ears, the things we say, and may the good Lord forgive us for the things we often think. Really, it tries ones soul. Round and round that head he must go, loosening caps or gibs, placing and gaugeing fresh knives then round after round again, tightening, tightening, next jointing, and guageing the stock for thickness. With the grinder, it is put into commission and in a very few minutes, the knife is made "good as new." A light jointing follows, and the machine is again at work in less time than the set can be removed.

This is but a single instance of the value of the automatic grinder. When putting in a fresh set of knives, give them the maximum projection. As often as "heel" accumulates to about one thirty-second of an inch, remove it by grinding, which is equivalent to a fresh set of knives. Repeat the operation until the knives are worn to the minimum before changing. This will probably be equal to re-knifing ten or more times. The time lost in grinding without removing the cutters from the head will hardly require more than twenty per cent. of the time necessary to change cutters. Moreover, it can always be arranged when changing times do come, to make it after working hours, or if not convenient to do it in that way, to take advantage of a "slack" hour with that particular machine, and when other work is not crowding our time.

I mentioned that changing knives was too often put off too long. There is a greater reason for it than a mere dislike for the work. It is because of a loss of time. In the modern planing mill everything goes at a hair-raising gait, and many times the quality of the work is sacrificed for the saving of time. Could the knives be sharpened in a few minutes, they would get it, but the loss of an hour is too much, and the job is postponed to the limit. The heel gets heavy, the grain is raised and torn, and many pieces must be trimmed out that would have passed O. K. under sharp cutters. Time is money, and a high grade product is more money. And when a high grade machine is purchased, one capable of producing maximum results in both quantity and quality, why hinder it in its work by leaving off an attachment costing but a few dollars?

Aside from the question of time, the grinding by the automatic is, in itself more desirable than by the large grinders used when the cutters are off of the machine. The small wheel used, more heavily concaves the back of the knife than the larger wheel and the more concave, the less rapidly the heel accumulates, allowing more jointing down without grinding.

Another trouble is that in placing the knives on the head, they are very apt to be uneven to the extent that one or more of them will be jointed more heavily than the rest—particularly at one end. And when one knife becomes heavily jointed, it spoils the work of the entire set. With the grinder, this is entirely overcome, as the knives may be "touched" up in a few minutes after jointing, and from that time on to the change, are kept perfectly uniform.

In short, this grinder is a tool that cannot be profitably dispensed with and at the best interests of a concern are not taken into account when machines are installed on which it cannot be used.

A despatch from Fredericton, N. B., states that the U. S. demand for New Brunswick lumber has improved during the past few weeks on account of wide-spread industrial activity following war orders from Europe. Reports from Great Britain are also to the effect that lumber market conditions continue to improve.

St. John and Miramichi Operations

St. John, N. B., March 4th:—Reports received from a number of prominent N. B. operators indicate that the lumber cut in New Brunswick during the present winter will be much larger than was outlined in earlier announcements. It is expected that the output on the New Brunswick Railway Company's lines will be about 65,000,000 feet, which is about the same quantity as that of last year. Practically all the companies on the Miramichi, with the exception of the Miramichi Lumber Company are taking out more than they originally intended. The Miramichi Lumber Company and the Dalhousie Lumber Company are only taking out about one half the quantity they took out last year. Operating conditions along the north shore have been good, and at present market conditions are favorable.

Fraser Ltd., Fredericton, N. B., are taking out about their usual quantity, for their various mills and will have sufficient stocks to keep all their plants going steadily throughout the season. In the neighborhood of Fredericton, the cut on Crown lands will be quite as large as it was last year. The same is the case in connection with operations generally along the St. John, in York, Carleton, and the lower end of Victoria counties.

On the Upper St. John and Allegash waters, the operating conditions have been favorable. There has been plenty of snow all winter and the weather has been cold and settled. The total cut in the Upper St. John and Allegash districts is expected to be about 53,000,000 feet, one million of which will be cedar. Much of this will be manufactured at Van Buren, Me., by the St. John Lumber Company, whose cut is about 32,000,000 feet. Of this 32,000,000 feet, about 19,500,000 feet will go down the St. John to Stetson Cutler Company at St. John.

The individual outputs of various operators on the Upper St. John and Allegash, according to the latest information received are as follows:—

On the Upper St. John river waters:

John A. Morrison of Fredericton, N. B., 9,000,000 for the St. John Lumber Co., Van Buren.

Flavien Chouinard at St. Pamphile, P. Q., 6,000,000 for the St. John Lumber Co., at Van Buren.

Arthur L. Noble of Fredericton, 5,000,000 for Stetson, Cutler & Co., St. John, N. B.

Albert M. Currier of Seven Islands, 4,000,000 for Stetson, Cutler & Co., of St. John.

Naviarre Pelletier of St. Francis, 500,000 for Stetson, Cutler & Co., of St. John.

On the Upper Allagash Waters:

Robert J. Potts of Hartland, N. B., 7,000,000 for St. John Lumber Co., at Van Buren.

Joseph T. Michaud of Houlton, 8,000,000 for St. John Lumber Co., at Van Buren.

Charles E. Jones of St. Francis, 2,000,000 feet for St. John Lumber Co., at Van Buren.

W. H. Canliffe's Sons of Fort Kent, 10,000,000 for Stetson, Cutler & Co., of St. John.

Aside from the figures already given Charles E. Jones will cut between 500,000 and 600,000 feet of cedar; J. W. Wheelock, 300,000 feet, and W. R. Wheelock 300,000 feet, all of which is for manufacture in the mills at St. Francis. These are all St. Francis men.

In the southern part of the province of New Brunswick the cut is about 60 or 65 per cent. of what it was a year ago. The curtailment in most cases has been voluntary, not the result of poor weather conditions. The chief reason for the reduction is the excessive cost of transportation by water to Great Britain and Europe. An early spring is expected and it is anticipated that the drives will be in motion earlier than usual.

Coast Lumber Association Elects Officers

The annual meeting of the B. C. Lumber & Shingle Manufacturers, Limited, was held recently at the new offices of the Association in the Metropolitan Building, Vancouver. The following officers and committees were chosen for 1916:

Honorary President—Mr. John Hendry.

President—Mr. J. W. Hackett.

Vice-Presidents—Mr. E. C. Knight (Vancouver, Mr. J. O. Cameron (Victoria).

Directors—Messrs. J. D. McCormick, J. B. Black, J. Hanbury, E. J. Palmer, L. A. Lewis.

Branch Chairmen—(Lumber): J. D. McCormick, chairman; G. S. Raphael, vice-chairman. (Shingles): J. Black, chairman; Robt. McNair, vice-chairman.

Parliamentary Committee—E. J. Palmer (chairman), E. C. Knight (vice-chairman), Messrs. L. A. Lewis, J. D. McCormick, G. S. Raphael, J. W. Hackett, J. O. Cameron.

R. R. Rules—H. J. Mackin (chairman), E. S. Sanders, J. Black, G. S. Raphael, A. R. Macfarlane, A. Flavelle.

Markets (Lumber Branch)—E. S. Sanders, chairman, with committee of the whole.

Grading Rules (Lumber Branch)—Geo. B. Cross, chairman; Mesrs. R. J. Thurston, E. S. Sanders, A. J. Hendry, H. K. Agnew, H. J. Mackin.

Markets Extension—L. N. Thompson, chairman; Messrs. J. G. Robson, H. J. Mackin, J. Hanbury, G. S. Raphael, A. Flavelle, D. McLeod.

Scaling and Grading (on lumber logs)—A. J. Hendry, chairman; Messrs. D. McLeod, J. Coburn, A. Flavelle, G. S. Raphael.

Grievance—P. D. Roe, chairman; Messrs. E. S. Sanders, H. J. Mackin, A. J. Hendry.

Blue Book—H. K. Agnew, chairman; Messrs. L. N. Thompson, Geo. B. Cross, H. J. Mackin, A. N. Wood.

Export Trade—E. J. Palmer, chairman; Messrs. H. J. Mackin, J. Hanbury, E. C. Knight, J. O. Cameron, A. J. Hendry, G. S. Raphael.

Export Sales—E. J. Palmer, chairman; Messrs. H. J. Mackin, E. C. Knight, L. A. Lewis, E. H. Bucklin, G. S. Raphael, D. McLeod, J. O. Cameron, G. S. Elliott.

Information Bureau—E. J. Palmer, chairman; Messrs. J. D. McCormick and E. S. Sanders.

Waste in Lumber Business

Waste in the logging industry in the United States amounts to fifteen to twenty per cent. of the timber cut, or about a billion and a half cubic feet of wood annually. Sawmill waste also amounts to several billion cubic feet of wood, although not all of it is absolute waste. A bulletin on the subject of lumber by-products just issued by the Bureau of Foreign and Domestic Commerce, makes the claim that only 320 feet of lumber is used for each 1,000 feet that stood in the forest.

It was the prodigious waste of American forest resources that led the Bureau of Foreign and Domestic Commerce to plan a thorough study of the methods of utilizing the waste products of the lumber industry in the United States and in those European countries that made the most distinct progress in this line. In the older and more thickly settled countries of the old world necessity led to a careful utilization of the forests many years before the subject was seriously discussed in this country. And in these older countries many methods have been worked out that should be of value in this country now that the old-time wasteful methods have been brought into disrepute. The plan was to have the American industry profit as much as possible by the hard-earned experience of the old countries.

Unfortunately the war upset the plan completely, and there is no immediate prospect of making the proposed investigation. But as the bureau had already engaged H. K. Benson, it was decided to go ahead and make a study of the industry in the United States. The bulletin just issued is the result of this study. It gives a definite idea of how far the manufacture of lumber by-products has been developed in this country, how far it may reasonably be expected to develop in the future, and just what some of the problems are that confront the industry.

There is a complete review of the wood-distillation industries, the manufacture of tannin extract, the manufacture of the various kinds of wood pulp used in the paper industry, the production of ethyl alcohol from sawdust, the manufacture of producer gas, and a number of other minor products. The extent to which these industries are carried on is outlined, and in cases where an industry is not prospering a discussion of the causes for such a condition is given. Import and export statistics are included when available.

The annual production of wood pulp in the United States is valued at over $80.000 000. Sulphite-pulp makers are considerably interested in the possible utilization of the sulphite waste liquor for the recovery of sulphur or other profitable utilization. This would result in a lowering of the cost of sulphite pulp. The manufacture of kraft pulp is also becoming well established, and is bringing about the utilization of cheaper wood.

The utilization of wood for the minor processes described in this report is not extensive. The manufacture of alcohol from sawdust has hardly passed the experimental stage, although technical men are optimistic as to the ultimate success of the process. One of the most interesting possibilities lies in the use of hydrolyzed sawdust as a carbohydrate cattle food. The use of wood for producer gas deserves more extended introduction in industrial plants. The manufacture of plastics from wood is still enveloped in secrecy, and, like the manufacture of wood flour, has apparently been developed to a much greater extent in European countries.

The new bulletin is entitled "By-Products of the Lumber Industry," Special Agents Series No. 110.

Arkansas Soft Pine Interests Appoint a Special Salesman at Chicago

In line with the trade extension idea as applied to lumber and with a view to developinpg new uses and markets for Arkansas Soft Pine, a group of Arkansas manufacturers has recently completed arrangements which provide for a special salesman, located at Chicago, representing an annual production of 550,000,000 feet, or approximately one hundred cars per day. From this office will be handled all inquiries of the unusual sort, as well as those originating from sources whose requirements call for ready shipments in large quantities. Special attention will also be given to searching into new fields where Arkansas Soft Pine is entirely adaptable but where it may have heretofore been unused. The concerns participating in this arrangement are the Arkansas Land & Lumber Company, Malvern, Ark.; Arkansas Lumber Company, Warren, Ark., Cotton Belt Lumber Company, Bearden, Ark.; Crossett Lumber Company, Crossett, Ark.; Eagle Lumber Co., Eagle Mills, Ark.; Edgar Lumber Company, Wesson, Ark.; Freeman-Smith Lumber Co., Millville, Ark.; Fordyce Lumber Co., Fordyce, Ark.; Gates Lumber Co., Wilmar, Ark.; Southern Lumber Company, Warren, Ark.; Stout Lumber Co., Thornton, Ark.; Valley Lumber Co., Reader, Ark.; Wisconsin & Arkansas Lumber Co., Malvern, Ark.

Joe H. Smith, Chicago, Ill.

A careful canvass of available men to fill this position resulted in the appointment of Joe H. Smith of Bloomington, Ill., for the past sixteen years, representative in Illinois and adjacent states for the Crossett Lumber Co., of Crossett, Ark. Mr. Smith has established headquarters at Room 630 Lumbermen's Exchange Building, Chicago, and is now actively engaged with his new duties.

That these manufacturers made a wise choice in Mr. Smith is evidenced by his successful career as a lumber salesman. Moreover, he is a veteran in the field and knows every detail of the lumber business from the felling of the tree to the installation of the finished product.

In 1880, after completing his education, Joe H. Smith joined his father in the retail lumber business which the latter had established at Mackinaw, and soon became a full partner. He had 12 years experience there and then travelled for several years, selling Northern White Pine and Yellow Pine. Sixteen years ago he became representative for the Crossett interests exclusively, with headquarters at Bloomington, where he has since remained.

Twelve years ago, Mr. Smith took his two sons, Clarence E., and Elmo S., into partnership under the firm name of Joe H. Smith and Sons. Some time after this, the sons transferred their headquarters to Peoria, Ill., where they are now, among the substantial fixtures of the lumber fraternity, under the business title of Smith Brothers. Mr. Smith's new arrangement will have no effect upon the business of Smith Brothers, nor will his work in Chicago in any way conflict with that of the individual representatives of the various concerns participating in the plan.

The Supreme Court of Appeal, at Fredericton, N. B., recently gave judgment in a case of much importance to New Brunswick lumbermen employed by lumber operators in the State of Maine. The case was that of Roy vs the St. John Lumber Company, a claim for $48 unpaid wages. Roy, was a stream driver and had obtained a judgment against the Brighton-Carleton Company for the amount of his claim, together with an order for leave to issue a writ for service out of the jurisdiction. The company appealed against this order and the Supreme Court has dismissed the appeal with costs.

Mr. H. E. Beasley, general superintendent of the Esquimalt and Nanaimo Railway, Vancouver Island, B. C., returned recently from an inspection trip over the company's lines. He reports that there is every indication of an exceptionally busy season this year. The demand far cars is already very heavy, especially for lumber. The company is already handling 30 to 36 cars a day for Cowichan Lake and Chemainus. Mr. Beasley reports great activity among the lumber mills on the Island.

Saws Make Their Debut in Vaudeville

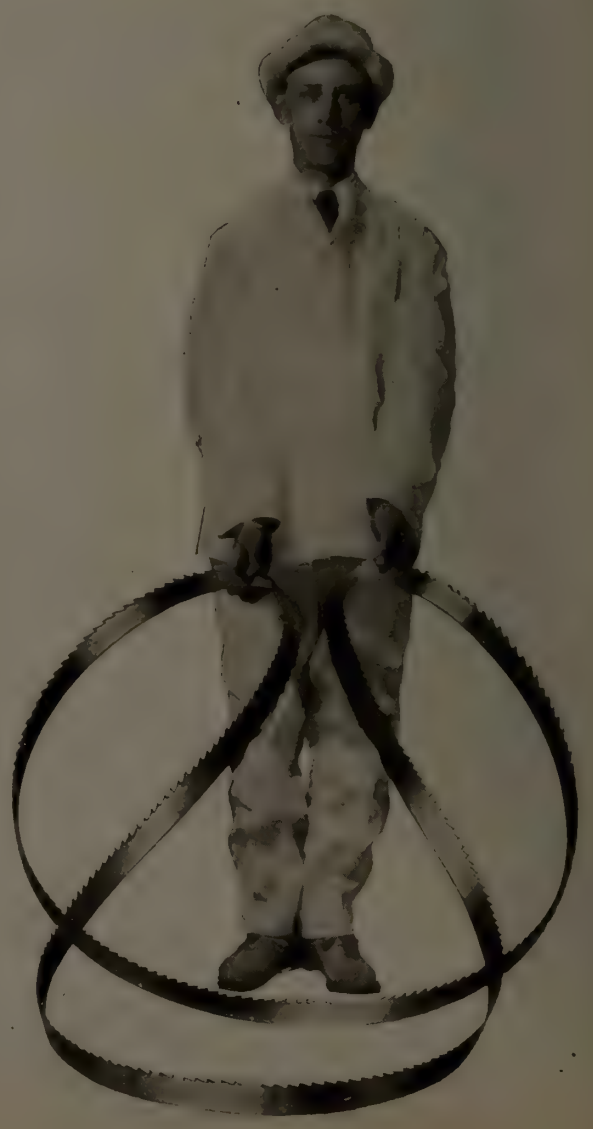
At a recent theatre party given by the Atkins Pioneers at the main Atkins Factory in Indianapolis, Ind., a new and novel act was presented by two young men from the factory. The first performance consisted of the very clever manipulation of a large shingle saw by Mr. Albert Copsey of the circular saw dept.

Mr. Copsey's performance consisted of rolling the circular saw and putting it through all kinds of contortions, sending it about the stage in large circles and then forming a figure eight, double eight, and spinning the saw like a top. His performance concluded with a most remarkable manipulation of the saw, wherein it was made to revolve on its circumference, gradually coming nearer and nearer to the floor, and then by manipulating the saw first with his foot and then his hand, the saw was made to stand upright again without moving from one spot.

Mr. Phillip Halskamp manipulated band saws in a manner to bring forth round and round of applause. He handled different sizes of saws, placing them in all conceivable shapes, forming single, double and triple coils, rolling the saws in coils without touching them with his hands and finally throwing the saws over his head with a twist which threw them into a coil, dropping down over his body on to the floor.

The act was of such a startling nature that we understand both of these young men have had very flattering offers from managers of vaudeville circuits.

Mr. John Ostrom, a prominent citizen of Pembroke, Ont., well known to Ottawa Valley lumbermen, was instantly killed on March 10th by a C. P. R. train at a crossing. Mr. Ostrom was driving a team of horses at the time and both he and his horses were killed. The late Mr. Ostrom was 65 years of age and had been engaged in the lumbering business in partnership with the late Robert Booth.



Lumber Case Dismissed

An action brought by the New Ladysmith Lumber Company against the Esquimalt ond Nanaimo Railway and the Canadian Pacific Railway for damages for the alleged non-delivery of a car of lumber shipped over their lines, consigned to Edmonton, has been dismissed by Mr. Justice Clement, his lordship expressing the opinion that the onus of proof rested with the plaintiffs and that they had failed to make out a case against the defendants. The plaintiffs will probably appeal against his lordship's decision.

Saskatchewan Companies Doing Well

Reports from the leading lumber manufacturing companies in Saskatchewan refer optimistically to the immediate future, which, compared with last spring, shows a decided promise. The Prince Albert Lumber company during the winter have employed altogether 15,000 hands and between 600 and 700 teams of horses. Apart from the payroll, the provisioning of this small army creates an industry in itself. Enquiries show that the logging camps which are located in the Shoal Creek and Stump Lake districts, are likely to break up at any time now, in any case by the beginning of next month, the company having already secured a full cut of logs. The logging camps report bad weather early in the new year, but say later favorable conditions facilitated the work. With the breaking up of the camps, all the old and regularly employed hands will be turned to millwork, the remainder returning to their homesteads. Most of the teams also go back to the harrow, the binder and the plow. The plant at Prince Albert will run night and day throughout the coming summer.

Mr. Angus Carss, of the Carss Mackinaw Clothing Co., Limited, Orillia, Ont., leaves on March 18th for his annual trip to the Pacific Coast. Mr. Carss has been calling upon the lumbermen throughout the country for many years and is well known to the trade. He carries a full line of samples of all his mackinaw clothing and lumbermen's supplies.

That the Western States are now on edge of a wave of prosperity that has swept the East as a result of the enormous demand for war munitions and that this prosperity will be reflected in a heavy demand for lumber from Washington mills are some of the assurances given by J. H. Bloedel, president of the West Coast Lumbermen's Association and of the Bloedel Donovan Lumber Mills, upon his arrival from an extended trip East.

The Croaker

Once on the aidge of a pleasant pool,
Under the bank where 'twas dark and cool,
Where bushes over the water hung,
And rushes nodded, and grasses swung,
Jest where the crick flowed outer the bog,
There lived a grumpy and mean ole frog,
Who'd set all day in the mud and soak
And jest do nothin' but croak and croak,
Till a blackbird hollered, "I say, yer know,
What is the matter down there below?
Are you in trouble, er pain, er what?"
The frog sez, "Mine is a orful lot;
Nothin' but mud and dirt and slime
For me ter look at jest all the time.
It's a dirty world!" so the old fool spoke,
"Croakity-croakity-croakity-croak!"

"But yer lookin' **down!**" the blackbird said;
"Look at the blossoms overhead,
Look at the lovely summer skies,
Look at the bees and butterflies;
Look **up,** old feller. Why, bless yer soul,
Yer lookin' down in a muskrat hole!"
But still with a gurglin' sob and choke
The blame ole critter would only croak.
And a wise old turtle, who boarded near,
Sez to the blackbird, "Friend, see here:
Don't shed no tears over him, fer he
Is low-down, jest 'cause he likes ter be;
He's one er them kind er chumps that's glad
Ter be so mis-rable-like and sad;
I'll tell yer somethin' that ain't no joke,
Don't waste yer sorrer on folks that croak."

—From "New Age."

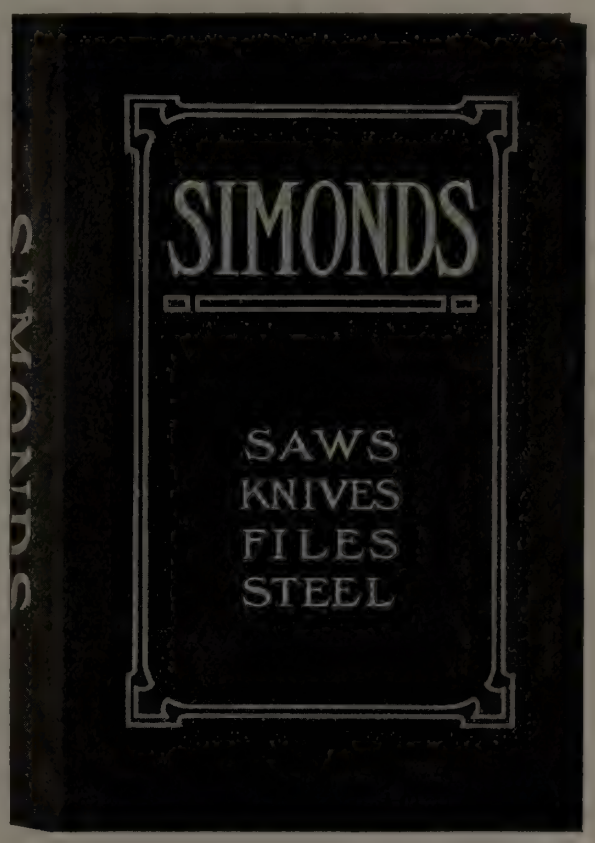
New Name for an Old Firm

The P. B. Yates Machine Company Ltd., will in future be the name of the well known firm of woodworking machinery manufacturers formerly known to lumbermen under the name of the Berlin Machine Works, Beloit, Wis., U. S. A., and Hamilton, Ont. In an announcement sent to the trade the company state that ever since the business was founded 40 years ago in the little Wisconsin town of Berlin, from which it took its name, considerable annoyance has been experienced through the adoption of this name by many other small concerns, established in cities of the same name in various States. They have therefore, concluded to change the name as above noted. This change is confined to name only. The officers, personnel, capital and policy remain as heretofore.

A Saw and Knife Book

When the 1916 issue of the Simonds Catalog was prepared the company made an effort to embody in it items of especial interest to saw and planing millmen. There are tables giving specifications, sizes and numbers of teeth, facts about speed of saws, and other technical points. Many illustrations appear in this book which have not appeared in previous issues of the Simonds catalog. Among the new goods illustrated and described is the new Inserted Tooth Cut-off Saw.

A special edition of this catalog has been prepared for filers.



sawyers, and superintendents of mills and they are welcome to a copy if they will write, mentioning this paper and addressing—Simonds Canada Saw Co. Limited, St. Remi Street & Acorn Avenue, Montreal, Que.

Urges B. C. Trade to Get Ready for Big Orders

Mr. Andrew Ness of the Ness Trading Company, Glasgow, Scotland, was in Vancouver recently, during a visit to B. C. to inspect the lumber situation. Mr. Ness looks forward to an enormous demand for B. C. forest products as soon as the war begins to approach its conclusion. During the days of reconstruction he expects to see an unprecedented demand in Europe for timber and lumber, and urges B. C. mill men to begin now to make ready for the opportunity.

A press despatch from Chicago recently stated that the Belgian Government is in the market for 5,000,000 feet of wood goods, 3,000,000 feet of which is to be in large hewn timbers. The despatch states that orders are to be placed on the market through the Belgian Consul at New Orleans, La.

Mr. Wm. Bryant, formerly superintendent for Schultz Bros. & Company, Brantford, Ont., has been engaged as superintendent of the plant of the Muskoka Wood Manufacturing Company, of Huntsville, Ont.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Wanted good sound Basswood logs, 12 in. and over in diameter. Quote best price F.O.B. cars. Apply Hay & Company, Limited, Woodstock, Ont. 3-6

Lumber Wanted

Soft Elm, Ash, Maple, Birch, Beech, Basswood. Dry or new cut. Cash when loaded. Box 373, Canada Lumberman, Toronto, Ont. 6-7

Cedar Wanted

Good cedar for boat building. Best prices paid for the right material. Write for particulars. The Peterborough Canoe Company, Limited, Peterborough, Ontario. 6-9

Hemlock or Spruce Timbers

We want to place an order for several cars of Hemlock or Spruce Timbers, 3 x 6 to 8 x 10 in., 10 ft. to 30 ft., for early shipment. Write the Elgie & Jarvis Lumber Company, Limited, 18 Toronto Street, Toronto. 6-6

Red Pine Wanted

Wanted to buy a stock of Red Pine. Apply Box 363, Canada Lumberman, Toronto, Ont. 6-8

Hemlock, Pine, Basswood

Wanted to buy one million feet Hemlock, also 1-inch Cull Pine and 1-inch Cull Basswood. Box 364, Canada Lumberman, Toronto, Ont. 6-8

Lumber Wanted

Wanted several cars maple, beech or birch squares 1, 1⅛, 1¼ in. x 42 to 60 in. in length. Write for particulars. J. Finlay & Sons Co., Norwood, Ont. 5-8

Grey Elm

Wanted 100,000 ft. of 1½ in. grey elm, No. 1 common and better, this lumber not to be edged, and can be loaded direct from the saw, but must be in 6 or 12 ft. lengths. Write for prices f.o.b. cars shipping point. Box 295, Canada Lumberman, Toronto, Ont. 3-6

Maple Squares

Wanted to buy 700,000 Maple squares, 1 in., 1¼ in., 1½ in., 1¾ in. and 2¼ in. Lengths 12 in. and up. A. K. Hansen & Co., St. Peter Street, Quebec City. 3-6

Basswood Wanted

Wanted 200,000 feet of 1-inch White winter cut Basswood to grade No. 1 Common and Better, to be plump 1-in. thick when dry. State price F. O. B. cars shipping point. Address, Box 308, Canada Lumberman, Toronto, Ont. 4-t.f.

Logs Wanted

Several cars Rock Elm logs. Quote price to St. Marys Wood Specialty Company, Limited, St. Marys, Ont. 4-7

Wanted to Buy

450,000 ft. 2 in., 2½ in., 3 in. and 4 in. log run Birch. Terms 75 per cent. cash on shipment, balance on arrival. Apply P. O. Box 643, Montreal, Que. 3-6

Wanted

All kinds and thicknesses of hardwood and softwood lumber. Give full description of same, together with price. Box 328, Canada Lumberman, Toronto, Ont. 4-t.f.

Soft Elm and Poles Wanted

Soft Elm, one or two cars, firsts and seconds, 3 in. and 3½ in. Quote lowest price. Also want poles 8, 16 and 24 feet, Tamarack or Hemlock. Large number wanted. Box 349, Canada Lumberman, Toronto, Ont. 5-6

Wanted

We are in the market for a large quantity of 2-in. Spruce Plank 4 in. and up wide, 8 feet and up long. Good merchantable stock. Kindly write us your lowest price. Box 334, Canada Lumberman, Toronto, Ont. 5-t.f.

Wanted

Several cars 16/4 Birch, No. 2 common and better grade. Must be dry and ready for immediate shipment. Write us your lowest price and full particulars. Box 333, Canada Lumberman, Toronto, Ont. 5-t.f.

Wanted

Wanted for shipment whenever in shipping condition:
2,000,000 ft. 3 in. No. 1 Com. & Bet. Soft Elm.
1,000,000 ft. 2½ in. No. 1 Com. & Bet. Soft Elm.
1,000,000 ft. 2 in. No. 1 Com. & Bet. Hard Maple.
500,000 ft. 2½ in. No. 1 Com. & Bet. Hard Maple.
Box 332, Canada Lumberman, Toronto, Ont. 5-8

WANTED
4-ft. Plastering Lath

We are ready to contract for 75,000,000 No. 2 and 3 Lath, cut 1½ x ⅜—4 ft., bundled 50 pcs. per pack. Can use mixed Pine and Spruce or all Spruce. Advise what you have now, quoting prices f.o.b. Chicago. Will consider proposition on your 1916 cut if you have no dry lath on hand.

Cannon River Lumber Company,
5-6 Webster Bldg., Chicago, Ill.

Spruce Pulpwood Wanted

Spruce Pulpwood wanted of good size, merchantable quality, four-foot peeled preferred, on cars shipping point. Box 323 Canada Lumberman, Toronto, Ont. 4-7

For Sale-Lumber

Hemlock Ties

FOR SALE—Considerable quantity of hemlock ties suitable for Electric Railways, Sidings, etc., ready for immediate shipment. Monteith Bros., Rosseau, Ont. 6-10

For Sale

One car nice 8/4 Rock Elm running high in grades. C. B. Janes & Co., Limited, Orillia, Ont. 5-t.f.

For Sale

White Pine and Hardwood, estimated 300,000 feet, will cut to order. G. A. Patrick & Son, Delaware Saw Mills R. R. 2, Lambeth, Ont. 1-6

Poplar For Sale

For sale two cars 1-in. Poplar cut March, 1915. Enquire by letter to Knight Bros. & McKinnon, Limited, Box 569 Cobalt, Ont. 4-tf.

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que.

Wanted-Machinery

Wanted

Small portable mill suitable for sawing ties, must be cheap for cash and in good order, either steam or gasoline. Send full description. Herbert Grier, 137 McGill Street, Montreal, Que. 5-6

For Sale-Machinery

Hoist For Sale

For sale cheap, steam hoist for loading logs. Apply to Cain Coal Company, North Cobalt, Ont. 6-7

Sawmill For Sale

Semi-Portable Sawmill, 45 H.P. engine, 50 H.P. boiler, mill complete with trimmers. Two saw edger. Endless log chain; combination lath machine and bolter. Swing cut-off saw. A snap for a good outfit, has only run four months. Box 371, Canada Lumberman, Toronto, Ont. 6-6

Planer and Matcher

Berlin No. 94 Planer and Matcher in good condition, with furring attachment. Capacity 100 feet per minute. Price, $750 f.o.b. Drummondville. Reason for selling, replacing same with faster machine. Apply Campbell, MacLaurin Lumber Company, Limited. Drummondville, Que. 6-7

Engine For Sale

Corliss Engine, 150 H.P., 18 cylinder, 24 inch leather belt, with pump, first class condition, no fault, changing to Electric. Inspect at Guelph Lumber Co., Guelph, Ont. 5-8

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

Wood-Working Machinery

1—36" Crescent band saw, A1 condition	$75.00
1—24" Cowan double surfacer, A 1 condition	375.00
1—8" Crescent jointer	75.00
1—Variety saw table, iron	85.00
1—Wood frame, 8 ft. saw table	60.00
1—Combination drill and mortiser, McGregor-Gourlay, 4" stroke, table ¾ x 5½, raise and lower 12", side movement 10", knife 1" wide	50.00

Pollard Manufacturing Company, Ltd.,
5-8 Niagara Falls, Ont.

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents.

Wanted position as band saw filer, long experience and good references. Box 300, Canada Lumberman, Toronto, Ont. 3-7

BAND SAWYER wants position, left hand mill. Good references. Box 335, Canada Lumberman, Toronto, Ont. 5-8

Open for year round position April 1st to take full charge for company with large stock of logs interests of the sawing, grading, estimating and inspection of all shipments. Married man with twenty years of experience as lumber inspector and manager. Box 305, Canada Lumberman, Toronto, Ont. 3-6

BAND SAWYER wants position. Three years' experience on double and two on single cut. First class recommendations. Box 342, Canada Lumberman, Toronto, Ont. 5-7

BOOKKEEPER AND STENOGRAPHER, thoroughly conversant with all routine office work, desires position; satisfaction absolutely guaranteed. Box 340, Canada Lumberman, Toronto, Ont. 5-8

EXPERIENCED BAND-SAW FILER wants position. Can supply first class references. Box 368, Canada Lumberman, Toronto, Ont. 6-6

LATH MILL MAN wants position to run a lath mill by the day or per thousand. Will go anywhere; ten years' experience. Reference. Box 369, Canada Lumberman, Toronto, Ont. 6-8

CIRCULAR SAWYER and capable filer wants position. Married; strictly temperate; with fifteen years' experience. Long season or steady position desirable. Box 370, Canada Lumberman, Toronto, Ont. 6-6

EXPERIENCED LUMBERMAN wants position in lumber factory. Can take full charge of same and understand all the different machines, also filing. First-class references. Box 358, Canada Lumberman, Toronto, Ont. 6-8

DOUBLE BAND SAW FILER wants position, first-class references.

BAND MILL FOREMAN wants position, first-class millwright, and can handle men to good advantage. Box 359, Canada Lumberman, Toronto, Ont. 6-11

BAND, RESAW OR ROTARY SAWYER wants position. Six years' experience; sober and good references. Box 353, Canada Lumberman, Toronto, Ont. 6-9

MANAGER OR SUPERINTENDENT — If your concern needs a man of authoritative knowledge in the woods, pulpwood and sawmill business of Eastern Canada, who is accustomed to large responsibility, is of a constructive and organizing type and can push things, desiring extent of remuneration on the basis of what he can actually accomplish, please communicate for details or preferably granting personal interview, with Box 367, Canada Lumberman, Toronto, Ont. 6-6

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

WANTED—SALES MANAGER in large lumber business, sales principally to United States markets. Must be thoroughly acquainted with production and classification of Spruce lumber, rough and dressed. Good salary for suitable man. Apply Box 362, Canada Lumberman, Toronto, Ont. 6-7

GREEN LUMBER CULLER wanted for large Ottawa Valley mill. Must be experienced. Give references, experience and wages expected. Box 356, Canada Lumberman, Toronto, Ont. 6-7

TIMBER CRUISER and traveller wanted. Apply Box 365, Canada Lumberman, Toronto, Ont. 6-8

SUPERINTENDENT WANTED for woodenware and wood novelty plant. Man familiar with manufacturing all kinds of wooden household articles. State experience, items you have been handling, where now employed, salary expected, etc. Give full particulars. Box 357, Canada Lumberman, Toronto, Ont. 6-7

SALES MANAGER wanted by a good reliable Western Ontario firm who manufacture a full line of building products. Must be a good pushing man, possessing the requisite knowledge of this kind of business to enable him to handle advantageously the advertising and selling of such products other than those sold to the local trade. Apply Box 361, Canada Lumberman, Toronto, Ont. 6-6

SUPERINTENDENT WANTED for old established and reliable Company in middle Western Ontario who manufacture and distribute a full line of builders' supplies in soft and hard woods, veneers, etc., and also manufacture boxes, shooks and other branches relating to the woodworking industry, for which we require a good, live practical man, one who understands men and machinery and can get results. No other need apply. References required. Box 372, Canada Lumberman, Toronto, Ont. 6-6

Business Chances

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

Siding For Sale

Siding in Toronto, 272 feet on G. T. R. Siding now in. Property of Sterling Lumber Company. Splendid retail prospects. D. A. Atkinson, 32 Church Street, Toronto, Ont. 6-t.f

Tie Contractor Wanted

Wanted a responsible contractor who would undertake to get out a quantity of ties in Ontario. Apply Box 366, Canada Lumberman, Toronto, Ont. 6-8

Miscellaneous

30 Replies

are often received to "Wanted" and "For Sale" ads. on this page. Even 50 replies are not an uncommon return from the investment of the small amount a condensed ad. costs. And isn't that good business—to get right into close touch with so many people interested in what you have to buy or sell? For you can be sure their transactions with you will not end when they have closed the business your single ad. announced.

Washington shingle manufacturers are lending hearty support to the campaign launched by the shingle branch of the West Coast Lumber Manufacturers' Association to raise $60,000 to initiate what is planned to become a nation-wide advertising campaign in favor of Washington shingles. At a recent meeting of shingle manufacturers Secretary H. P. Wyckoff told his auditors that "unless the shinglemen of the coast combine at once and advertise red cedar shingles nationally, the shingle business here inevitably will go on the rocks. One of two things will happen. Either it will be killed by the patent roofing companies, who are now flooding the country with advertising, or it will be bought up by large capital and exploited in some such manner as we are now presenting to you."

Union Lumber Co.

Limited

Dry White Pine Norway Spruce and Lath

Union Lumber Co., Limited

701 Dominion Bank Building

TORONTO, CANADA

Competent Manager Wanted

A large lumber plant and mill in Toronto has an excellent opportunity to offer a man of real ability as head office manager. This vacancy has been made by the death of the late manager. Propositions of straight salary, salary and commission, an interest in the business, or even a sale of the business as a going concern, will be considered.

This is a large proposition and only the competent man of proven ability and experience need apply.

Box 374 Canada Lumberman

Toronto, Ontario

For Sale

Strictly up-to-date, double-cutting band mill with horizontal and upright resaw attachment

10 hour capacity of 100 M feet

Planing mill and shipping facilities for 10 cars per day

Excellent location in mountain district of British Columbia.

Will sell plant and twenty years timber supply or will sell plant separate and sell timber to be paid for as cut.

Excellent opportunity for good operator.

For further particulars apply to

Box 307

Canada Lumberman & Woodworker

Toronto, Canada

Review of Current Trade Conditions

Ontario

The lumber trade in Ontario continues on a very quiet basis. This is quite a normal condition for the present time of year and simply means that the trade is at a between-seasons stage. The severe weather of the past fortnight has added to the natural quietness of the trade. Travellers who have been about the province extensively during the past month are inclined to believe that conditions will pick up as soon as the weather shows signs of becoming more settled and pleasant. There is already quite a fair consumption of stock by some manufacturing lines. Piano and medical instrument lines, for instance, are quite active, and are using up a good deal of lumber.

The shell box situation is still more or less of a puzzle. The Munitions Board have sent out tender forms in connection with several classes of boxes. Their requirements in Ontario, according to these forms, will be extensive. A great many firms are figuring upon the work, and it is expected that contracts will soon be given out. In fact, we already learn that some contracts have now been placed. In connection with these contracts it is likely that there will be a much better feeling among the trade than under the old way of doing business, even if the calling for tenders in a businesslike manner reduces the actual returns to the firms which receive the contracts.

The building situation throughout Ontario, while it has not yet shown any activity, is expected to do so pretty soon. Travellers find that Ontario farmers, like the farmers in the West, are well supplied with money, and that they are giving a good deal of thought to the necessity for putting up new buildings and repairing old ones. It is quite reasonable to believe that there will be a fair movement in this direction during the approaching spring, as the farmer has done remarkably well, and for a long time past has not been much of a factor in the building situation.

Reports from Ottawa indicate that a noticeable improvement has commenced in the lumber trade, especially in connection with the American market. There is a strong demand for spruce for export to New York. Reports from the woods indicate that operations have been carried on successfully in practically all cases, and that hauling operations are almost completed.

Eastern Canada

There is no change to report in connection with the lumber market at Montreal, nor is any expected until construction again becomes active. A fair amount of building in the way of houses and flats is looked for this year, but there are no important large construction schemes under consideration. Wholesalers are looking forward anxiously to the letting of new shell box contracts, hoping that they will soon be placed, and afford relief from the present dullness. The export situation continues very uncertain. Steamship companies are unable to give information regarding the amount of tonnage that will be available, as they do not know what the requirements of the Government will be. Some space has already been booked at 285s and 300s per standard. A couple of tramp schooners, it is said, have been chartered at 225s.

At Boston, the price of eastern spruce continues to advance. Retail yards are buying plentifully and manufacturers are not very keen about selling. Some mill men are quoting $28 base for spruce frames, Boston delivery, which is the highest price in years and probably the record price. Some sellers, however, have been taking $27, but these are now scarce. The production of spruce this winter is reported to have been from 25 to 50 per cent. below that of the winter previous. There is an active demand for random, and quotations are firm, the range being as follows:—2x3, $21.50 to $22; 2x4, $22.50 to $24; 2x5, 2x6 and 2x7, $21.50 to $22; 2x8, $25 to $26.50; 2x10, $27; 2x12, $28. The lowest price now asked for matched boards in stock lengths is $25 and some are asking $26. All lines of hardwood at Boston are firm and the demand is strong. Birch is especially active. Thick sizes of birch are high and very erratic. Firsts and seconds 1 in. birch are quoted at $56 to $59 for red, and $45 to $47 for sap birch. Stocks of dry hemlock in manufacturers' hands are much reduced. The demand seems active, especially for dry hemlock boards. Clipped boards 10, 12, 14 and 16 ft. are bringing $23. Shingles are rather quiet, but on account of the situation on the Pacific Coast, prices are fairly steady. The best white cedar extras are offering at $3.50 and fair makes at $3.40. The range for white cedar clears is from $3 to $3.10. Lath are steady and fairly active. For 1 5/8 in. manufacturers are asking $4.25, Boston rate, and for 1½ in. $4.

United States

The most important feature in connection with the general business situation in the United States today is the remarkable condition of the steel market. Consumers are almost in a panic for fear there will not be sufficient steel to go round, yet record breaking prices do not seem to worry them a bit. In addition to the enormaus demand for steel for munitions and war supplies the domestic consumption has reached great proportions. All this activity is producing a tremendous demand upon the car building companies. All car shops are crowded with orders. The immense amount of money that has been put in circulation generally has created an easier money market, producing a condition of prosperity that leads people to consider the building of homes and the erection of business buildings, also construction work of all kinds. This is the feature of the general situation that is of particular interest to the lumber trade, as it ensures a good demand for building material that will continue probably throughout the present year. An increased demand for building materials of all kinds is confidently expected this spring. The lumber industry is now enjoying a large immediate demand and the indications are for an improved demand for the future. It is seriously handicapped, however, by lack of transportation facilities, the freight situation constantly growing worse and the congestion at the large eastern ports continually becoming very pronounced. In short, the railroad companies are swamped with business and their facilities for taking care of it are absolutely inadequate.

The yellow pine business is on a better basis than it has been for several years. Although there was a slight fluctuation and reduction in prices during February, conditions have again improved and the tendency is now distinctly upward. Producers appear to have the situation well in hand and a stable market from this time forward is well assured, as the demand is constantly increasing and production is being kept well within bounds. Manufacturers on the Pacific Coast report improvement, and a better situation than there has been for some years. Lumber being shipped now is bringing the purchaser a considerable advance over the prices of 1915. Inland Empire mills are also enjoying a good demand. Throughout the western interior the situation is one of general prosperity. Northern hardwood maufacturers report a good demand for their products, and the same conditions pevail in connection with southern hardwoods. Hemlock manufacturers in the north and east are enjoying a good demand for practically all they can produce, at good prices. The situation is easily and definitely summed up in regard to all parts of the country in a statement that the only drawback to be found anywhere is the lack of transportation facilities. With this removed the lumber business is assured of a long season of prosperity.

Great Britain

The spot market at London continues very active and deliveries are large in spite of the fact that available stocks are light and arrivals limited. Values continue to advance so that importers are not attracted to the forward purchasing business. Practically all transactions at present are for immediate requirements. Conditions are now such that when navigation is opened shipments of all kinds of stock should be heavy. Deliveries at London docks for the week ending February 12th amounted to 3,851 standards as compared with 4,361 standards during the corresponding week of 1915. At Foy, Morgan & Company's recent auction sale 3 x 5 unsorted St. John spruce 5/20 sold at £23 5s per standard. A load of clear silver spruce from Portland, Ore., 2 x 8, 10/22 sold at £27 10s per standard. Montreal pine dry firsts, 1 x 4/6, 10/16 brought £31 per standard. Unsorted Montreal spruce 3 x 7/11, 10/14 sold at £25 15s. Oregon pine from Tacoma, Wash., 1½ x 8, 8/16, dry prime clear, brought £23 per standard.

At Liverpool, the timber trade is greatly concerned about the interpretation that will be placed upon the edict prohibiting the importation of furniture woods, hardwoods and veneers. Up to date, the latest information gives no explanation of what this edict will cover. The greater portion of the wood imported under these headings, however, is for Government requirements and it may reasonably be assumed that the exemption clause will still allow these goods being brought into England under license. The c. i. f. spruce market at present is practically dead. A few liner parcels have been arriving and have been disposed of quickly at figures surpassing all records. There is no business in progress for forward delivery on clear c. i. f.

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

terms, because of the lack of tonnage. Space from Quebec to Liverpool or Manchester has been booked at 260s per standard and 300s is talked of. The spot market has continued to advance and the demand is still strong, while arrivals are very small. The purchasers of today are the actual consumers in nearly all cases. Prices of all thicknesses of birch have advanced. First open water is still some distance off and it looks as though further increases may be expected. At Manchester, stocks of hardwoods are low and with the embargo upon their importation it looks as though higher prices are certain. In soft woods also, the high freight rates continue to advance prices. Spruce deals 3 in. x 11 in. are valued at £35 per standard, and scantlings at £26 10s. Quebec and other pine is advancing in value daily. Third quality deals are near £33 per standard for 11 in. widths.

A steady volume of business is reported from Glasgow, on a spot basis. Very little spruce is arriving at present and prices are advancing, with apparently no effect upon the demand, which continues brisk.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Uncertainty Still Governs Montreal Trade

Montreal, March 11th (Special to the Canada Lumberman):—Conditions in the lumber trade remain about the same as noted in the last report. Until construction makes a start, there is not likely to be any marked improvement in the demand. As far as can be gathered, there are no important schemes under consideration, although we may expect a fair amount of building in the way of houses and flats. For the moment trade is very quiet, wholesalers looking forward to the new shell box orders to give a certain amount of relief from the present stagnant position.

Most firms with shell box contracts are working at a comparatively slow rate; some are behind in their deliveries, not because they were not prepared to make deliveries, but in consequence of production being ahead of requirements. The prices for boxes have lately been reduced, and there are complaints that certain firms are apparently willing to manufacture at quotations which leave little or no profit or at an actual loss. This cutting, it is declared, must have its influence on the general volume of shell box business, making it difficult to secure a reasonable amount of profit.

The building permits last month totalled $65,915, as compared with $441.980 in February last year. For the year to date the value is $240 075, against $645.241 in the corresponding period of 1915.

There is much uncertainty as to the export situation. The steamship companies are in the dark as to the amount of tonnage likely to be available, owing to Government demands. There are, however, indications of the rates which are likely to prevail. A little space has already been booked at 285s. and 300s. per standard, and it is also reported that one firm has chartered two tramp steamers at 225s.

The sulphite pulp market continues its upward march. With a very strong demand, and with European supplies to the United States limited, the outlook is for a still further gain in values. Kraft pulp is scarce. Newsprint is in heavy request both for domestic and foreign account and is shipped out as fast as can be manufactured. Prices, too, are rising, in sympathy with the advance in sulphite.

Ottawa Trade Showing Improvement

Ottawa, March 9th; (Special to the Canada Lumberman):—There has been noticed quite a decided change for the better in the local lumber trade. Particularly is this so in the American market, but the Canadian trade has also improved somewhat during the last two weeks. Spruce is especially strong in the New York market and there is a good demand for 1½ inch by 48 inch lath at an advance in price. Most of the Ottawa manufacturers look forward to a year of good trade, especially with the United States.

Lumbermen expect that tonnage will again be very scarce for moving lumber to the British Isles. At the same time it is understood that some of the English buyers are looking this way to buy cuts for this season.

Some of the manufacturers' yards are fairly well loaded up, but owing to the improvement in trade, stocks are being cut down at a good rate now. With regard to woods operations, the work is coming along in good shape and most of the hauling will be caught up within the next ten days.

Mr. G. C. Seibert, formerly with Schultz Bros. & Company, Limited, Brantford, Ont., where he occupied the position of sales manager, has been appointed manager for Galbraith & Company, Limited, Owen Sound, Ont. Galbraith & Company, Limited, are arranging to go into the manufacture of wood specialties, such as toys, games and kitchenware, more particularly such articles as are now imported.

Canadian Trade in Great Britain

In its issue of February 19th, the Timber Trades Journal of London, England, under the heading of "Canadian Trade," publishes the following:—"The majority of the cuts of Quebec spruce have now been arranged for by shippers, the production being about the same as last year, and though we understand a small advance on last year's prices is being asked, it would appear now as if spruce was relatively the cheapest wood to be had in the British market. One of the Canadian shippers now on this side has expressed his amazement and disappointment that up to now the British Government purchasers of whitewood should have gone so largely to Swedish and Russian shippers. With regard to yellow pine deals little has yet been done in selling, as the inevitable freight difficulties are standing in the way of business. There is a fairly good demand in certain parts of the United Kingdom, but the prices being realised are in nearly all cases less than the goods could be imported at, at the present rates of freight. The market, however, is rising, and should continue to do so unless there is a drop in the freight market. Some of the railway inquiries are out for oak timber, for which there is an active demand. The Admiralty contract for timber, consisting of elm and waney pine, has again been placed with the firm of J. Burstall & Co. Canadian shippers are wondering as to the scope of the restrictions against the import of hardwoods into this country, but hope that these will not be extended to Colonial woods. As a matter of fact the bulk of the Canadian hardwoods is used by the railway companies and shipbuilders, whose requirements are essential for the welfare of the country, especially in times of war. The following Canadian shippers are now in England on their annual visits: Mr. Wm. Power, M. P., of W. & J. Sharples; Mr. J. F. Burstall, of John Burstall & Co.; Mr. R. M. Cox, of Robt. Cox & Co.; and Mr. Kerouet, of King Bros., Ltd. Mr. Beckett, of R. R. Dobell & Co., who generally pays us a visit at this time of the year, is in training at Quebec preparatory to going to the front, whilst another who usually comes over, Mr. Goodday, of H. R. Goodday & Co., is also undergoing a course of military training before coming to Europe."

Will Advertise Red Cedar Shingles

A meeting was recently held in Vancouver, B. C., attended by some of the leading manufacturers of red cedar shingles in the province and it was decided that the firms represented should join with the United States mills in a combined project to advertise red cedar shingles throughout North America, by the medium of magazines, newspapers, farm publications and lumber and trade journals. B. C. mills which have already joined this movement are as follows:—Vancouver Cedar Mills Ltd., Huntting-Merritt Lumber Co. Ltd., New Westminster Mill Co. Ltd., and the Thurston-Flavelle Co. Ltd. Including American mills, the membership covers 40 mills manufacturing 3 billion shingles annually. The movement includes not only advertising the red cedar shingle, but the stablizing of grades, efficient inspection arrangements and the furnishing of literature and illustrations to retailers to enable them to carry on their local advertising successfully. It is also proposed to provide a trade mark so as to make it possible to guarantee quality.

It is estimated that B. C. exports of lumber during 1915 amounted to about 100,000,000 feet, as compared with 37,000,000 feet during 1914, the increase being largely due to the requirements of the allied Governments for war purposes. Much of the exports have been handled by vessels furnished by the Governments. The scarcity of tonnage, however, has led to the shipment of considerable quantities by way of the C. P. R. which has made a rate of 60c per hundred lbs. on lumber from B. C. coast terminals to St. John, N. B., whence the material is shipped to United Kingdom ports by vessel. The latest reports tell of increasing activiey in the lumber trade of B. C., the demand both at home and abroad being on the increase. The box shook trade of the province has been stimulated along with other lines, and markets for B. C. shooks have been developed which were hitherto unknown. The outlook in this line is quite promising.

"I'll Stand Back of It"

—Says Ye Old Miller

The only way you can test the baking merits of

Cream of the West Flour

The hard wheat flour that is guaranteed for bread

is to give it a trial in your camp. The full-flavored, nutritious, body building loaves Cream of the West makes, will instantly captivate every member of your camp. They will give them a sense of satisfaction after every meal, and be an incentive to them for the production of more and better work.

Prompt shipment guaranteed on all orders.

THE CAMPBELL FLOUR MILLS CO., LIMITED

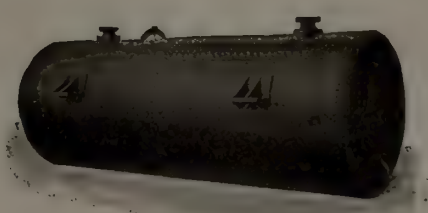
TORONTO PETERBORO

Paul F. Gauvreau
84 St. Peter St., QUEBEC, Que.

W. J. McAuley & Co.
B-24 Board of Trade Bldg., MONTREAL, Que.

C. E. Choat & Co., HALIFAX, N.S.

Jenckes Boilers



We make a Specialty of

Horizontal Tubular Boilers

for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

Sherbrooke Montreal Cobalt So. Porcupine St. Catharines Toronto Vancouver Nelson

Utilizing Wood Waste in the Paper Industry

By E. B. Biggar

The devastation of large tracts of state-owned forests in France and Germany by the armies that are now wasting the face of the earth in Europe, and the stoppage of the regular channels of the lumber trade since the great war began will direct attention anew to the possibilities of saving the prodigious waste of wood that has been going on ever since the axe has been laid to the trees of this continent. Fortunes can be made out of the odds and ends of waste in the lumber industry of Canada and the United States. It is calculated that if the wood wasted in yellow pine lumbering were distilled by the steam process into turpentine the product would equal all the turpentine produced from gum. Tanning extracts are largely made from chestnut, and usually from cordwood, but in a recent year (1907) there was enough wasted in the chestnut lumber industry of the United States to produce all the tanning extract made that year from the cordwood specially cut for the purpose. These are two illustrations out of many that could be cited as to the enormous aggregate of wood waste that might be profitably used.

There is a large waste of raw material in pulp and paper manufacturing, and the great development of this industry in Canada will no doubt bring into existence allied industries such as are carried on in European countries. Up till now the attention of capitalists has been so concentrated on the main industry that scarcely any thought has been devoted to using the by-products of the business; but these by-product industries will come in time.

The Soda Pulp Problem

It has been suggested that much can be done in saving sawmill waste to use in the manufacture of soda pulp. This can be done, but the process is not without its difficulties. Unfortunately the question of the raw material is the least of these difficulties. It is a problem of chemicals, of transportation, of cheap power and of markets combined.

It may seem strange that while the manufacture of mechanically ground wood pulp, of sulphite pulp and of sulphate (Kraft) pulp has developed so wonderfully along with paper manufacturing in many of its special branches in Canada, there has been no increase in the soda pulp industry in recent years. Indeed, it is a fact that the present total output, since the destruction by fire of the plant near Newcastle, N. B., is less than it was fifteen years ago, there being now only two plants that are in active production, making less than twenty tons per day. The cost of a soda plant would be about $10,000 per ton per day output.

Soda pulp is produced by the action of caustic soda on the fibres of the wood, digesters for treating the wood being used, as in the making of sulphite pulp. Caustic soda is produced from carbonate of soda, and is known also under the trade name of soda ash or alkali. By the sulphite and sulphate processes, which need not be here described, wood pulp is made having a longer and stronger fibre, and this fibre is used to mix with the shorter and more easily made groundwood pulp in various proportions to give it the strength needed for different kinds of paper. The soda process produces a fibre, but it is softer and of a different texture and is used for making book papers and papers having a fine smooth surface. The proportion which such papers bear to the whole industry is small, as may be understood when it is stated that out of a grand total of about 4,500,000 cords of wood used annually in the United States pulp and paper industry only 650,000 cords go into the soda fibre process. Again, out of these 650,000 cords consumed in soda pulp no less than 350,000 cords are made from poplar wood, which produces by far the better fibre when compared with other woods. Pine, beech and maple, in the order named, rank next as raw material for soda fibre, while fir, hemlock and spruce are away down on the list. It will be seen at once that if Canadian soda fibre is to attain a reputation and become a permanent industry it should be based upon poplar wood, and this further reduces the field of such an industry if it is conducted as a means of using up the mill waste of the average Canadian sawmill.

Export Markets Essential

Of recent years a larger proportion of book papers is being made from printed papers that are bleached and used over again, and this helps to reduce the requirements of the raw material. Any large output of Canadian soda plants would have to seek a market abroad for the present, and this brings another problem before us. The present price of chemicals in the paper industry, and especially in the pulp processes, is not merely abnormal but without precedent. The pulp industry in Norway and Sweden is cared for and regulated by the government in those countries to a much greater extent than in any country except Germany, and large investments in any new lines in Canada would want to be assured that the connections with Great Britain, which could undoubtedly be made now to supplant Scandinavian trade, would be continued after the war. No doubt it would be to the economic advantage not only of Great Britain, but of the British Dominions, if the whole Empire could be more self contained, but if this view prevails, then Russia, France, Italy and the other allies will want to share some of these advantages or preferences. But if there was a permanency in such trade arrangements, it would mean a tremendous development in the pulp and paper industries, as well as all others based on wood as a raw material.

Caustic soda is a by-product in the electrolytic bleaching process, and the electrolytic process has revolutionized the manufacture of bleaching powder and soda ash. The success of this depends on cheap water power and convenient transportation. Without doubt there is a great field for this in Canada, war or no war. What it offers now may be grasped from the simple statement that before the war bleaching powder was 1¼c. per lb., while now it varies from 6c. to 10c., and often it is not obtainable at that.

Causes for Canada's Pulp and Paper Progress

Canada has made her great advances in pulp and paper manufacturing because of three prime advantages, first the vast extent of raw material in the forests, second the immense hydraulic power available, and third the native skill of the Canadian people in wood craft. One of these advantages, the cheap water powers, would alone ensure the success of a Canadian electrolytic bleach industry, and then a new era in soda pulp and a further advance in manufacturing paper for export would naturally follow. The initial capital involved would be large, but the results would be proportionately great, because they would favorably influence many industries throughout Canada besides the pulp and paper trades.

The electrolytic bleaching plant at Niagara Falls, N. Y., has been a great success, and the establishment of a large plant in Canada would not only prove profitable in itself, but its existence would provide a more assured basis for a soda pulp industry on a considerable scale, and thereby give greater diversity to the paper industry. A Canadian soda pulp industry is therefore not so much a problem of raw wood, where so much is being needlessly burnt and otherwise wasted, but a problem of cheap chemicals. The devotion of some large water power cheaply developed for this purpose would not only greatly expand the whole paper industry, but would stimulate a large series of other industries in which bleaching and soda products are used.

Fire Brick for Lumbermen

The Elk Fire Brick Company of Canada, Limited, Federal Life Building, Hamilton, Ont., manufacturers of every kind of fire brick, include in their output a number of lines of importance to lumbermen, among them being special lines for refuse burners, boiler settings, kilns, Dutch ovens, etc. The whole problem connected with the production and use of fire brick is entertainingly and well discussed in a booklet issued by the company under the title of "Refractory Efficiency Engineering." The book commences with the first stages of the industry and follows it through to the various finished products, dealing with fire clay, its proportion, blending, etc.; manufacturing, and finally with the marketing of the product. The second part of the book gives an interesting history of the Elk Fire Brick Company and a detailed description of its operations, policy, etc. In addition to the above the book contains an assortment of important information of value to all who are interested in fire brick.

One of the chief points brought out in the book is the fact that the term "high grade" is often improperly used in connection with fire brick. All brands of fire brick, it is pointed out, are "high grade" for some classes of work, because they give better results in one or more places, than other brands. The method of marking does not necessarily entitle them to the term "high grade." This fact places upon the salesman the responsibility of recommending the special varieties best suited for particular work.

Samples of the Elk Brick Company's fire bricks were recently tested by the Department of Mines at Ottawa, and the results showed that they were of high refractory quality and stood severe crushing strain.

TURN YOUR 'WASTE' WOOD TO ACCOUNT

Every Saw Mill in Canada should have a small SODA PULP PLANT to take care of its Slats, Tops, Bottoms and 'Waste' Wood. Contracts for long periods of years can be obtained.

For full information, apply—

BECKER & CO.

LIMITED

64 Cannon Street, LONDON, E. C., England

WHO HAVE IMPORTED NINETY PER CENT. OF THE CANADIAN PULP SUPPLIED TO EUROPE SINCE 1899.

GREAT BRITAIN DEMANDS MORE CANADIAN WOOD PULP

Rogers-Buffalo Automatic Saw Sharpeners

No. 1 Automatic Saw Sharpener

This is one of the famous Rogers-Buffalo Automatic **SAW SHARPENERS** and is guaranteed to give perfect satisfaction.
We make a full line of Knife Grinders and Saw Sharpeners

Let us quote you prices.

Samuel C. Rogers & Co.
10-16 Lock St.
BUFFALO, N. Y.

The Lumberman's Milk

IN POWDER FORM

KLIM

READ BACKWARD.

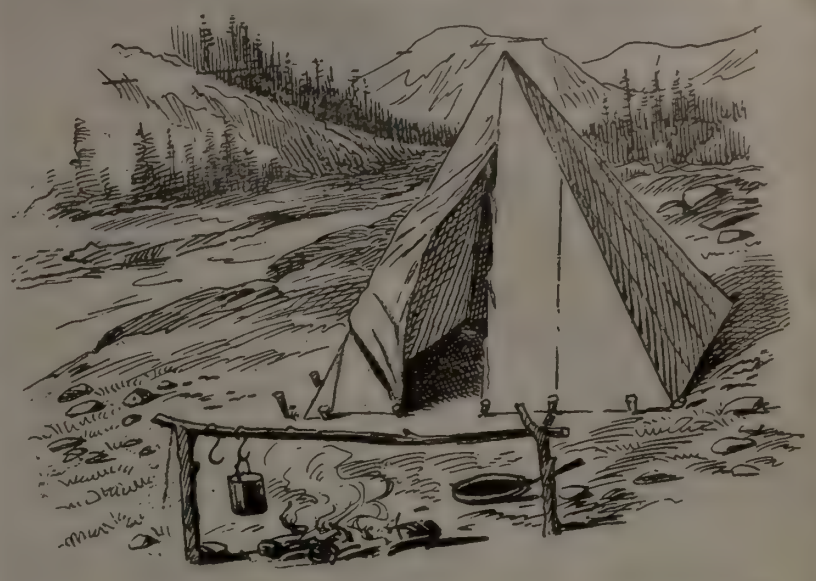
Klim is pure—cheaper than fresh liquid milk. One-third the cost of condensed milk. No freights on useless water—keeps in any temperature—no waste. Packed for camp use especially in 10 pound tins $2.00 each, the pound makes one gallon. Case lots, special price.

Write for samples, etc.

Canadian Milk Products Ltd., Toronto

Plants:—Belmont, Ont., Brownsville, Ont. **Head Office:—Mail Building**
Montreal Office– 508 New Birks Building

"Canada's Largest Tent and Flag Manufacturers"



The World Knows None Better Than Woods' Non-Absorbent Duck Tents.

Pyramid Tent

without walls, as illustrated above

8 oz. Woods' Non-Absorbent Duck

Size	Price
7 x 7½ x 7 ft.	$ 9.00
9 x 9 x 7½ ft.	12.00
10 x 10 x 8 ft.	13.00

7 oz. Woods' Non-Absorbent Duck

Size	Price
7 x 7½ x 7 ft.	$ 8.75
9 x 9 x 7½ ft.	11.00
10 x 10 x 8 ft.	12.00

WOODS' Non-Absorbent Duck is exclusively our own production and is entirely different from any other duck used in tent manufacturing, being made in our own cotton mills at Welland, Ont., from specifications of the highest standard. Every tent made from this duck bears our trade mark which is your identification stamp of quality and lastingness, and our guarantee of "Perfect Satisfaction" to every purchaser.

Send for our Catalogue de Luxe. The greatest catalogue of its kind ever published.

Smart-Woods LIMITED

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THE EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS DIEU RIEN
MONTREAL - Canada
Head Office at Montreal.

SPRUCE rough or dressed

1" No. 2 and Better Birch, 1914 cut
also Basswood, Hemlock and Pine

Saw Mills at MONT LAURIER.
Dressing Mills at ST. JEROME

Herman H. Hettler Lumber Co.
Midland, Ont.

Manufacturers of

WHITE PINE and RED PINE LUMBER and LATH

EXCELLENT PLANING MILL FACILITIES

Special Attention Given to Prompt Delivery

CEDAR
Shingles

Campbell, MacLaurin Lumber Co.
Limited
Board of Trade Building, MONTREAL

Low Prices will be named on the following
WHITE PINE
FOR **IMMEDIATE SHIPMENT**

45,000 feet 1 x 5, 10/16 ft. Mill Run Box out.
15,000 feet 1 x 9, 12/16 ft. Mill Run Box out.
26,000 feet 1 x 10, 12/16 ft. Mill Run.
30,000 feet 1 x 10, 12/16 ft. Mill Run Box out.
70,000 feet 1¼ x 4 and up, 6/11 ft. Mill Run Box out.
55,000 feet 1 x 4-7, 12/16 ft. Box.
75,000 feet 1 x 4-6, 10/16 ft. Mill Cull.
} DRY STOCK
2,000,000 Mill Run Spruce lath, 4 ft.
75,000 No. 1 Pine lath, 4 ft.
300,000 No. 2 Pine lath, 4 ft.
180,000 No. 3 Pine lath, 4 ft.

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
Eastern Townships Bank Building, MONTREAL, Quebec

EDGINGS

Ontario

Charles Raysen, Vienna, Ont., is contemplating the purchase of sawmill equipment.

The Toronto Wood Turning Company, 95 Richmond Street West, Toronto, recently lost their plant by fire.

W. C. Edwards & Company, Limited, Ottawa, Ont., have increased their capitalization from $400,000 to $4,400,000.

S. L. Lambert, Welland, Ont., recently lost his planing mill by fire. The loss is estimated at $25,000 and insurance at $8,000.

J. A. Orton, Orillia, Ont., recently lost his planing mill by fire. The amount of the loss is estimated at $7,500, with some insurance.

The Buchanan Planing Mills Company, Goderich, Ont., recently suffered a serious loss by fire. The amount of the loss is estimated at $6,000.

Reid Bros. Company, Fourth Street, Niagara Falls, Ont., have prepared plans and work will start at once on the erection of a mill to cost $2,000. The building will be of frame construction and concrete foundation.

The Robert Quance Company, Limited, has been incorporated with head office at Delhi, Ont., and capital stock of $40,000, to carry on business as sawmillers and lumbermen. The provisional directors are R. Quance, R. F. Quance and M. A. Wilson.

S. A. Hager & Son, 703 C. P. R. Bldg., are open to receive tenders for 1,000,000 feet of common and better 1-in. birch; 1,000,000 feet of common and better 1½-in. birch, and 1,000,000 feet of common and better 2-in. birch. The material is for the Dominion and French governments.

The Beamsville Basket and Veneer Company, Limited, have been incorporated with head office at Beamsville, Ont., and capital stock of $40,000. Those interested are S. G. Near, A. W. Reid and T. Nodwell.

The Western Contracting Company, Limited, has been incorporated with head office at Port Arthur, Ont., and capital stock of $40,000, to carry on business as contractors and manufacturers of lumber and pulpwood. Those interested are W. F. Langworthy and A .J. McComber.

Jacob Kaufman Limited has secured a provincial charter in Ontario with head office at Berlin, Ont., and capital stock of $50,000, to carry on business as woodworkers, lumbermen, etc. The provisional directors are J. Kaufman, M. R. Kaufman, M. Kaufman, A. R. Kaufman and E. L. Kaufman, all of Berlin.

Eastern Canada

The sawmill belonging to Gaudias Maurice, St. Camille, P. Q., was recently destroyed by fire, incurring a loss of $3,000, with no insurance.

Plans are being prepared by the Belgo Canadian Pulp and Paper Company, Shawinigan Falls, P. Q., for the erection of a paper mill at that place.

The Montreal Harbor Commissioners, Common Street, Montreal, P. Q., have awarded a contract for fir timber to Mason & Company, 80 St. Francois Xavier Street.

Western Canada

The Manning-Sutherland Lumber Company, Calgary, Alta., have opened a yard at Bawlf, Alta.

The Arctic Lumber Company, Limited, has been incorporated with head office at Edmonton, Alta., and capital stock of $10,000.

The Warren Timber Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $125,000, to carry on business as manufacturers of and dealers in lumber, shingles, etc.

The Athabasca Power Company, Limited, has been incorporated with head office at Winnipeg, Man., and capital stock of $100,000, to carry on business as manufacturers and dealers in lumber, timber, logs, etc.

A new sawmill has been completed at Qualicum Beach, Vancouver Island, B. C., by the Qualicum Beach Lumber Company, who own a large amount of timber and intend to commence cutting operations immediately.

The Diamond Lumber and Shingle Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $15,000, to carry on business as timber and lumber merchants, sawmill and shingle mill proprietors and to manufacture and deal in sash, doors, etc.

The Columbia River Lumber Company, Golden, B. C., have started logging operations after having been shut down for about six weeks. They report plentiful orders from the Prairie Provinces for all grades of lumber, for use principally in the construction of farm buildings. The company will employ 300 men during the present year.

The Sydney B. Smith Lumber Company has commenced to build a sawmill and planing mill near Lombard, B. C., a mile west of Bradner on the

B. C. E. R. It is expected that cutting operations will commence about April 1st. The plant will be electrically driven with power furnished by the B. C. E. R. The plant will have a capacity of from 50,000 to 75,000 feet per day. The company have secured timber which it is estimated will last them for six to eight years.

The Cargo Shingle Company has been registered under the Companies Act in B. C. and authorized to carry on business as an extra-provincial company within the province. The head office for the province is at 739 Hastings Street West, Vancouver, and M. D. Rector is attorney for the company. The head office of the company is at 14th Street Dock, Everett, Wash. The company's capital stock is $40,000. The objects of the company are the manufacturing and sale of shingles.

W. K. Nichols, manager of the Ladder Lake Lumber Company, Big River, Sask., reports that the outlook for the present year's business is excellent. The company's planing mill is now running, and two camps are being operated at Crooked Lake, employing from 200 to 250 men. Logging conditions have not been good during the past few months owing to the great depth of snow and the excessive cold. However, the company have an extensive supply of logs on hand left over from the previous year. The sawmills at Big River are expected to be running night and day this year at full capacity.

Thos. Meredith, of New Westminster, B. C., managing director of the Canadian Pacific Lumber Company, has leased the company's mill at Port Alberni, B. C., to Seattle mill men. The deal involves the purchase of 250,000,000 feet of fir and cedar logs. The lessees are H. A. Dent, of the Dent Lumber and Shingle Company, and A. W. Mylroi, of the Anchor Supply Company. The mill has a capacity of 100,000 feet per day and Mr. Dent states that it will operate to its capacity from the middle of March, giving employment to 200 men. It is reported that the price paid was $250,000. The idea of the lessees is to cater to the Alaskan and northern trade. The company has already commenced to ship out lumber which was on hand when the transfer took place.

The reorganization of the Ocean Falls Company, Limited, at Ocean Falls, B. C., is being rapidly completed, and it is expected that a busy city will shortly be brought into existence at Ocean Falls, as a result. The plant has been taken over by the Pacific Mills, Limited, capitalized at $9,500,000, of which $2,000,000 is to be issued in 6 per cent. preferred shares and $7,500,000 in common shares, with a bond issue of $3,000,000. J. H. Lawson is president, W. S. Lane secretary, and the Board of Directors is composed of N. R. Lang, S. D. Brooks, W. S. Lang, R. R. Parker and J. H. Lawson, all of Vancouver. The Crown-Willamette Paper Company, of Portland and San Francisco, is also largely interested, also the Ocean Falls Company, Limited, as bond holders. Arrangements are now being made for the erection of a paper mill in addition to the pulp mill. The present plant, including a pulp mill and sawmill, are to be much improved. The Ocean Falls Company, Limited, was incorporated in 1910 and its pulp mill and sawmill were operated for a time. Three years ago the company went into the hands of receivers and the deal for reorganizing was completed a few months ago.

Messrs. P. Payette Co. of Penetang, Ont., have recently made a number of installations in different mills in the country of their Lath and Bolter machines, three of the most recent ones being for McFadden and Malloy at Spragge, Ont.; Wm. Milne & Sons of North Bay; and the Bonnechere Lath and Picket Co., Ltd., at Golden Lake. They have also recently built a 2 ton pulley, 36 in. face for a new main drive in Manley Chew's Midland mill, supplying as well all the coupling boxes and shafting.

A deputation of the members of the Mountain Lumbermen's Association recently waited upon Hon. Wm. R. Ross, Minister of Lands and Forests for British Columbia, to urge that he continue the work done by the Department in developing the markets for British Columbia timber and lumber. The members of the deputation were W. F. Lammers, W. Mark DeCew, W. A. Anstie, and Neil Murray. The deputation also called upon A. W. Pineo, chairman of the Workmen's Compensation Act Commission for British Columbia, in order to acquaint him with their views in regard to the working of the act.

A report from Portland, Oregon, states that, for the first time in ten years, operators on the Pacific Coast have now no fear of overproduction, even with all mills running on a ten hour day. A Washington mill has recently received an order from the Burlington Railroad for stringers, at a price a little more than double what was paid last year. Today, quotations on the three grades of logs in the Puget Sound, Grays Harbor and Columbia River markets are $7, $10 and $13, the highest, it is said, in ten years. The only handicap in connection with the whole business is the lack of bottoms for water shipment. Quite an important factor in keeping the volume of production during the present year will be the recent destruction by fire of the Inman-Poulson mill at Portland. This mill had a daily output of 360,000 feet.

Blair & Rolland, Limited

Lumber & Pulpwood

20 St. Nicholas Street, Montreal, Que.

Dressed as Required, Spruce and Pine

MILL RUN 1 in. x 4 x 10 ft. up
" 1 in. x 5 x 10 ft. up
" 1 in. x 6 x 10 ft. up
" 1 in. x 7 x 10 ft. up
" 1 in. x 8 x 10 ft. up
MILL RUN 2 in. x 4 x 10 ft. up
" 2 in. x 5/7 x 10 ft. up
" 2 in. x 8 x 10 ft. up
" 2 in. x 9 x 10 ft. up
" 2 in. x 10 x 10 ft. up
MILL RUN 3 in. x 4/5 x 10 ft. up
" 3 in. x 6 x 10 ft. up
" 3 in. x 7 x 10 ft. up
" 3 in. x 8 x 10 ft. up
" 3 in. x 9 x 10 ft. up

P 1 or 2 Sides V joint, Beaded or Novelty Siding Prompt and Good Work. We Ship Mixed Car Loads as Required.

Roofing, P 2 S and Matched

1 x 4 up x 8 up—about 60 per cent. 12 and 13 ft.

Mill Cull Spruce

2 in. x 4 up x 10/13 and 3 x 9 x 10/13
3 in. x 4 up x 10/13

1,700,000 pcs. MILL RUN SPRUCE LATH 4 x 1⅜ x ⅜
500,000 pcs. MILL RUN WHITE PINE LATH 4 x 1⅜ x ⅜
200,000 pcs. No. 2 WHITE PINE LATH 4 x 1¼ x ⅜

H. BOURGOUIN

Dominion Express Bldg., 145 St. James St., Montreal

Wholesale Lumber and Timber

SHELL BOX STOCK

White and Red Pine, Spruce

Hemlock, Birch, Maple

Railway Ties, Fence Posts, Etc.

Prompt shipment. Satisfactory stock. Good service Write for Prices

A. F. B. AUSTIN, Manager

New RAILS Relaying

12 to 80 pounds per yard.

LOGGING CARS

Jno. J. Gartshore

58 Front St. West, Toronto

BUSHMEN
WANTED

Teamsters, Sawyers, Skidders Filers, etc.,

AS RECRUITS FOR

224th Overseas Canadian Forestry Battalion

For Forestry work in England, Ireland and Scotland

RECRUITING OFFICES

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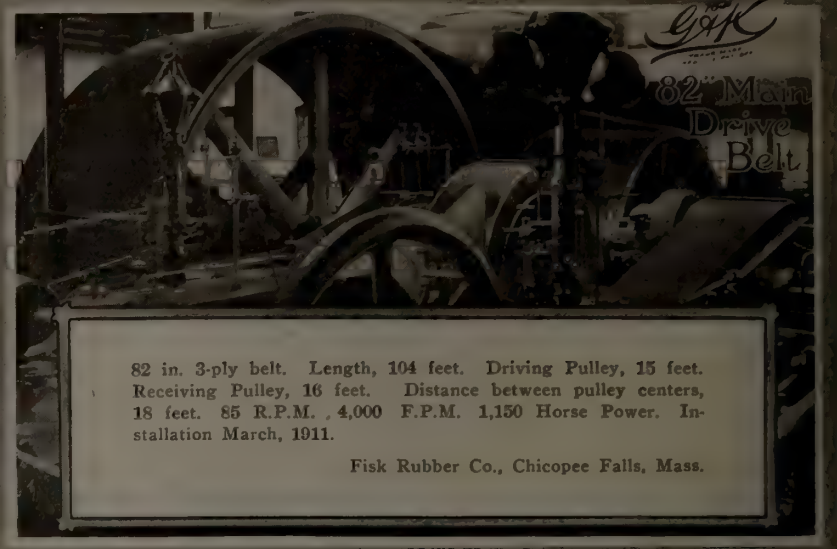
Mattawa
Arnprior
Ottawa 43 Bank Street
Buckingham
Hawkesbury
North Bay
Sudbury

RATES OF PAY:

RANK	Pay Per Day	Field Allowance Per Day	Separation Allowance Per Month
Sergeants - -	$1.35	$0.15	$25.00
Corporals - -	1.10	.10	20.00
Lance Corporals	1.05	.10	20.00
Privates - -	1.00	.10	20.00

ALEXANDER McDOUGALL, Lt.-Col.
O. C. 224th Overseas Canadian Forestry Battalion



82 in. 3-ply belt. Length, 104 feet. Driving Pulley, 15 feet. Receiving Pulley, 16 feet. Distance between pulley centers, 18 feet. 85 R.P.M. , 4,000 F.P.M. 1,150 Horse Power. Installation March, 1911.

Fisk Rubber Co., Chicopee Falls, Mass.

One Inch or Eighty-Two Inch

Machine Belt or Main Drive Belt. For any service and every service, G & K Belts give absolute satisfaction.

Because like the Fisk 82 in., all G & K Belts are carefully constructed from leather of our own tannage, tanned slowly, uniformly, and expressly for belting purposes. They possess the essential qualities of pliability, firmness with minimum stretch, great tensile strength, and durability. Lastly, they are absolutely guaranteed as to quality and workmanship.

There is a G & K belt for every drive in your mill—its use means maximum production and low cost of operation. Why not let us serve you?

The Graton & Knight Mfg., Co.

Oak Leather Tanners and Belt Makers
Worcester, Mass. U. S. A.

Representatives in Canada:
The Canadian Fairbanks-Morse Co., Limited
St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Vancouver, Victoria

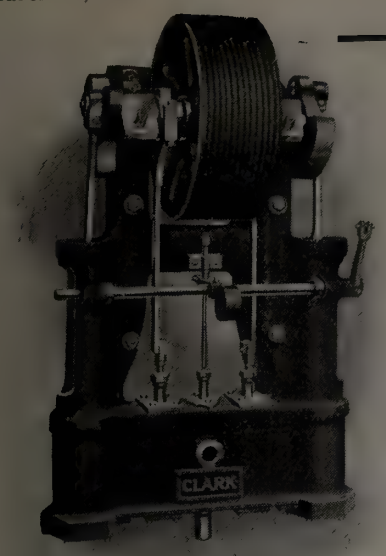
FREE SAMPLE
Stops Bleeding

There's a sample of Douglas' Egyptian Liniment awaiting your request. It's free—absolutely free—along with literature explaining the manifold uses to which it can be put.

No person or animal need bleed unnecessarily where Douglas' Egyptian Liniment is kept. It staunches bleeding immediately.

In cases of toothache, sore throat, neuralgia, rheumatism, etc., it effects immediate relief. In the stable its use is invaluable for thrush, cuts, spavins, calluses, etc.

Send at once for your free sample.



The Clark Twin Engine Feed for Sawmill Carriages

BUILT WITH THE FOLLOWING SIZE CYLINDERS:

Dia.	Stroke	Weight
10″	14″	5100 lbs.
12″	16″	7100 lbs.
14″	18″	11700 lbs.
16″	20″	12700 lbs.

The cylinders and frame are cast in one piece. The crossheads are cast steel with adj. shoes. Valve chests are lined with removable bushings. If you want perfect control of your carriage when feeding slow or if you are sawing long logs you should use this type of feed. It also uses 50 per cent. less steam than the direct shot gun type of feed.

CLARK BROS. CO., Olean, N.Y.

Patented Nov. 29 '92; July 19 '10.

Grooves Cut with Huther Bros. Dado Heads

Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

Write for New Illustrated Catalog.

HUTHER BROS. SAW MFG. COMPANY, Inc.

1103 University Ave.
ROCHESTER, N. Y.

Steam and Gasoline Logging Engines

"DUNBAR" Logging Engines are built in Canada to meet the need for sturdy substantial engines in Canadian logging operations. A close study of the conditions existing in this industry enables us to design engines which would give the greatest amount of service at the lowest possible cost.

If you are interested in logging machinery we will send you details. Write us. We are the makers of the original Shingle Machine, "Dunbar" Lath Machine and "Dunbar" Clapboard Machine.

Remember the makers' name

Dunbar Engine & Foundry Company
WOODSTOCK, N.B.

Meet Me at the TULLER—for Value, Service, Home Comforts.

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Center of business on Grand Circus Park. Take Woodward car, get off at Adams Avenue

ABSOLUTELY FIREPROOF
200 Rooms, Private Bath, $1.50 Single, $2.50 Up Double.
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100 Rooms, Private Bath, $2.50 Single, $4.00 Up Double.
100 Rooms, Private Bath, $3.00 to $5.00 Single, $4.50 Up Double.

TOTAL, 600 OUTSIDE ROOMS
All Absolutely Quiet

Two Floors—Agents' Sample Rooms. New Unique Cafes and Cabaret Excellente.

Pink's Lumbering Tools

The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

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Send for Catalogue and Price List.

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The Thomas Pink Company, Limited

Manufacturers of Lumber Tools

PEMBROKE - - - - - ONTARIO

MADE IN CANADA

It's a Pink anyway you take it, and it's the best Peavey made.

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa,
December 20th, 1912.

Deputy Minister.

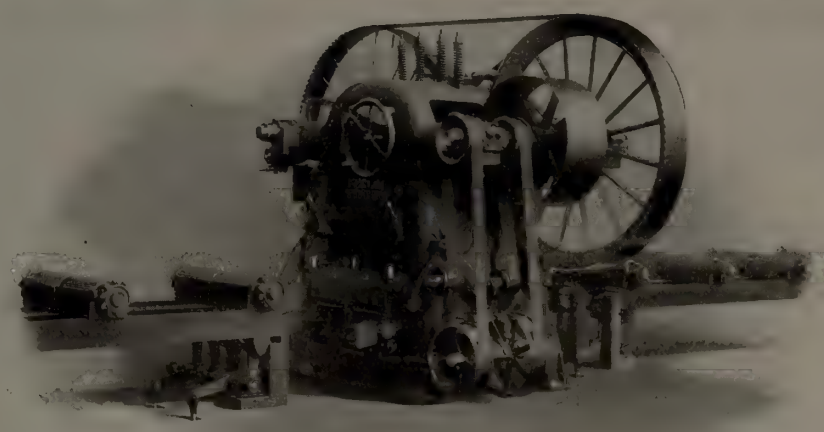
One Man or Three?

Figure the labor cost of operating your head rig—wages of Head Sawyer, Carriage Setter and Carriage Rider—compare with that usually paid the operator of a Berlin Horizontal Sawmill Resaw and settle in your own mind whether or not it pays to cut a log to its last board on the head rig.

Your head sawyer is one of the highest priced men in your employ. Why load him up with work that a lower priced man can do just as well and from two to three times as fast? The duty of the head rig—an expensive but indispensable unit—should not go beyond the actual work of opening up the log and cutting to grade. After that every cut it makes is a direct loss to you.

Berlin Heavy Duty Horizontal Resaws

Make Better Lumber at Less Cost



Made in 5-ft., 6-ft., 7-ft. Wheel Sizes.

Steam, Air, Hydraulic or Hand Bed Adjustment.

Many mill men have fortified themselves against unnecessary operating costs by installing these Horizontals to assist their head rigs.

Cants, planks, deals, slabs, or even half logs fed to them are cut into perfect lumber at from 100 to 225 lineal feet per minute.

The head sawyer has greater opportunity to secure the best from each log. Head rig cutting lines are reduced at least one-half, and mill output increased from 35% to 50%.

A request on your firm's letterhead brings additional information on this modern method. **Ask for the "H Series Booklets."**

A New Book

Illustrating and describing in brief and comprehensive manner the best ideas on every type of Band Sawing Machinery has lately been published and called

"Wisdom Teeth"

When writing for the "H Series Booklets," let your letter include a request for "Wisdom Teeth."

P. B. Yates Machine Co., Ltd.

Successors to

THE BERLIN MACHINE WORKS LIMITED

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AJAX Is Made To Meet Your Conditions

and we have yet to hear of a case where it has not successfully met the service for which it was made and recommended. Made of the best quality steel—with the strong powerful and ever holding lap-weld—tested and certified—it satisfactorily performs the most severe service.

AJAX Loading Chain

is used by the great majority of lumbermen everywhere—the best proof we could submit that it is the best chain made.

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SOLD BY YOUR JOBBER

MADE BY

Standard Chain Company
Pittsburgh, Pa., U.S.A.

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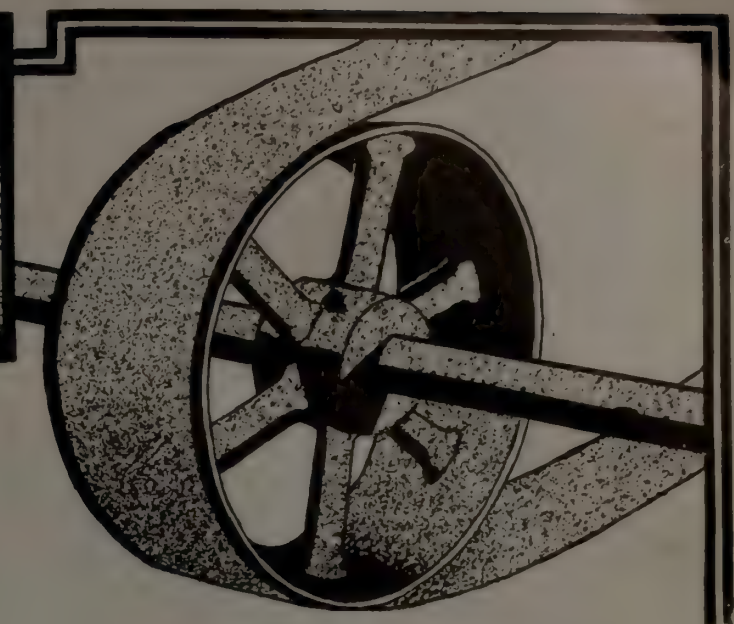
When You Overhaul Install

GOODHUE BELTS



"Acme Waterproof" Leather Belting

This brand is especially well suited to the wet places in a saw or pulp mill and will run true as long as it is in service. When you are overhauling your mill equip it with "Goodhue Belts" and you will never regret it. They are honestly made of solid leather—every inch a good belt and they won't stretch.

Get our details and prices

J. L. Goodhue & Company, Limited

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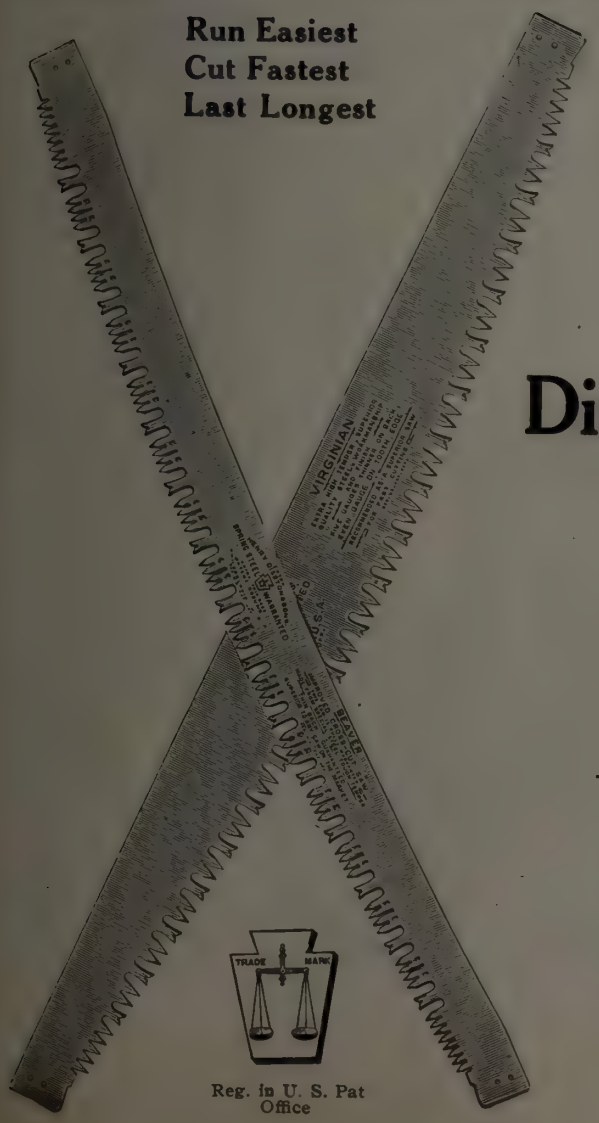
WINNIPEG AGENTS—Bissett & Webb, Ltd., 151 Notre Dame Ave., East, Winnipeg, Man.
VANCOUVER AGENTS—Fleck Bros., Ltd., 1142 Homer St., Vancouver, B. C.

Run Easiest
Cut Fastest
Last Longest



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Reg. in U. S. Pat Office

Labor Saved Is Time Saved

When to this is added increased durability we have the economy that naturally results from larger output and long service.

These are some of the strong points in favor of

Disston Cross-Cut Saws

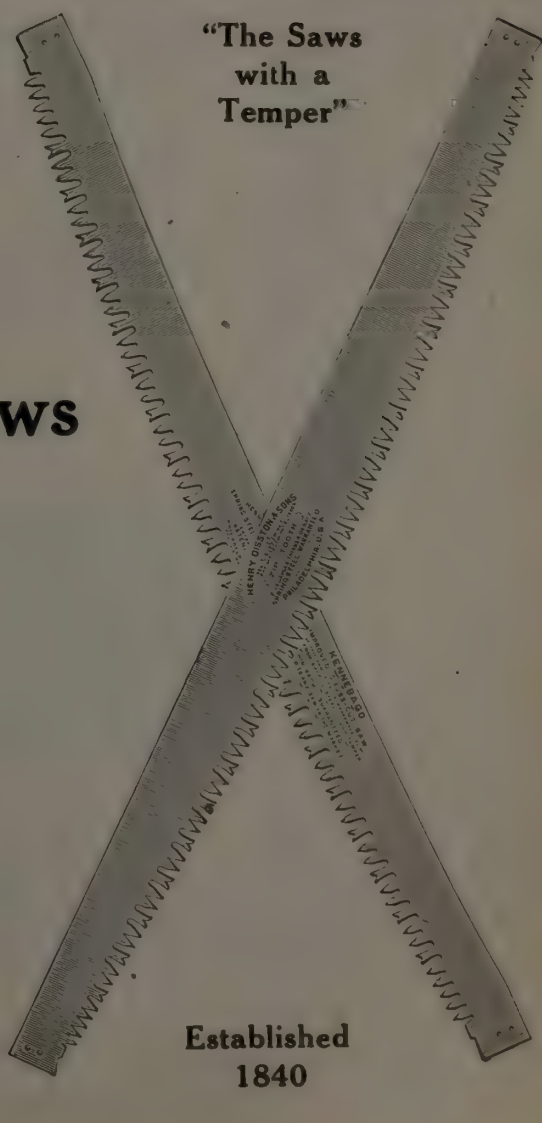
They are ground to a true taper all the way from cutting edge to an extra thin back. Being ground on lines that conform exactly to the breast of the saw, the blade is absolutely uniform in thickness throughout the entire length of the cutting edge. This special method of grinding gives the maximum amount of clearance with the minimum amount of set, without sacrificing elasticity and stiffness. You know that all these points are good points, and substantiate our claim that Disston Cross-cut saws are unexcelled.

You will find a lot of valuable information in our Cross-Cut Saw Booklet. Sent free on request

Henry Disston & Sons Ltd.

Keystone Saw, Tool, Steel and File Works
2-20 Fraser Ave.
TORONTO, ONT., CAN.

"The Saws with a Temper"



Established 1840

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TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	31 00	32 00
1 x 12 common and dressing	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft.		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft.		16 00
2 x 4 to 12, 10 and 16 ft.		19 00
2 x 4 to 12-in., 12 and 14 ft.		19 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet: 8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain		31 50
Fir flooring, 1 x 4, edge grain		35 00
Fir flooring, 1 x 4, flat grain		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 30
XXX 6 butts to 2-in.		3 25
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	40 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1st and 2nds, 4/4	42 00
Birch, No. 1 com. and bet., 4/4	35 00
Birch, 1st and 2nds, 6/4 and 8/4	45 00
Birch, 1st and 2nds, 10/4 and 12/4..	52 00
Birch, 1st and 2nds, 16/4	55 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4..	34 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet...	28 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	32 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1st and 2nds, 4/4	40 00
Hard Maple, common and better, 4/4	30 00
Hard maple, 12/4 & 16/4, 1sts and 2nds.	46 00
Red oak, plain 1sts and 2nds, 4/4	63 00
Red oak, plain, No. 1 com., 4/4	40 00
Red oak, plain No. 2 com. 4/4	29 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	65 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain, 1sts and 2nds, 4/4.	63 00
White oak, plain, No. 1 com., 4/4	40 00
White oak, plain, No. 2 com., 4/4	29 00
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	66 00
Red and White oak, plain, No. 1 com. 5/4 and 6/4	43 00
Red and White oak, plain, No. 2 com. 5/4 and 6/4	32 00
Red and White oak, plain, 1sts and 2nds, 8/4	70 00
Red and White oak, plain, No. 1 com. 8/4	48 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	88 00
White oak, ¼ cut No. 1 common	57 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$52 00	54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	25 00	26 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	17 50	18 00
1"x3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	15 00	17 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1¼-in.	19 00	21 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x4" and up, 6'-11'	17 00	18 00
1"x4" and up, 12'-16'	18 00	20 00
1"x9"-10" and up, 12'-16'	22 00	24 00
1¼"x7" 8-9" and up, 12'-16'	22 00	24 00
1¼"x10" and up, 12'-16'	22 00	24 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles:		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	70	75
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Quebec Spruce Deals		
12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00
Cuts and Better	
4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00
No. 1 Cuts	
1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00
No. 2 Cuts	
1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in.. 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00
No. 3 Cuts	
1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00
Common and Dressing Mill Run	
1-in. x 4-in.	25 00
1-in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00
No. 1 Barn	
1 inch	31 00 45 00
1¼, 1½ and 2-in.	36 00 45 00
2½ and 3-in.	45 00
4 inch	50 00
No. 2 Barn	
1 inch	28 00 36 00
1¼, 1½ and 2-in.	30 00 36 00
2½ and 3-in.	38 00
No. 3 Barn	
1 inch	21 00 28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00 25 00
Box	
No. 1, 1, 1¼, 1½, 2-in.	22 00 25 00
No. 2, 1¼, 1½, 2-in.	19 00 23 00
Mill Culls	
Mill run culls, 1-in.	19 00
1, 1¼, 1½ and 2-in.	20 00
No. 2	17 00 18 00
Lath	
No. 1, 32-in. pine	1 80
No. 2, 48-in. pine	4 35
No. 1, 48-in. pine	4 85
No. 3, 48-in. pine	3 85
Hemlock Lath 48 in.	3 80

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

S. 1 S. and 1 E.

Dimension	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8	14 00	17 00	20 50	18 50
2 x 10	18 00	18 50	21 50	19 00
2 x 12	18 00	19 00	23 50	20 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension	
2 x 4, 8, 12, 14, 16	18 50
2 x 4-10-18-20	20 50
2 x 6, 8 to 16	18 50
2 x 8, 8 to 16	18 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	26 50
2 x 10 and 2 x 12; 8-16 ft.	23 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	25 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	27 50
No. 1 Common Boards	
4 inch	19 00
6 inch	21 50
8, 10, 12 inch	23 50
Mixed widths	22 50
Flooring	
4 or 6 inch No. 1	33 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00
Shiplap—Finished	
6 inch	20 00
8, 10 and 12 inch	21 00
Siding	
6 inch No. 1	33 00
6 inch No. 2	31 00
6 inch No. 3	21 50
Lath	
No. 1 Cedar, pine, spruce (not mixed)	4 00
No. 1 Cedar, pine, spruce (mixed)	3 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	25 10
3 x 8 in.; 8 to 16 ft.	22 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	25 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	27 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	17 50
2 x 4 in.; 12 and 14 ft.	18 50
2 x 4 in.; 10 and 16 ft.	19 50
2 x 4 in.; 18 and 24 ft.	20 50
2 x 4 in.; 22 and 24 ft.	21 50
2 x 4 in.; 26 to 32 ft.	23 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	20 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	22 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	23 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	25 00
2 x 14 in.; 10 to 16 ft.	25 00
2 x 14 in.; 18 and 20 ft.	27 00
2 x 14 in.; 22 and 24 ft.	28 00
2 x 14 in.; 26 to 32 ft.	30 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	21 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	22 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	23 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	24 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	26 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	24 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	24 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	25 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	25 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	32 00
Nos. 1 and 2, 1 x 4 in., E. G.	31 00
Nos. 1 and 2, 1 x 6 in., E. G.	29 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	23 00
No. 3, 1 x 4 in. or 6 in.	20 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	19 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft.	20 00
No. 2 Shiplap, 6 in.	19 00
No. 2 Shiplap, 8, 10 and 12 in.	20 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	19 00
Common Boards, 8 to 12 in.	20 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 75

LATH

Fir lath, 3/8 x 1 3/8 in. x 4 ft., bundled in 50's	4 00
Cedar lath 3/8 x 1 3/8 in. x 4 ft.	4 50

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$94 00
Uppers 5/4 to 8/4	92 00
Uppers 10/4 to 12/4	97 00
Selects 4/4	84 00
Selects 5/4 to 8/4	82 00
Selects 10/4 to 12/4	92 00
Fine common 4/4	61 00
Fine common 5/4	65 00
Fine common 6/4	65 00
Fine common 8/4	67 00
No. 1 Cuts 4/4	51 00
No. 1 Cuts 5/4	57 00
No. 1 Cuts 6/4	59 00
No. 1 Cuts 8/4	61 00
No. 2 Cuts 4/4	32 00
No. 2 Cuts 5/4	43 00
No. 2 Cuts 6/4	45 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	33 00
No. 3 Cuts 6/4	34 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	46 00
Dressing 5/4 x 10	51 00
Dressing 5/4 x 12	52 00
No. 1 Moulding 5/4	58 00
No. 1 Moulding 6/4	58 00

Continued on page 62)

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NATIONAL Worm Drive Trucks are made in the largest Motor Truck Plant in Canada. The design is the product of our own Engineering Department, and is the result of the most searching investigation of the requirements of Canadian roads and conditions. The materials used in NATIONAL TRUCKS are the same as specified by the British War Office in ordering Trucks for war purposes.

Lumber Companies will find NATIONAL MOTOR TRUCKS the most economical for hauling logs, dressed or rough lumber, and other products of the industry. Four models to suit every condition. Capacities of Trucks are 1,000 lbs., 1,500 lbs., 4,000 lbs. and 7,000 lbs.

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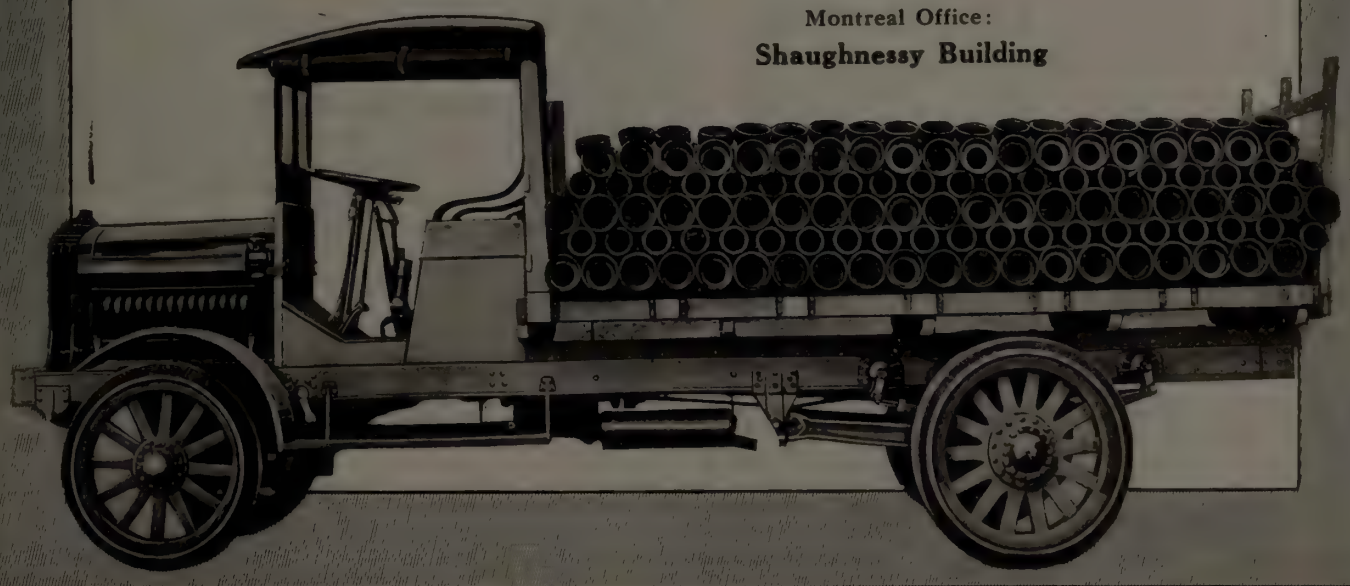

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No. 1 Moulding 8/4	58 00
No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	32 - 33	21 - 23	13 - 15
5/4 to 8/4	34 - 36	23 - 25	13 - 14
10/4 to 16/4	39 - 41	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	35 - 37	22 - 24	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	34 - 36	23 - 25	14 - 16
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	32 - 34	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	44 - 46	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	60 - 62	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in.	92 00	98 00
Selects, 1 to 2 inch	80 00	88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	70 00	72 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	36 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 00	34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	28 00	29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		23 50
Spruce, 8 in. and under dimen.		26 00
10 and 12 in. random lengths, 10 ft. and up	25 00	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	23 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	23 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	20 00	21 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	21 00	22 00
1⅝-in. spruce laths	4 15	4 25
1½-in. spruce laths	3 85	4 00

New Brunswick Cedar Shingles

Extras	3 30	3 40
Clears	2 75	2 90
Second clears	2 40	2 60
Clear whites	2 25	2 30
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.	3 60	3 70
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear	3 50	3 60

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for the

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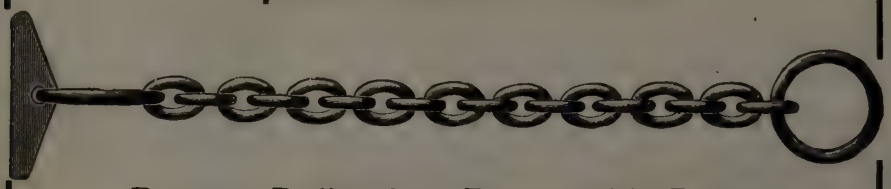
Special Chains to order



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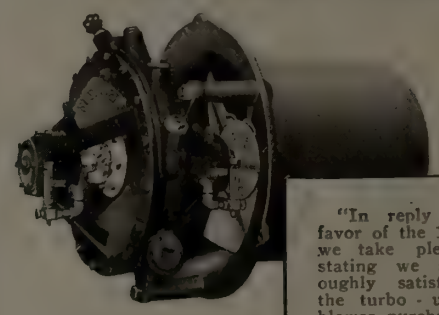

"In reply to your favor of the 11th inst., we take pleasure in stating we are thoroughly satisfied with the turbo-undergrate blower purchased from you. We have no trouble at all, keeping up steam, burning nothing but shavings mixed with coal dust. We have been able to cut our fuel cost to a minimum and consider your blower a very good investment." (Name on application)

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have proved successful on account of correct design and careful construction.

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B. F. Sturtevant Co. of Canada, Limited

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Selling Agents for Sanford Riley Stoker Co., "The Riley Stoker"

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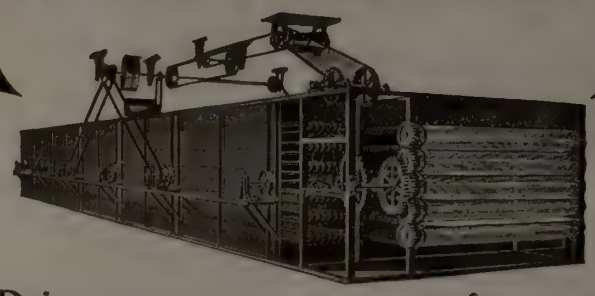

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Timms, Phillips & Company

DUST COLLECTORS
Canadian Blower & Forge Company
Sheldons Limited

ELEVATING AND CONVEYING MACHINERY
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Jeffrey Manufacturing Company
Waterous Engine Works Company

EMERY GRINDERS
Carborundum Company
Waterous Engine Works Company

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Hamilton Company, William
Jenckes Machine Company
Waterous Engine Works Company

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Sheldons Limited

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Canadian Blower & Forge Company
Sheldons Limited

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Nicholson File Company
Simonds Canada Saw Company

FIRE BRICK
Elk Fire Brick Company of Canada

FIRE FIGHTING APPARATUS
Waterous Engine Works Company

FLOUR
Campbell Flour Mills

FOREST ENGINEER
Lt.-Col. L. J. D. Marquis

GLOVES
Eisendrath Glove Company

GRAPHITE
Turner Brothers Canada, Limited

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Can. Mathews Gravity Carrier Co.

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Anderson Lumber Company, C. G.
Cameron & Company
Fassett Lumber Company
Fesserton Timber Company
Gillespie, James
Hocken Lumber Company
Hoffman Bros.. Company
Moores, Jr., E. J.
Muir, Kirkpatrick & Sharpe
Newman, John P.
Spencer, C. A.
Stearns Salt & Lumber Company
Summers, James R.
Terry & Gordon
Webster & Bro., James

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Canada Wood Specialty Company
Wilson Bros.

HEMLOCK
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Bartram Bros.
Bourgouin, H.
Fesserton Timber Company
Graves, Bigwood & Company
Haeberle Lumber Company
Hart & McDonagh
Hocken Lumber Company
Laferte, J. A.
McGibbon Lumber Company
Mason, Gordon & Company
Spears & Lauder
Spencer, C. A.
Terry & Gordon
The Long Lumber Company

HOSE
Can. H. W. Johns-Manville Co., Ltd.
Dunlop Tire & Rubber Co.
Gutta Percha & Rubber Company
Turner Brothers Canada, Limited

HARDWOOD VENEER DOORS
Wilson Bros.

INTERIOR FINISH
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Canadian Western Lumber Company
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Southern Lumber Company
Stout Lumber Company
Terry & Gordon
Valley Lumber Company
Wilson Bros.
Wisconsin & Arkansas Lumber Co.

KNIVES
Disston & Sons, Henry
Peter Hay Knife Company
Simonds Canada Saw Company
Waterous Engine Works Company

LATH
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Austin & Nicholsin
Bartram Bros.
Beck Mfg. Company, C.
Christy-Moir Company
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Fesserton Timber Company
Fraser Limited
Fraser-Bryson Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Georgian Bay Lumber Company
Harris Tie & Timber Company
Graves, Bigwood & Company
McGibbon Lumber Company
New Ontario Colonization Company
River Ouelle Pulp & Paper Co.
Southern Lumber Company
Stout Lumber Company
Spencer, C. A.
Terry & Gordon
Valley Lumber Company
Victoria Harbor Lumber Company
Wisconsin & Arkansas Lumber Co.

LAUNCHES
Adams Launch & Engine Company

LOCOMOTIVES
Canadian Locomotive Company
Climax Manufacturing Company
Jeffrey Manufacturing Company
Montreal Locomotive Works

LOCOMOTIVE CRANES
Canadian Link-Belt Company

LOGGING CARS
National Steel Car Company

LOGGINC CHAINS
Columbus Chain Company

LOGGING & MACHINERY EQUIPMENT
Boving Hydraulic & Engineering Co.
Hamilton Company, William
Ryther & Pringle Company
Waterous Engine Works Company

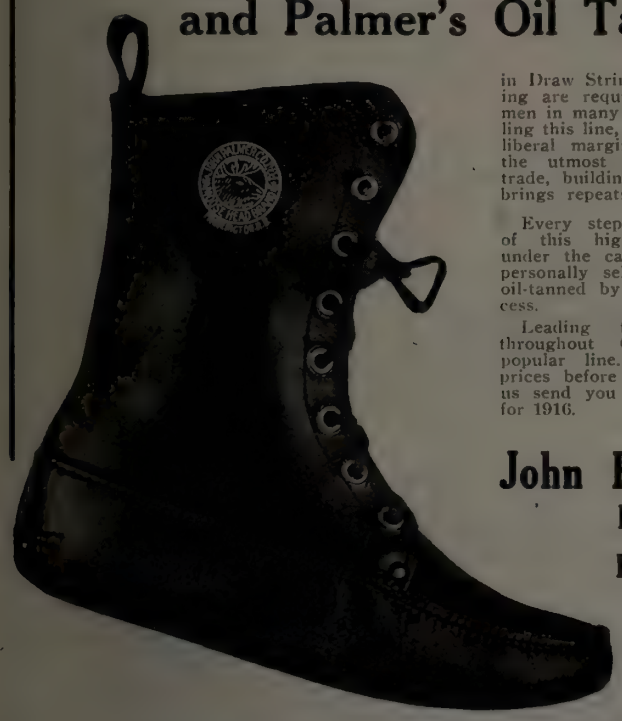
LUMBER
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Auger & Son Limited
Austin & Nicholson
B. C. Lumber Commissioner
Canadian Western Lumber Company
Canada Wood Specialty Company
Cottton Belt Lumber Company
Crossett Lumber Company
Dudley, A. N.
Eagle Lumber Company
Fassett Lumber Company
Fesserton Timber Company
Garrett Lumber Company, T. H.
Georgian Bay Lumber Company
Goodday, H. R.

(Continued on page 66

Merchants! Share in Our Big 1916 Sales

Every year sees a heavy increase in sales for the genuine Palmer's Oil-tanned, waterproof footwear. Our fine new plant has been the outgrowth of the demand we have created by A1 quality, and we are now ready to cope with record sales for 1916.

"Moose Head Brand" and Palmer's Oil Tans



in Draw Strings and Regular Sewing are required by thousands of men in many walks of life. Handling this line, you not only secure a liberal margin of profit but give the utmost satisfaction to your trade, building the reputation that brings repeats.

Every step in the manufacture of this high-grade footwear is under the care of an expert; we personally select all leather used, oil-tanned by our own secret process.

Leading footwear jobbers throughout Canada handle our popular line. See samples and prices before placing orders. Let us send you our free booklet L., for 1916.

John Palmer Co.
Limited
Fredericton, N.B.

(Canada's Largest Manufacturers of Oil-Tanned Footwear.)

Don't Blame the
FIRE BRICK

if it fails to give satisfaction. More likely than not you have been using the wrong kind for your particular purpose. A firebrick intended for use in a small hand-fired boiler may not give the same result if used under high pressure boiler with mechanical stoker.

So when sending us your enquiries be sure to specify for what purpose these brick are to be used.

You are sure then of a high quality brick, that is absolutely the best for your purpose.

We Manufacture the Following Well Known Brands

"Elko," "Elk Steel," "St Marys," "Keystone" and "Rotex"

Catalogue is yours for the asking.

Elk Fire Brick Co. of Canada, Limited
HIGH GRADE FIRE BRICK and CLAY
Federal Life Bldg., Hamilton, Canada

EST. 1880 "FACTS FIRST"

James D. Lacey & Co.

EXPERIENCE : RESOURCES : PRECISION

Shall Stumpage be an INVESTMENT, a Speculation or a "Gamble?"

All investment in timberland, unless for immediate logging operations is, technically speaking, speculation—because profits depend on Increase in value. All good timberland is steadily and rapidly appreciating in value, so that the only thing which stands between the investor in timberland and a sure profit is the question as to whether a tract actually contains the stumpage on which the purchase price is based.

The best "cruising" of timber after the old-fashioned method (or non-method) introduces a factor of possible error so great that the purchase often becomes nothing short of a "gamble." Everyone knows of case after case where a buyer has met heavy losses—often without any intent to deceive on the part of the seller.

A full LACEY REPORT on a timber tract, made on the internationally-known and essentially scientific LACEY system, which we have been 36 years in developing, removes the last vestige of "gamble" from any timber transaction (whether carried through under our auspices or not) and smoothes the way for both buyer and seller.

James D. Lacey & Co.
INTERNATIONAL TIMBERLAND FACTORS
EST. IN 1880

CHICAGO
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SEATTLE
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PORTLAND (ORE.)
1310 Northwestern Bank Building

NEW ORLEANS
1213 Whitney-Central Building

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Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Harris Tie & Timber Company
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Hettler Lumber Co., Herman H.
Harquail Company, Ltd., J.'& D. A.
Laberge Lumber Company
Laferte, J. A.
Laidlaw Lumber Company, R.
McDonald Lumber Co.
McLennan Lumber Company
Montreal Lumber Company
Moores, Jr., E. J.
Muir, Kirkpatrick & Sharpe
Murphy & Company, J. J.
Newman, John P.
New Ontario Colonization Company
Parry Sound Lumber Company
River Ouelle Pulp & Lumber Co.
South Coast & Northern Lumber Co., Incorporated
Southern Lumber Company
Stout Lumber Company
Summers, James R.
Terry & Gordon.
Trout Creek Lumber Company
Union Lumber Company, Limited
Valley Lumber Company
Victoria Harbor Lumber Company
Wilson Bros.
Wisconsin & Arkansas Lumber Co.

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LUMBERMEN'S FOOTWEAR

Palmer Company, John.

LUMBER MEASURING REGISTER

Jas. Morrison Brass Mfg. Company

LUMBER TRUCKS

Norman S. Knox
Waterous Engine Works Company

METALLIC ROOFING

Metallic Roofing Company

MOTOR TRUCKS

National Steel Car Company
Packard Motor Car Company

NORTHERN PINE

Anderson Lumber Company, C. G.
Auger & Son
Beck Manufacturing Company, C.
Blair & Rolland
Bourgouin, H.
Cleveland-Sarnia Sawmills Company
Donogh & Company, John
Eagle Lumber Company
Fesserton Timber Company
Forest Mills of B. C., Limited
Fraser-Bryson Lumber Company
Gordon & Company, George
Gillies Bros. Limited.
Graves, Bigwood Company
Harris Tie & Timber Company
Hart & McDonagh
Hettler Lumber Co.. Herman H.
Hocken Lumber Company
Long Lumber Company
Mackarell & Company, Thos.
Mason, Gordon & Company
Moores, Jr., E. J.
Quebec & St. Maurice Industrial Co.
Spencer, C. A.
Summers, James R.
Terry & Gordon
Watson & Todd, Limited

PACKING

Can. H. W. Johns-Manville Co., Ltd.
Dunlop Tire & Rubber Co.
Garlock Packing Company
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PLANING MILL MACHINERY

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Pink & Company, Thos.

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Perrin & Company, W. R.

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Waterous Engine Works Company

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Jeffrey Manufacturing Company

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Smart-Turner Machine Company
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Metallic Roofing Co.

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SASH

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Hoe & Company, R.
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Rogers & Company, Samuel C.
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Hamilton Company, William
Huther Bros., Saw Mfg. Company
Jeffrey Manufacturing Company.
Long Manufacturing Company, E.
McLennan Foundry & Mach. Works
Parry Sound Lumber Company
Payette & Company, P.
Waterous Engine Works Company
Yates Machine Co., P. B.

(Continued on page 68)

Canadian Made Locomotives

There is no need to go outside of the Canadian market in order to obtain the best logging locomotives. We have been specializing in this line for fifty years. You will find the design of our locomotives complete and the sturdy construction equal to every test of the severe service of logging operations.

Repair parts can always be had on the shortest notice.

This engine is 13½ ins. x 18 ins. and weighs 35 tons.

Grey Iron Castings—any size or shape—ordinary or intricate—made promptly. New foundry, splendidly equipped We would be pleased to quote on castings—singly or by contract. We also make drop forgings of all descriptions.

MAY WE SEND YOU SPECIFICATIONS?

Canadian Locomotive Company, Limited, Kingston, Ont.

Taylor and Arnold Ltd., Sales Agent, Montreal and Winnipeg

J. J. TURNER & SONS

PETERBOROUGH, ONT.

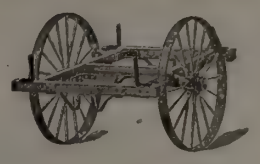
Government Contractors and the largest Manufacturers and Dealers in Canada of

Lumbermen's Tents, Bed Ticks, Grey Blankets, Nose Bags, Waterproof Goods, Steel Ranges and General Camp Outfits.

Write for Catalogue. **Prompt shipments.**

DETACHABLE

Lumber Trucks



For SAWMILLS, PLANING MILLS and LUMBER YARDS

Write for catalogue and prices.

Norman S. Knox

47 Wellington Street East TORONTO

LOGGING LOCOMOTIVES

The designs of our Logging locomotives are the result of wide experience, extending over a period of 80 years.

The material used in their construction is thoroughly tested and is the best of its kind.

All details are accurately finished to standard gauges and are absolutely interchangeable on all locomotives of the same class and size.

This cuts out long delays at critical times of the work, as parts liable to wear can be kept on hand or shipped promptly from our works.

MONTREAL LOCOMOTIVE WORKS, LIMITED,

DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.

VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

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DARLING BROTHERS LIMITED

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Branches: Toronto and Winnipeg

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Fraser Limited
Gillespie, James
Harris Tie & Timber Company
Long Lumber Company
McGibbon Lumber Company
Muir, Kirkpatrick & Sharpe
North Shore Shingle Association
Terry & Gordon.
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SODA PULP PLANTS
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Arkansas Soft Pine Bureau
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Crossett Lumber Company
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Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Hobart & Company
Mason, Gordon & Company
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Stout Lumber Company
Valley Lumber Company
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Mackarell & Company, Thos.
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Columbus Chain Company
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Waterous Engine Works Company

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Pratt & Whitney Company
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Campbell Lumber Company. L. E.

TIMBER LANDS
Lacey Co., Jas. D.

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Canadian Link-Belt Company
Jeffrey Manufacturing Company
Waterous Engine Works Company

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Webster & Bro., James

VENEER MACHINERY
Perrin, William R.
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Fleming Bros.

WATER WHEELS
Boving Hydraulic & Engineering Co.
Hamilton Company, William
Smith Company, S. Morgan

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Canada Wire & Iron Goods Co.

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Canadian Blower & Forge Company
Jeffrey Manufacturing Company.
Long Manufacturing Company, E.
Waterous Engine Works Company
Yates Machine Co., P. B.

WOOD PULP
Becker & Co.
New Ontario Colonization Co.
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YELLOW PINE
Chicago Lumber & Coal Co.

ATKINS

There is a distinct advantage in using **Atkins Segment Ground Cross Cut Saws.**

You will realize this fact when you try them.

By actual test we are cutting 25 per cent. more timber with least cost for refitting. Let us send you our book "C.L." Write for it to-day. ATKINS PERFECTION No. 5 and No. 69 EUREKA FALLING SAWS are the most popular Saws in Canada to-day. Send us your name for further information. Let us tell you what these Saws are doing. Then you can use your own good judgment later on.

Atkins No. 69 Eureka Falling

E. C. ATKINS & COMPANY

Makers of Sterling Saws

Factory—
HAMILTON, ONT.

Branch House:
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Canada Lumbermen

Have learned from experience that "ASBESTOL" Gloves and Mittens serve their purpose better than any other work gloves on the market.

Made from the best selected leather,

EISENDRATH'S Celebrated Horse Hide,

by skilled workmen, these famous work gloves and mittens are proof against the effects of heat, steam and water.

Make sure of the "ASBESTOL" trade-mark the next time you buy work gloves. Most good dealers know "ASBESTOL" and carry the line.

Eisendrath Glove Company

2001 Elston Ave. **CHICAGO, ILL.**

Made in U. S. A.

Canyon Lumber Company, Everett, Washington

Plymouth Cheaper in the End

In July, 1913, the Canyon Lumber Company of Everett, Washington, wrote us:

> "We use Plymouth D Ship 200 thread lathyarn for tying up our Kiln Dried finishing lumber, such as flooring, Ceiling, Drop Siding and special stock. We use this for the reason that it goes further to the pound than any other lathyarn we have found, and while we could get 200 thread lathyarn for less money, we find that your yarn is cheaper in the end."

Today this concern still prefers Plymouth Lathyarn, using it on both lath and finishing lumber and taking about a ton every six weeks.

Plymouth Lathyarn gives more ties than any other for the same money. And it's always the same. Try it.

PLYMOUTH CORDAGE COMPANY
NORTH PLYMOUTH, Mass. WELLAND, Ont.

INDEPENDENT CORDAGE CO., LTD.
TORONTO, ONT.—CANADIAN SALES AGENTS

P. S.—This same company uses Plymouth Manila Rope around booms and mills.

Not altogether what we say but what users say

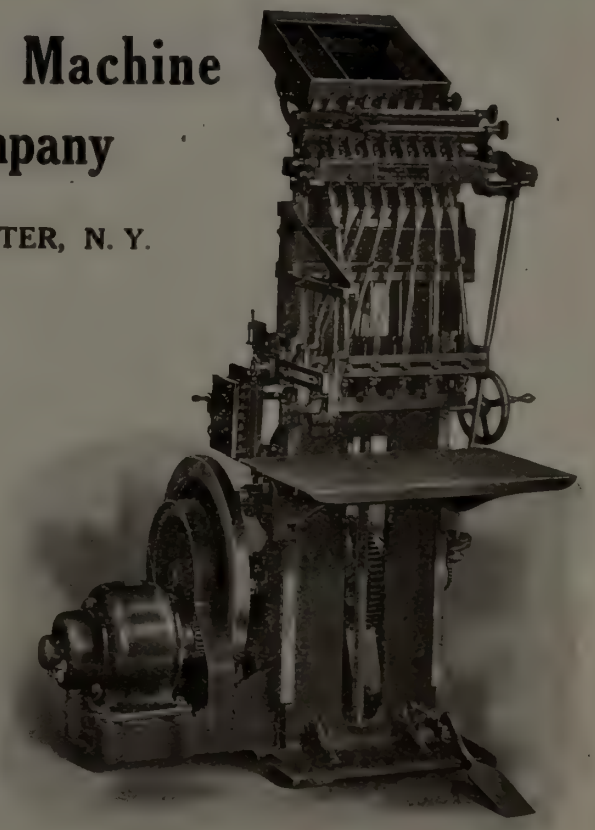
"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

Morgan Machine Company

ROCHESTER, N. Y.



Manufacturers of—

Nailing Machines,

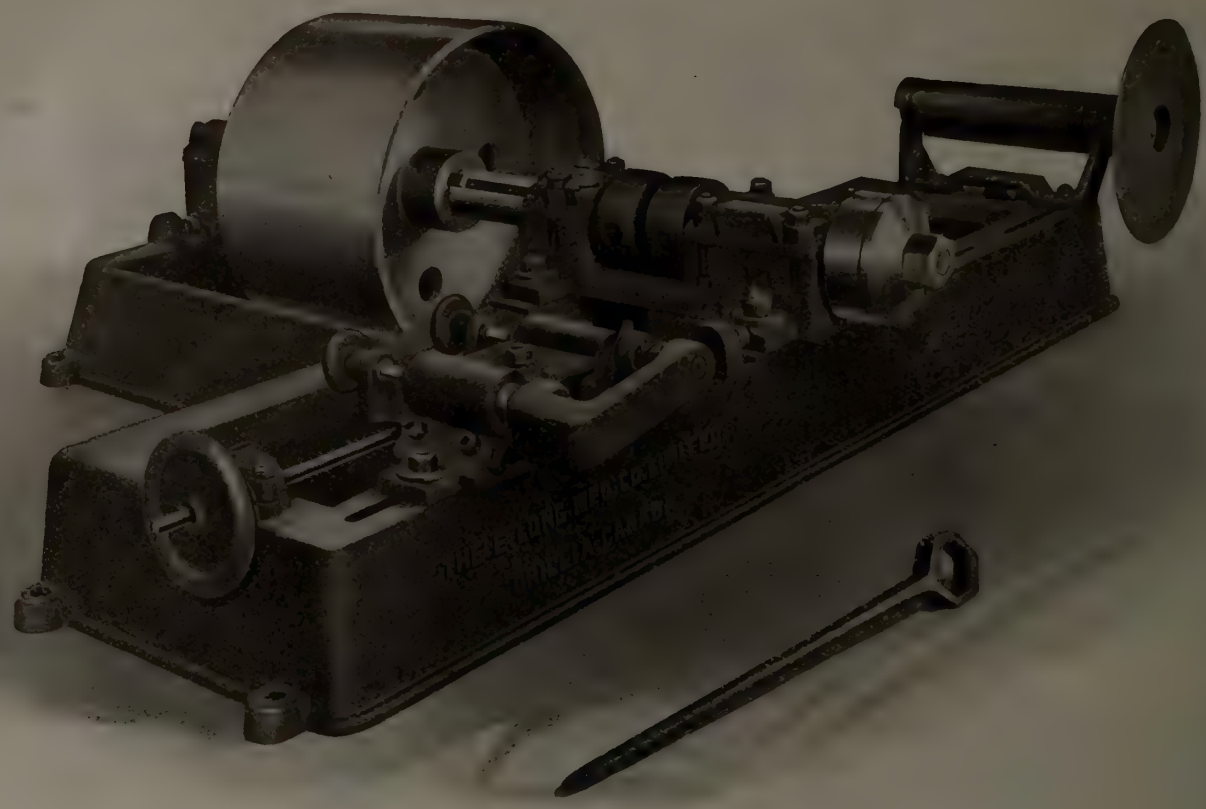
Lock Corner Box Machinery,

Box Board Matchers,

Box Board Printing Machines.

Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the **Morgan Machine Company** for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.



THE E. LONG MANUFACTURING CO. SAW-MILL MACHINERY ORILLIA, CANADA

THE E. LONG MANUFACTURING SAW-MILL MACHINERY ORILLIA, CANADA

Iron Saw Frame

For a simple, substantial machine that will stand up under long service and a heavy lumber production, we have no hesitation in commending the machine herein described and illustrated, as having made good under the severe tests of actual service.

Note particularly the simplicity of design, the accessibility of every part, and the full adjustment provided for.

The frame, or bed, of the machine is made in a single casting of the hollow box section, heavily ribbed and absolutely rigid. This facilitates the installation of the machine and insures a proper relation of parts being maintained. All the parts of the machine rest on planed surfaces and are bolted through the top of the bed casting. To get at these bolts, large hand holes are left on the inside of the machine; one of which can be seen above.

Ask us for catalogues and prices

The E. Long Manufacturing Company, Limited

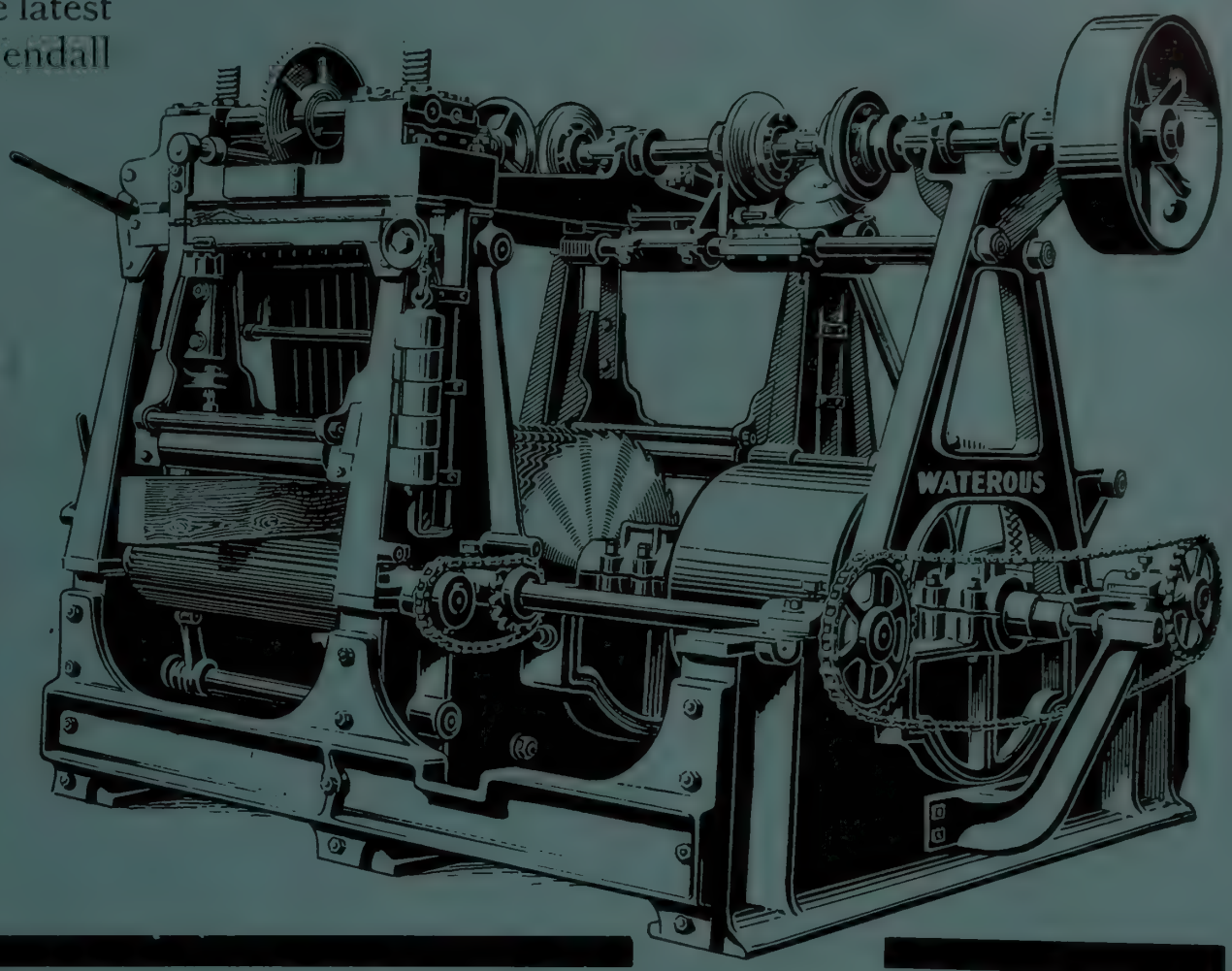
Orillia - Ontario

A New Machine That IS New

This illustration shows the latest development of the Kendall Circular Gang.

It was completed in our shops on October 1st, 1915, and is the last word in Circular Gang design.

It takes cants from 4" to 12" thickness and at the rate of from 2500 to 3000 a day, will turn them into lumber, perfect in finish and cut evenly from end to end. Big capacity on small stuff and lumber cut better than is possible on Band Saw, Circular Saw or Vertical Gang distinguish this machine.



The 1916 Model Kendall Circular Gang

The Kendall Circular Gang has come to stay. It meets the demand for a machine that will turn small logs into merchantable lumber economically. Those already in use though of old design have proven its worth.

These earlier models are still being built and sold. They are good machines—*but there is a better.*

The 1916 Model Kendall Gang built under the supervision of Mr. I. N. Kendall, from new drawings, and new patterns, incorporates *absolutely original features* found in none of the older design machines now being manufactured elsewhere.

While all the good points of previous models are retained, such weaknesses that use has made apparent have been eliminated. The new features and better construction of this 1916 Kendall Gang mean an appreciable increase in capacity, in nice cutting ability, and in safety, convenience and sturdiness.

This *latest* development of the Kendall Gang patents is built in a shop that has specialized in high class machinery construction — that has built machinery for Canadian sawmills for more than 50 years. Our reputation is a guarantee that this New Model Kendall Gang is built as it should be.

When you investigate the Circular Gang question see that you get facts and figures of the "WATEROUS BUILT" Kendall Gang—the new machine that IS new.

The Waterous Engine Works Co., Limited

H. B. Gilmour, Vancouver, B.C. BRANTFORD, CANADA Winnipeg, Man.

$5,000,000.00

worth of mixed metal sold annually.

"FROST KING" METAL

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price 30c per lb., Fort William and East; West of Fort William 35c per lb., delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, 40c per lb.; West of Fort William, 45c, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

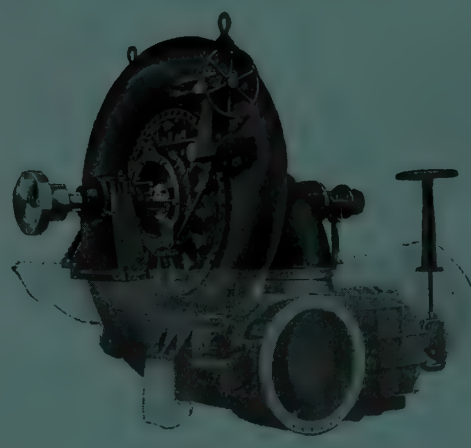
Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Smith Hydraulic Turbines

for driving the

Paper Mill and Pulp Grinder



This type of equipment specially designed for high head developements.

Our particular claim for these turbines is service, the kind of service that responds to the demand

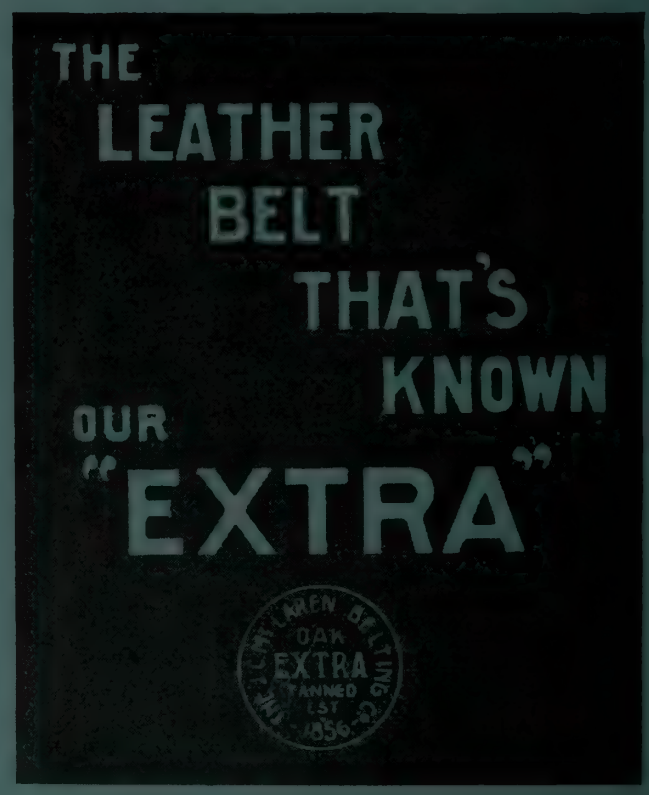
Promptly and Efficiently

Write for Bulletin F

S. Morgan Smith Co., York, Pa.

H. B. VanEvery—CANADIAN REPRESENTATIVE

405 Power Bldg. - - - Montreal, P. Q.

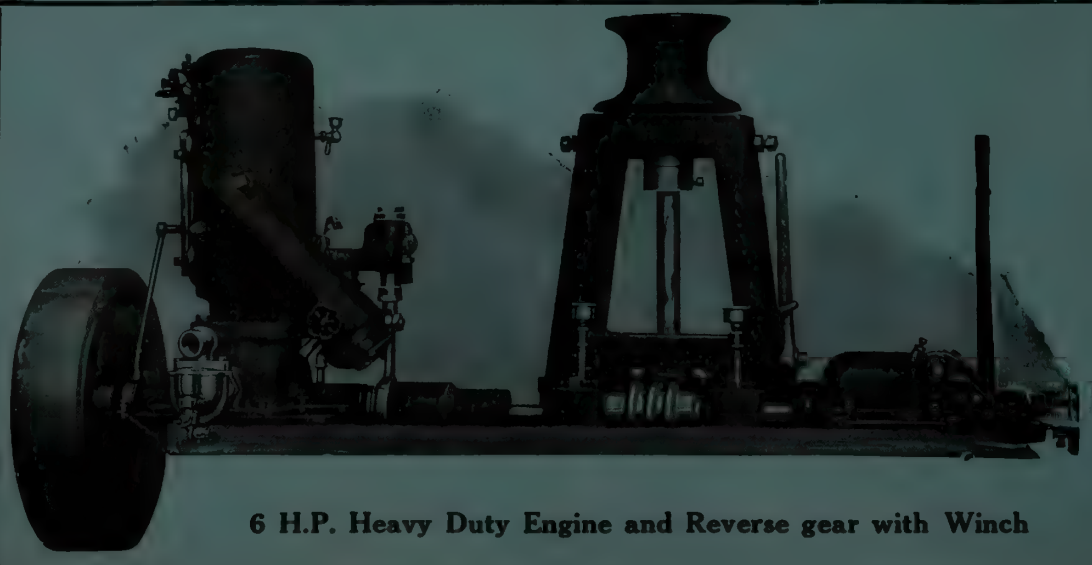


Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.

Limited

General Mill Supplies MONTREAL



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River Driving Costs

will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

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Penetang, Ont.

Vol. 36 Toronto, April 1, 1916 No.

Canada Lumberman & Wood Worker

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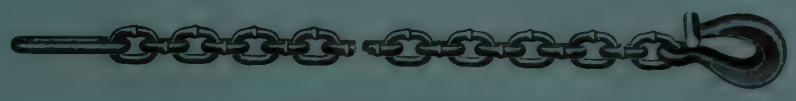
Highest quality

Boving Hydraulic & Engineering Co.
LINDSAY, ONT. Limited



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Made in Canada Write to Fully Guaranteed

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Balata Belting

Waterproof and Stretchless.
The best belt for sawmills.

Manufactured and guaranteed by

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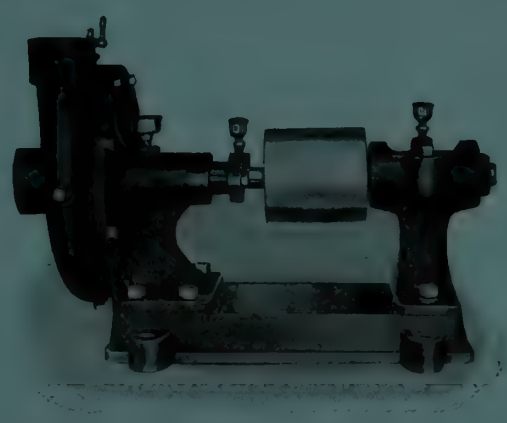

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PUMPS

let us figure on your needs.

The Smart-Turner Machine Co., Ltd.
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J. M. T. VALVES
Globe Angle Check Safety

All parts proportionately accurate. Materials and workmanship of the highest grade. Guaranteed to give excellent service under conditions for which they are recommended.

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The Morrison Lumber Register, as illustrated, is bolted to your planer, molder, etc. It records each stick as it is fed under the wheel of the register. It is absolutely accurate and dependable.

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Morrison Lumber Measuring Register

Alphabetical Index of Advertisers, Page 64 Classified Directory to Advertisements, Page 68

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AMPHIBIA BELTING

COSTS LESS PER DAY

Put Good Belting

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Good Machines

Your machines are expensive, and naturally you expect them to turn out the quality and quantity of work commensurate with their cost.

Then why harness them with belting which cannot begin to do them justice?

Use

"AMPHIBIA"

Planer Belting

and get the most work from your machines, in the quickest time, at the lowest cost per day of service.

Try a sample run of "AMPHIBIA" Planer and prove its merits.

"Leather like gold has no substitute."

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Established 1876

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For 40 Years Tanners and Manufacturers of the Best Leather Belts

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The FLEXIBLE WATERPROOF BELT

"AMPHIBIA"

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Cross Arms, Shaped, Bored and Painted

3¼ x 4¼ x 3′ 6″	2000 pcs.
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3¼ x 4¼ x 4	12000 pcs.
3¼ x 4¼ x 6′	9000 "
All Selected Norway.	

Dressing done on short notice. ***Send us your inquiries.***

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand miH.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited,

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QUALITY LUMBER

We feature especially at this time

Shell Box Lumber

We have a large and varied stock of Pine and Spruce in grades suitable for this work.

We are also long on

1″ and 2″ No. 2 Hemlock. Good dry stock.

SEND US ALL YOUR ENQUIRIES.
WE WILL MAKE IT WORTH YOUR WHILE TO TRADE WITH US.

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Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

ENLIST

in the army of money savers and get our prices on

Hemlock, Red, Jack and White

Pine, Lath, Shingles, Ties and Slabs

We have 3 cars of 3X British Columbia Red Cedar Shingles in Transit

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HAMILTON, ONT.

Nothing Spooky

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Hocken's Hemlock

It is just genuine good lumber, strictly up to grade. It's price is always right and it is shipped on time every time. Write us.

Hocken Lumber Company, Limited

Otter Lake Station, Ontario

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Our Special List of British Columbia Products

5/8 x 3, No. 1 and 2 Clear Fir Ceiling Dressed 7/16 x 2½ Face.
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1 x 3, 8/18 ft. No. 1 and 2 Clear Fir V. Joint Drsd. to 12/16 or 13/16 x 2½ Face.
1 x 4, 8/18 ft. No. 1 and 2 Clear Fir V. Joint Drsd. to 12/16 or 13/16 x 3½ Face.
1 x 3, 8/18 ft. No. 1 and 2 Clear, angle and F. Grain Fir Flooring, Drsd. to 13/16 x 2½ Face.
1 x 4, 8/18 ft. No. 1 and 2 Clear angle and F. Grain Fir Flooring Drsd. 13/16 x 3½ Face.

NOTE FACE MEASURE OF CEILING AND FLOORING

Our flooring is not hollow backed, we deduct 50c off flooring prices for 13/16 x 2¼ and 3¼ face dressing.

British Columbia Shingle Special

5 to 2¼—12 in. Clear Butts 18 in. Perfections 220 lbs.
5 to 2 in.—12 in. Clear Butts.....180 lbs.
5 to 2 in.—XXXXX 16 in.....180 lbs.
6 to 2, 3/16—XXXX 16 in.....170 lbs.
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We are quoting low prices on all 12 in. Clear Butt Shingles.
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Our pine and veneered doors for domestic and export trade are made on the principle of "Not how cheap, but how good."
Our guarantee of faultless workmanship and choice materials goes with every door.

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WHITE PINE NORWAY PINE SPRUCE

All Sizes

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Our Shingles are uniform in quality, being well manufactured and graded.

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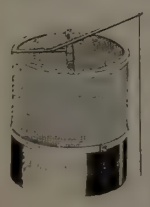

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All Thicknesses

Also full line in

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All grades and sizes.

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Merchantable 100,000'		1" Spruce
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Fay upright, graduated stroke.
Smart foot-power.

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12" Crescent jointer with safety head.
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M138 Cowan power feed.
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42" Fay & Egan power feed.
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Spruce
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All stock sized or matched if required.

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California White Pine
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Best Stock for Factory and Pattern Lumber

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Always

A big and carefully selected stock of hard and soft woods, well manufactured and accurately graded.

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Complete stocks always ready for prompt shipment.

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Strictly up-to-date, double-cutting band mill with horizontal and upright resaw attachment

10 hour capacity of 100 M feet

Planing mill and shipping facilities for 10 cars per day

Excellent location in mountain district of British Columbia.

Will sell plant and twenty years timber supply or will sell plant separate and sell timber to be paid for as cut.

Excellent opportunity for good operator.

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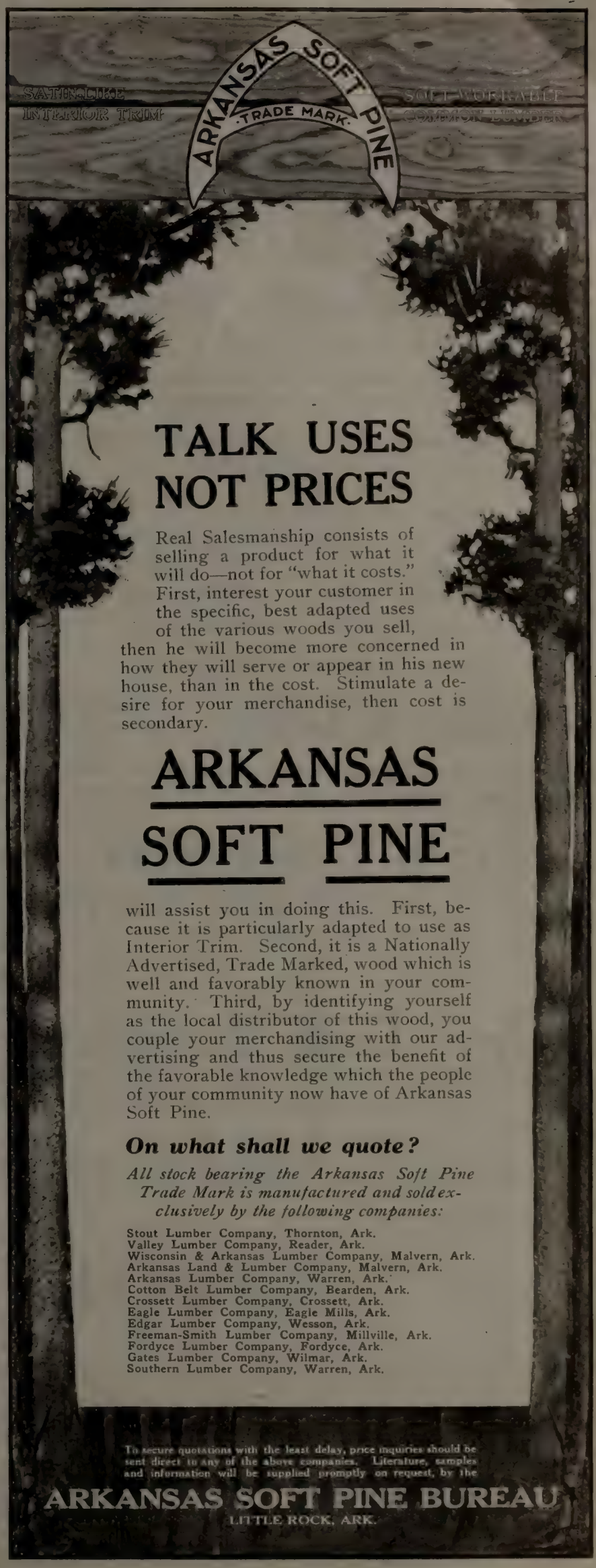

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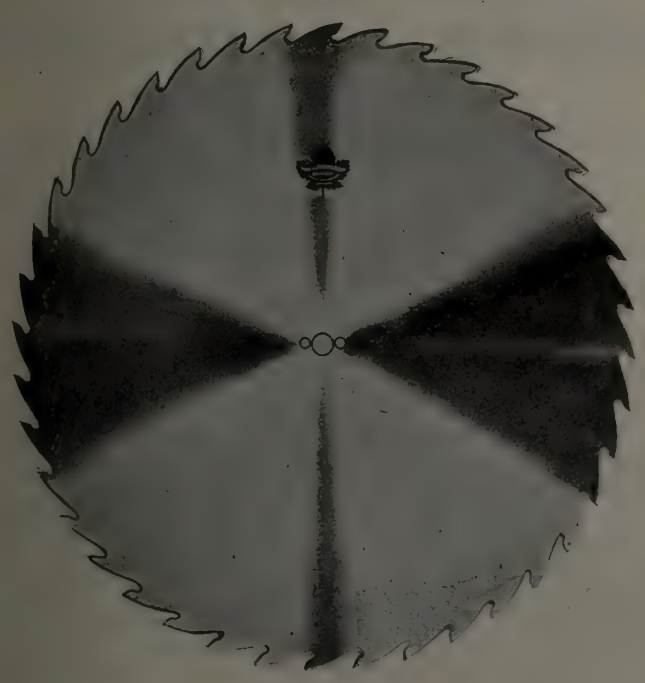

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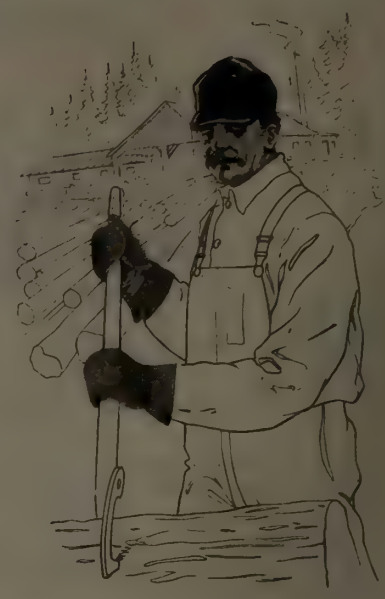

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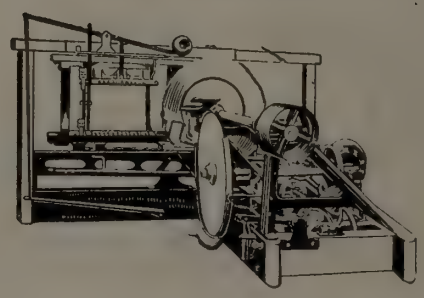

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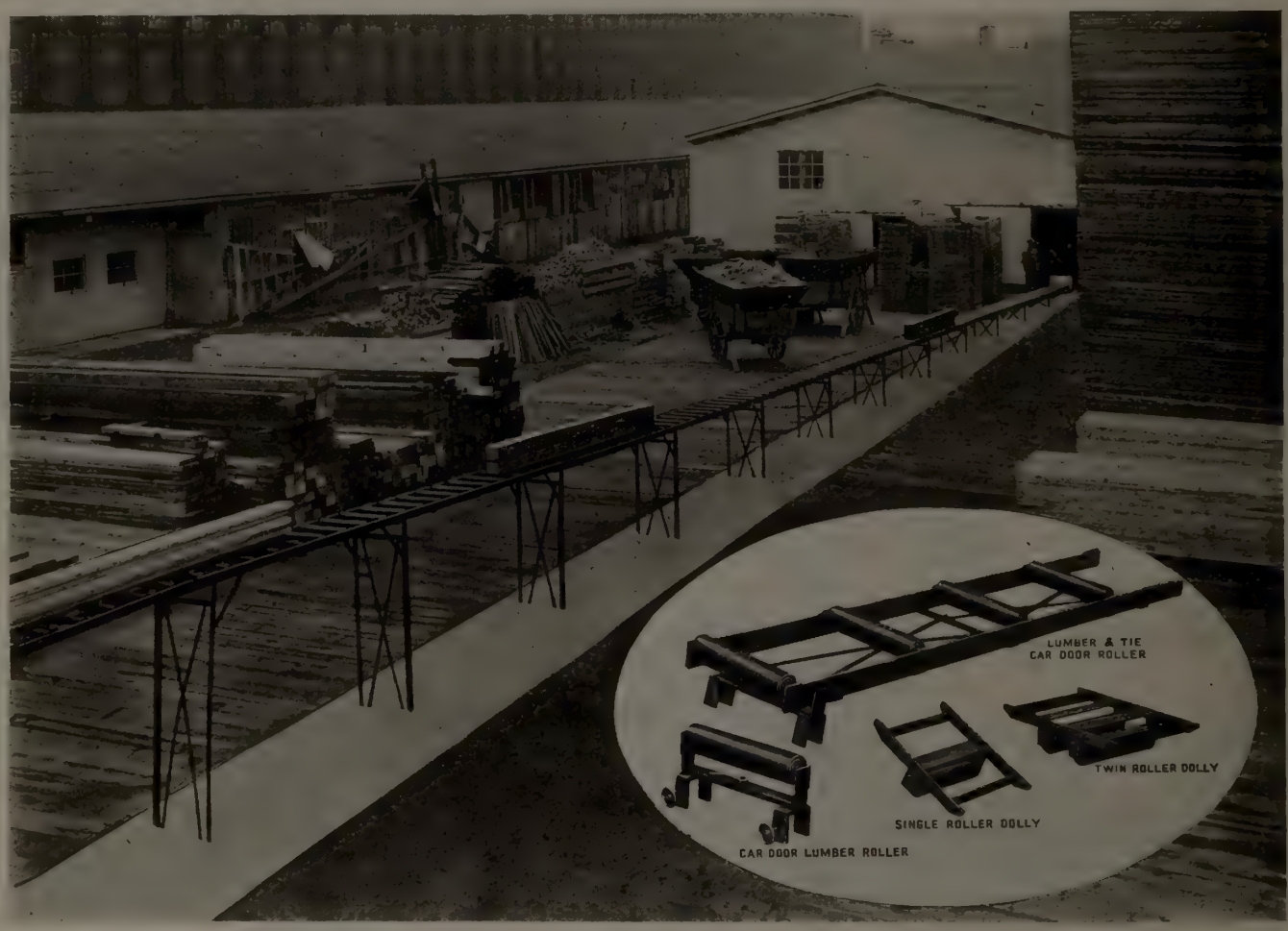

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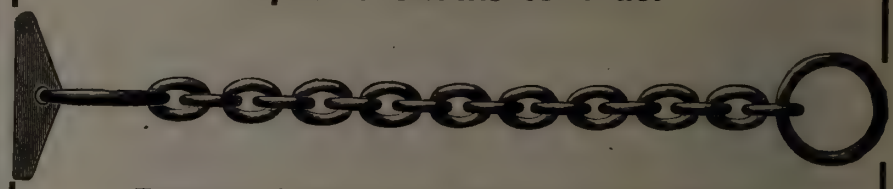

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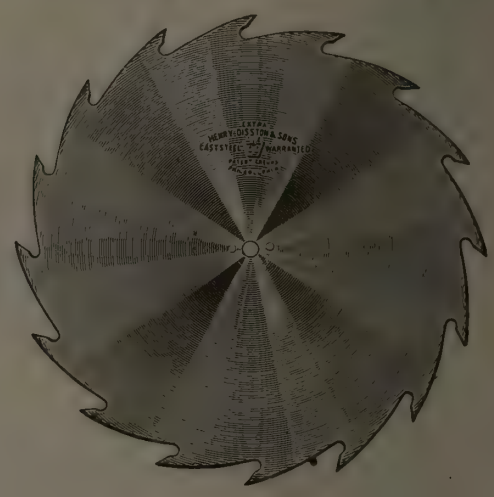

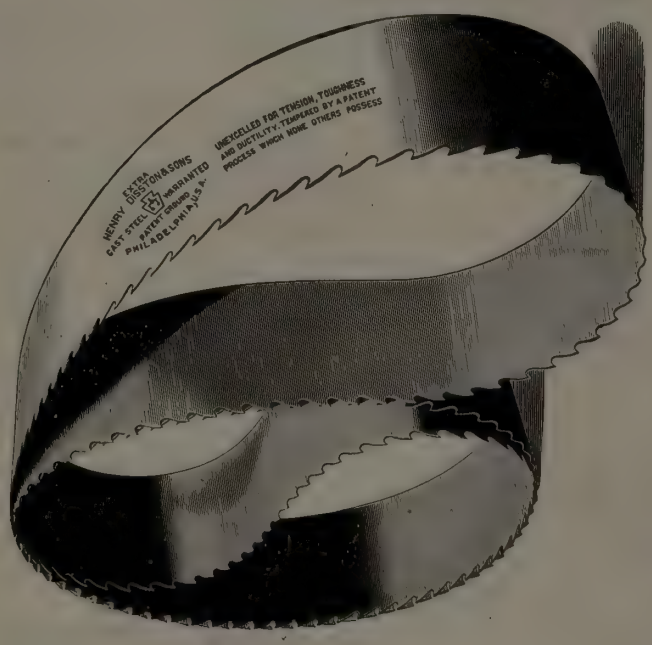

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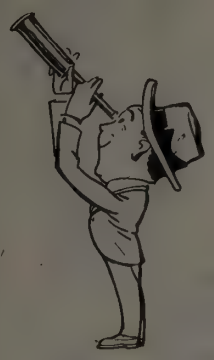

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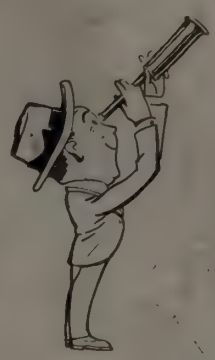

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TORONTO **MONTREAL** **WINNIPEG**

Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster General for Canada, for transmission as second class matter.

Entered as second class matter July 18th, 1914, at the Postoffice at Buffalo, N. Y., under the Act of Congress of March 3, 1879.

Vol. 36 Toronto, April 1, 1916 No. 7

Immigration to Canada After the War

Our minds are so occupied these days with the events taking place at the front that it is a difficult matter for most of us to give careful thought to other questions, particularly to those which have a more or less abstract nature and require considerable analytical study in order that they may be understood. Some of these questions, however, are today of such importance that they must be taken into consideration earnestly. The most important matter for all of us to consider, aside from the actual prosection of the war, is the question of adjusting our industrial affairs to the conditions which will prevail as soon as the war comes to an end. We touched upon this subject in our last issue in a general way, treating it chiefly from its international point of view in connection with tariffs and treaty arrangements between the Allies in regard to preferential trade, and we called attention to the great revolution which has already taken place in Great Britain regarding free trade, with all that this means to the other parts of the Empire.

In the present issue we publish a letter from a Canadian who has recently returned to Toronto after spending the winter in England where he has had exceptional opportunities for observing conditions as they exist. What he has to say is of much interest and importance and follows out some of the lines of thought which were developed in our former issue. He takes the point of view that the old world will experience greater poverty after the war than has ever before existed and that the debt-stricken countries of Europe will find their people seeking to emigrate to America to share in the wealth the war has left untouched, or has possibly increased. Whatever view one takes upon this question, we believe that there is plenty of sound reason for predicting, in the years which follow the war, a great flood of immigration to America. Therefor, after the question of tariffs and international treaties, the subject which will probably be of greatest importance to Canadians will be that of immigration. Unless the countries of Europe are able to impose upon their inhabitants some cast-iron form of prohibition against emigration, there will be millions of people who will seek their homes in America, and we in Canada will have a great new problem to solve. It is none too soon to give the matter thought today. Our Government ought at once to consider it from every possible point of view.

Already, in the days before the war, we were finding it a difficult thing to keep from our shores many undesirable immigrants who wanted to settle in Canada. After the war, this difficulty will probably be many times greater. These people will be coming to Canada and to the United States. Both countries will want to get the pick of them and to turn aside the undesirables. So we will have headed towards Canada not only those who decide to emigrate to this country, but those also who are rejected by the United States. Our problem will be, not to encourage immigration to our shores, but to separate the good from the bad. We will have a great opportunity to fill up our empty lands with the pick of the English, Scotch and Irish who emigrate and with the desirable ones from the lands of our Allies. At the same time we will have to be on our guard against the rif-raf from all over Europe. We cannot lay our plans any too soon as the job will be a big one when it materializes.

The suggestions made by our correspondent regarding the treatment of immigrants when thy arrive in Canada are deserving of study. Most of the men who arrive on our shores will be experienced in agriculture and in the ways of life in a new country and it will be up to us in Canada to make the most of them; to see that they are taken in charge, provided as quickly and completely as possible with the means of fitting themselves for their new life and encouraged to go on the soil and to help in making our country fruitful.

Trade Ethics Under Discussion in Toronto

"Trade Ethics" was the rather extensive subject discussed at a recent meeting of the Lumbermen's Section of the Toronto Board of Trade. Although the matter was brought up by one member in a rather apologetic manner, it developed a discussion having all the earmarks of something important in the way of definite regulations for the guidance of the trade. The over-lapping of the present fields of operation of manufacturers, wholesalers and retailers was the basis of the discussion. This is a fruitful source of uncertainty and sometimes of ill-feeling among lumbermen, as it is worked out today in most of the Canadian markets. If something can be done to draw the lines fairly clearly between the different fields, it will be a good thing for all concerned. Those who discussed the matter did not seem over sanguine of affecting anything very definite, but the fact that all admitted the importance of making an effort to clear the air of its present uncertainties, indicates that, at least, the question will be pretty well threshed out, and that, if it is possible to draw up workable definitions of the fields of the different members of the trade, it is pretty sure to be done.

The present difficulty commences at either end of the scale and extends right through to the other end. Manufacturers for instance, according to the present go-as-you-please methods may practically consider anyone a legitimate customer. The manufacturer of course confines himself to a very considerable extent to such customers as will take large quantities from him at one time and who are recognized fairly generally as legitimate wholesalers. There are manufacturers, however, who maintain their own selling organizations which are practically wholesale selling firms conducted under the management of the manufacturer. This combination of the manufacturer and the wholesaler in one firm gives it a much wider field of operation than the ordinary manufacturer or the ordinary wholesaler. We do not imply that there is any criticism of this way of doing business, it is a recognized and legitimate manner of marketing lumber. The situation, however, is one which calls for a pretty definite understanding on the part of all concerned as to what lines of trade they ought to consider their legitimate lines. Otherwise misunderstandings and hard-feelings are pretty sure to develop. The discussion of the matter by the Lumbermen's Section of the Toronto Board of Trade was brought up by a member of a firm of this nature who wished to hear the

opinions of others regarding what they consider his legitimate field of operation should be.

When you come to consider the operations of the wholesalers, the field of uncertainty increases many-fold and the troubles increase likewise. There are a good many definitions of a wholesaler and few of them bear much resemblance to the others. It would be a fine thing to have these definitions weeded down to one which would make it possible for the wholesaler to do a good business and yet avoid being called a number of unkind things which we have sometimes heard them called. Then there are firms of wholesalers conducted by parties who are also conducting a retail business. Some of these firms have financial interests in manufacturing operations which are so extensive that they really come very close to being manufacturers as well. They present another source of uncertainty which it would be well to clear up, if this can be done.

There is, in normal times, plenty of business for all these varieties of lumbermen and they can make a good living out of the trade without treading too much on one another's toes. Nowadays, however, when orders ar so rare, it is pardonable perhaps for a wholesaler to think that a retail order is a pretty important bit of business, and perhaps it is pardonable for the manufacturer to think that a contractor who takes a fair amount of stock is a pretty good man to sell to. The small volume of business that has been in progress during the past year and a half has not been enough to make much difference who gets it. But when times are good and lumber is moving extensively it will be a great advantage to the trade in Toronto if something definite in the way of trade ethics has been worked out and put into operation, so that everyone will know where he is at, and if anyone transgresses it will be easy for the others to agree about the extent of his transgression and to treat him in future according to his merits.

A Few Thoughts About Advertising Lumber

Lumbermen in Canada have never taken extensively to the idea which has been worked out successfully in the United States that advertising is not only an individual proposition for the marketing of one's own product but also a proposition which can be handled successfully in a co-operative manner with a view to creating a general demand for an article in the sale of which all are mutually interested. In the United States this idea has been making great advances during the last few years, until today, the producers of various kinds of lumber have, in various instances, co-operated successfuly for advertising their products so as to create a market for the men who have to sell them to the consumer. It is an everyday matter now to pick up a popular magazine and see in it several fine advertisements of white pine, northern hemlock, cypress, southern pine, redwood, etc. These advertisements are profitable or they would not be continued. They are creating in the minds of the public an idea that, after all, there is much to be said for lumber and timber as against their many forms of substitutes. Already the effect is widespread.

Is it not time that Canadian lumbermen took a leaf out of the book of their friends across the line and gave this question serious thought. In the absence of any such co-operation to make the public think about our Canadian products, these United States advertisements are setting up in the minds of Canadians an idea that there are some very choice woods across the line which cannot be had in Canada and which are better even than our own. It would be a comparatively new thing in Canada for the lumbermen to advertise in this manner, but we have good reason for believing that it would be a paying proposition and one which the lumbermen's organizations already in existence in several different provinces could take up to advantage.

Such a plan if worked out rightly would result in benefit to the lumbermen all round. By co-operation of this kind the manufacturer will make lumber a very attractive material for the retailer to handle. The wholesaler will benefit by the better demand coming from the retailer who will find a wider field of enquiry for his goods. At the same time the retailer will naturally become more of an expert in regard to the use of wood and the consumer will get the best material for his purposes in a far greater number of cases than he does today. The retailer moreover, will be encouraged to do his own share of the work by advertising more persistently and more earnestly in his own local papers.

Elsewhere in this issue we publish an article giving a summary of the remarks on advertising made by Mr. R. S. Kellogg, secretary of the National Lumber Manufacturers' Association. The keynote to his address was "Use Wood Where Wood is Best." He brought out the advantages of co-operative advertising, to which we have referred above and also discussed the importance of honesty in advertising. Mr. Kellogg has made a special study of the whole lumber trade in the United States and his opinion carries probably more weight on this subject than that of any other man. He states that the lumber trade, in years gone by, failed to realize the possibilities for increasing its markets which manufacturers in other lines had realized long ago and taken advantage of to the full. As a result of "advertising, lots of it, honest advertising and efficient advertising," he says, "the lumber trade has today revolutionized the methods of merchandizing its product and this applies not only to the manufacturer, but to the wholesaler and to the retailer." Such a strong statement should make Canadian lumbermen give the subject some of the attention which it deserves.

Honesty in advertising is the keynote of the success now being obtained in connection with lumber publicity in the United States. The idea has taken strong hold that the thing to advertise is that wood should be used only where wood is best suited for the purpose and that the public should be educated as to the uses of wood. This education is the field for the combined efforts of the manufacturers and the wholesalers. In working out such a plan in Canada it would probably be necessary to take the production of certain important districts and work up advertising campaigns for them separately. Such a plan is now being put into effect by the Government of B. C. The results, as our readers already know, are definite and most promising. There is probably a good field for similar work in connection with white pine, spruce, hemlock, birch, and possibly one or two other Canadian woods.

It may be imagined by some that our object in urging this proposition is to some extent one of self interest. We do not figure, however, that much of this class of advertising would come to our own columns. The idea is that the public should be educated in the uses of lumber through its popular magazines. Of course, the benefits that would result from the increased use of wood, would also be a benefit to lumber trade publications, but the big benefit would be to the whole industry, and as this plan has been put into operation so successfully in a considerable number of cases across the line, we can see no reason why a similar programme could not be successfully worked out in Canada.

The woodman is not sparing the walnut tree these days. East, West, North and South of Kansas City, there are cars loaded with walnut logs on the sidings and more logs piled along the tracks. The timber is coming to Kansas City to be sawed into gun stocks, says a despatch from that city. Three hundred cars of logs are coming into Kansas City a month, and close to 5,000 gun stocks are being turned out every day. Two plants have the business, the Penrod Walnut and Veneer Company in Sheffield, and the Frank Purcell Company in Armourdale. Each is surrounded by high barbed wire fences, locked gates and warning signs. But the nervousness of war contract holders is easing up.

The appearance of a new lot of shell box contracts in Ontario and Quebec is a welcome event of the last fortnight. About twelve or thirteen million feet of pine, spruce and hardwoods will be required for these boxes and already stock is moving for them. There is just one fly in the ointment although its importance remains still to be seen. The prices of the boxes are said to be so low that there will be very little if any money in them.

New Shell Box Orders Make Their Appearance

On March 17th the Imperial Munitions Board allotted contracts for a little over a million shell boxes. The orders were divided between Quebec and Ontario firms, about 65 per cent. going to Quebec and the balance to Ontario; the Ontario orders being largely located at Eastern points. The contracts are for the production of 6 round 18 pounder boxes; 50 round 4.5 C. C. boxes; 2 round 60 pounder boxes and 2 round 6 in. boxes.

These contracts will require roughly about 12 or 13 million feet of lumber, the varieties being spruce and pine in 1 in. stock 4 in. and up wide for the tops, bottoms and sides, and birch and maple in 1 in. stock varying from 7 in. to 9 in. wide for the ends. The Toronto firms which received contracts were T. H. Hancock and the York Lumber Company.

Bushmen's Battalion Making Quick Progress

A report from Ottawa states that permission has been granted to lumbermen now attached to overseas battalions of the 2nd Divisional Area to be transferred to the 224th Foresters' Battalion of Ottawa.

Recruiting for the Bushmen's Battalion is going ahead rapidly. It is expected that fully 1,500 men will join. By the third week in March 700 men had already enlisted and applications were coming in rapidly from all over the country. On March 18th the 700 men already enlisted were reviewed by his Royal Highness the Duke of Connaught at Ottawa. They presented quite a picturesque appearance, being armed with broad axes instead of rifles. His Royal Highness addressed the officers and men both in French and English, telling them that the service they would render overseas would, in practical value, equal that of any of the best trained, purely military battalions which had gone to the front.

The Battalion will mobilize at Quebec early in April and will be ready for the transports within five weeks from the time the war office asked for it. The officers in command are Lt.-Col. Alex. McDougall, Major Gerald White, M. P., and Major B. R. Hepburn, M. P.

The English Prohibition of Imports

In connection with the prohibition of the import of furniture wood, hardwoods and veneers into Great Britain, which was recently announced, the British Board of Trade has appointed the following committee to grant licenses under special circumstances for importation of such goods:—J. H. Bovill, chairman; Geo. Burt, J. P., and Col. G. T. B. Cobbett, with Mr. H. J. Phillips of the Board of Trade as secretary. The furniture woods, hardwoods and veneers prohibited by the proclamation comprise those hardwoods which are so specified in the appendix to the import list No. 32, 1914. The prohibition of imports does not include fir, pine, spruce, oak, teak sleepers or staves, or wood manufactures, as for instance, 3 or more ply wood. Among the woods for which license to ship must be obtained are the following:—basswood, cedar, gum, hickory, iron wood, maple, walnut and American white wood. All applications for permission to import these woods under special circumstances, namely, where goods were already on the way at the date of the prohibition proclamation, or had been paid for, are to be addressed to Mr. H. J. Phillips, secretary of the Licensing Commission, Gwydyr House, White Hall, S. W.

A cable from London, Eng., under date of March 24th states that the president of the Board of Trade has given notice that after March 30th importation of the following, among other goods, will be prohibited:—furniture, manufactured joinery and other wood manufactures, wood and timber of beech, birch, elm and oak. Importation of these will be allowed only under a license, but such licenses will generally be granted only for goods on the way to the United Kingdom, or goods actually purchased when the notice was issued.

Car Shortage Situation Critical

Orders for lumber for delivery at prairie province points have been so plentiful lately that B. C. mills are confronted with a serious shortage of cars for making delivery. Mr. F. W. Peters, general superintendent of the B. C. Division of the C. P. R. recently issued a statement explaining the company's position, in which he said:—"The lumber mills are pressing the railways for more box cars because of the large orders coming in from the prairies. The difficulty the railways have is that they are called upon by the farmers in the prairie provinces for cars to move the wheat which is still unmarketed, and exposed to the weather. Every car taken away from this service and sent out to B. C. would mean a loss of that car to the best customer the lumber mills have got, and would mean that the farmer would be unable to realize on his crop and purchase lumber. The problem is how to keep the storage elevators open. To receive this grain, cars must be furnished to ship it by rail to Atlantic ports. The storage at these Atlantic ports is all filled up owing to lack of shipping facilities across the Atlantic, which means that thousands of cars are being held under load and thus are out of service. Canadian railways claim conditions on this side of the line are infinitely better than in the United States where the whole country is suffering from a lack of cars to handle the enormous traffic offering."

The congestion in the United States is described in a despatch from Chicago which states that only one of the through railroads between New York and Chicago has its tracks clear. There are 100,000 cars, loaded to the roofs, backed up on the storage tracks between the two cities. Goods that left Chicago in December have not yet got to within 300 miles of the Atlantic seaboard. For a distance of 900 miles every available spur and line is choked with loaded cars. The docks, piers, private warehouses, public storehouses, and open spaces in the yards are piled high with goods. The car shortage situation is expected to become even more acute with the advance of spring, and no improvement is believed to be in sight.

Trying to Relieve Car Shortage

At a recent meeting of the Board of Trade of New Westminster, B. C., Mr. J. G. Robson, chairman of the Lumber Committee, and Mr. Rummell, chairman of the Transportation Committee were appointed a special committee to enquire into the shortage of box cars for lumber exports from that district and to endeavor to induce the provincial Government to assist in facilitating the interchange of cars across the Fraser bridge for the St. Paul and Milwaukee line. Mr. Robson said: "That just at this time when the lumber manufacturing industry had half a chance to come to life, the impossibility of getting box cars, owing to the congestion on the prairies, where cars were used for grain storage purposes, was proving a serious handicap to the mill men. He instanced how local shingle mills were being tied up for want of cars and how the Fraser Mills were short 900 cars. The B. C. Electric were doing much to provide the facilities by making connection with the different railways as the C. P. R. at Abbotsford, Northern Pacific at Sumas, and Great Northern. If some arrangements could be made to facilitate the transfer of Milwaukee cars over the Fraser bridge, this would be a factor in relieving the situation."

Embargoes Hampering New England Trade

Boston, Mass., March 23, (Special to the Canada Lumberman):—Trade is not very active here just now on account of the cold weather and snow we have had. There is still a heavy coating of snow on the ground, in fact as much as there has been at any time this winter. We look for at least a good fair trade when weather conditions improve. Of course in some lines of manufacturing, particularly in box manufacture, there is great activity. It looks as though there would be at least an average amount of building, possibly more. We are greatly hampered by railroad embargoes, and the New Haven railroad seems to be shut off most of the time. It is injuring business on that line and considerably effecting our distribution of lumber. We are in hopes when we get better weather the railroads may be able to take care of their business better, but are afraid the New Haven is not likely to be able to get along without embargoes for a good while to come. Of course New York business is also hampered very much in the same way.

May Tax New Brunswick Timber Lands

The question of how to raise more revenue was discussed by many supporters of the Government in the New Brunswick Legislature recently, and the resolution of J. L. White, proposing to place a tax upon granted lands not included in the school districts was enlarged upon and an amendment offered by L. P. D. Tilley to have a committee of the House inquire into the advisability of taxing both crown and granted lands was adopted. There are 7,000,000 acres of crown lands and it is said about 4,000,000 acres of granted lands. Some propose a tax of two cents an acre upon crown lands, which would yield about $140,000. An equal tax upon granted lands would bring $80,000, but it is said some propose that granted lands shall pay four cents per acre, which would yield a revenue of $160,000, or $300,000 in all. The Speaker appointed Messrs. White, Carter, Mahoney, Jones, Culligan, Woods, Hachey, Tilley, Lockhart and Slipp as the committee for this purpose.

Big Orders for Douglas Fir Gone to U. S.

A despatch from Portland, Ore., states that a contract for 4,500,000 feet of Douglas fir lumber has been awarded by one of the Entente Powers to the Duncan lumber mill. On account of the scarcity of vessels on the Pacific, the entire order, it is said, will be delivered by rail to the Atlantic seaboard for shipment to Europe. The contract calls for delivery within 90 days. Another rush order from an Entente Power, which is said to have been placed with the Wauna mill, calls for the delivery on the Atlantic seaboard of 80,000 feet of spruce for the construction of aeroplanes. During the last few days several large orders have been placed with the Columbia river mills by the railroads. The Great Northern Railroad has contracted with one mill, it is reported, for 4,000,000 feet of Douglas fir, to be used in the construction of box cars.

Canadian Timber Trade in South Africa

Conditions Which Restrict Its Use—How They Can Be Removed—Scandinavian Imports Favored

By H. R. MacMillan*

The natural forests and forest plantations of South Africa supply only a small proportion of the country's necessities. Such timber as is produced in the country is used chiefly for firewood, mining props, railway sleepers, native huts and fencing. Small quantities of the more valuable woods are used for vehicles, cabinetwork and handles. The total amount of South African timber used for all purposes annually is estimated to be 58,000,000 board feet, practically none of which is fit for saw-timber. In contrast with this it is estimated that 120,000,000 feet of sawn lumber are imported into the country annually.

The chief needs of the timber-using population of South Africa are at present supplied by imports.

The timber imports into South Africa for 1914 were valued at $5,962,915. South Africa in proportion to its population ranks after Australia as second in the list of the world's timber importing countries. The average value of the annual timber importations of Australia is $2.87 per capita, whereas the average in South Africa is $1 per head, including the native population who use no imported timber.

Mr. H. R. MacMillan.

The total imports of all kinds in 1914 were as follows:—

Article	1914 Quantity	1914 Value	1911 Value
	Cubic feet.	£	£
Pine	7,437,567	409,597	532,850
Railroad sleepers	Not stated.	377,962	Not stated.
Flooring and ceiling	2,039,736	143,417	187,300
Box shooks	Not stated.	85,228	82,853
Unspecified unmanufactured timbers.	975,539	60,659	51,495
House frames	Not stated.	51,992	70,730
Unspecified manufactured goods	Not stated,	38,902	34,746
Teak	53,207	20,202	(?)
Planed and grooved lumber	173,744	18,937	22,048
Oak	114,360	17,025	12,030
Handles	Not stated.	15,217	15,197
Staves	Not stated.	9,842	13,467
Walnut	42,637	6,337	7,083
Poplar	40,054	5,407	10,485
Hickory	15,956	2,234	8,202
Total	.....	1,242,274	*1,058,486

*Exclusive of an unknown quantity of railroad sleepers and teak.

Considering that no saw-timber is produced in South Africa, with a large agricultural population, an extensive system of railroads and public works and the greatest mining district in the world, the annual importations of timber do not seem sufficient. Timber is sparingly used throughout South Africa. There are three reasons for the grudging use of timber:—

1. The high price.
2. The sale of timber is not pushed.
3. Timber is considered as a temporary material in comparison with substitutes that may be used at the same or less cost.

Timber is inevitably high in price in South Africa. There are five causes for this.

(a) Sources of Supply:—The nearest important sources of supply are Sweden and America. The freight rates from Sweden are normally $10 per thousand feet board measure, and the freight rates from Canada and the United States are normally $15 per thousand.

(b) Profits Demanded by Importers:—In the case of a timber which could otherwise be landed for sale at a low cost the profits demanded by the importers are unduly high. Douglas fir 3-inch by 9-inch deals are landed in normal times at a South African port for 36 cents per cubic foot or 6¾ cents per lineal foot of 3-inch by 9-inch. Swedish deals are landed in normal times to sell at 47 cents per cubic foot or 9 cents per lineal foot of 3-inch by 9-inch. The custom amongst importers has always been to keep the price up by taking a larger profit on the Douglas fir and selling both Douglas fir and Swedish deals at approximately the same price. The purchaser in South Africa thus loses the benefit he would otherwise derive from the presence on the market of a cheap timber such as Douglas fir. Throughout the country it is customary for the importer to secure approximately 4 cents profit on Douglas fir and ½ to 1 cent profit on Swedish deals, per lineal foot of 3-inch by 9-inch.

(c) The Re-sawing of Imported Stock:—The custom in South Africa is to import timber in the shape of deals and logs, which are carried in stock by the importers, chiefly at the coast ports, and to re-saw these stocks to the order of the purchasers. Most of the Douglas fir, whether imported in timbers or 3-inch by 9-inch deals, is re-sawn before being used, except in the case of mining timbers. Large quantities of Swedish 3-inch by 9-inch deals are also re-sawn into 3-inch by 4½-inch, 1½-inch by 9-inch, 1-inch by 9-inch, and 2¼-inch by 3-inch. The sawing is usually done by the importer. The charges levied, though now decreasing, are very high. For cutting a 3-inch by 9-inch deal into 1½-inch by 9-inch or 1-inch by 9-inch, the charge is $1 for each hundred lineal feet of saw cut for Swedish deal and $1.25 for Douglas fir. For cutting a 3-inch by 9-inch deal into 3-inch by 4½-inch or 2¼-inch by 3-inch the charge is 50 cents for each 100 lineal feet saw cut for Swedish deal and 60 cents for Douglas fir. These charges vary slightly, but those quoted fairly represent the cost. In some districts Douglas fir is now cut for the same price as Swedish deals.

These charges for sawing perhaps do not represent an inordinate profit to the importer. Only small lots are sawn at a time, the plant is continually kept changing from one job to another and one size to another. The mills being small cannot be operated on the same basis of cheapness as is the case in lumber producing countries.

The sizes in use in South Africa are fewer than is the case in Canada. A great saving would result if these sizes were imported ready cut and carried in stock. The only objection is the probable loss through the checking or warping of the smaller dimensions when piled in the yards in the very hot, dry and destructive climate of the coast towns. It was observed, however, that a tendency exists to increase the proportion of ready manufactured sizes imported, particularly in Scandinavian goods where several of the sizes smaller than 3-inch by 9-inch may now be purchased 25 per cent. cheaper than the 3-inch by 9-inch, a concession doubtless inspired by the desire of the Scandinavian shipper to utilize the small trees.

(d) Climatic Effects:—The climate of South Africa, coupled with a certain amount of careless handling in the yards, assists to increase the cost of timber. Lumber piled in the open is exposed to months of hot sun and parching wind. Nevertheless, although lumber this year in South Africa is worth on the average over $40 per thousand at the coast, an incredibly large proportion of it was piled in the open, without cover of any kind, without sticking, on poor or no foundations and with little care given to the location or situation of the piles. The losses from checks in re-sawing timbers in some of the railway workshops have run between 30 and 50 per cent. Large proportions of stocks carried by the importers are on hand several months or a year and losses occurring necessarily figure in the selling price of the timber.

(e) Inland Rail Freights:—The inland rail freight rates greatly increase the cost of timber to the great bulk of the population. The timber imported into South Africa is landed at six ports as follows:—

	Cubic Tons 1914
Table Bay (Cape Town)	92,169
Durban	70,334
Port Elizabeth	44,519
East London	42,102
Mossel Bay	5,661
Delagoa Bay	*Not stated

*The importations through Delagoa Bay are usually equal to or greater than those through Cape Town.

Small quantities for Rhodesia are imported through Beira.

Over nine-tenths of the population of the country lives inland. The large towns and many of the best agricultural districts are 300 miles and more inland. The freight rates on imported timber are, generally speaking, twice as high as on domestic timber even though

*Special Canadian Timber Trade Commissioner. Reproduced from the Weekly Bulletin of the Department of Trade and Commerce.

there is as yet no domestic saw-timber. The general level of freight rates may be judged from a few instances.

Cape Town to Hutcheson—419 miles—rate on rough lumber, 37 cents per 100 pounds.

East London to Bloemfontein—404 miles—rate on rough lumber, 42 cents per 100 pounds.

Durban to Johannesburg—482 miles—rate on rough lumber, 72 cents per 100 pounds.

The cost of Douglas fir delivered to the yard in Johannesburg is approximately twice the cost c.i.f. at Durban.

The rate on dressed lumber is approximately twice the rate on rough lumber. Freight is charged on rough Douglas fir at the rate of 3 pounds per foot board measure.

It may be readily seen that in South Africa the cost of lumber to the consumer is very high indeed. Even such large purchasers as mines, railroad departments and construction companies pay high prices. In 1913 the South African railways, buying by the cargo, paid at the coast $40 per thousand feet for third and fourth grade Swedish 3-inch by 9-inch deals, and $37.50 for merchantable Oregon logs. The price to the house-builder or farmer in the interior is very much higher. The average individual purchaser in the farming districts of the country before the war paid 14 cents per lineal foot for fourth grade Swedish 3-inch by 9-inch, or $62.20 per thousand feet. Douglas fir deals or timbers at that time cost the farmer or resident of the small town over 200 miles from the coast slightly more. The prices in 1915 have risen to about $80 per thousand for both Swedish and Douglas fir, common grades.

The small quantity of native timber in the country does not exert any tendency to decrease prices. The Government sells standing timber, situated miles from a railroad, in a forest of mixed species where only one or two species can be logged and operating costs are high, for as much as $20 per thousand feet. The average price of all log timber sold by the Government is $6.60 per thousand feet on the stump. The cost of logging and manufacture in South Africa is much higher than it is in Canada.

The Importing and Selling of Timber

The conditions under which the timber business is handled are not likely to promote an increased demand.

The importing is done by merchants who carry stocks, and not by agents or brokers. In the case of White Sea and Vladivostok timbers or Douglas fir, which because of the lack of a regular liner service must be imported in cargo lots, the number of importers is very small, only two or three in each of the five ports serving the country. In the case of Scandinavian or Finland timber, which may be brought forward regularly in lines fortnightly to any important South African port in quantities of 10,000 board feet or more, a larger number of firms are engaged in importing, and small quantities are imported direct by the builders.

Over 80 per cent. of the timber stocks in the country are carried at the coast in order to avoid investing further capital in the payment of rail freight before the timber is needed. The only timber yards in the interior are at the mines, the railway workshops and comparatively small stocks carried by dealers in Johannesburg and several of the larger towns for the supplying of immediate wants. In towns of less than 5,000 population there are no lumber yards and no stocks of lumber. Anyone desirous of purchasing lumber does so from a price list or catalogue through the general merchant, who sends the order forward to the wholesaler at the coast. Great delay therefore sometimes results in getting timber. A public works engineer in an interior town was three months securing a Douglas fir stick 12 inches by 12 inches by 26 feet.

When inquiries are made by probable purchasers the timber merchants endeavor to get the business. But no efforts are made to encourage the use of timber. This absence of selling initiative and energy causes timber to lose ground with both large and small purchasers.

The railroads, mines, public works and harbor departments are constantly besieged by trained representatives of steel and concrete industries, demonstrating the advantages of using such products instead of timber. After the sales are made and steel and concrete are in use these same representatives are continually on the ground to observe the service rendered by their products, head off complaints, study faults and suggest improvements to the manufacturer in order that the quality of the product may be continually improved.

The small purchaser is similarly affected. Both the wholesaler and the retailer through whom the lumber is distributed to the builder and the farmer in the cities, towns and countries, carry timber as more or less of a side line. They are also agents for and carry stocks of corrugated iron, cement and other substitutes; in fact the retailer in all towns always carries these materials in stock, whereas he rarely carries lumber in stock. The situation, therefore, is that in a large proportion of cases if the builder in a South African town wants lumber he can get it only after effort and delay, whereas cement, metal and other substitutes are ready at hand.

The chief substitutes for lumber in South Africa are galvanized iron, bricks, cement and stone. Galvanized iron was sold in normal times for $40 per ton at the coast, or $47.60 per thousand feet superficial measurement. The freight to interior points is less per superficial foot for galvanized iron than for lumber. Galvanized iron lasts fifteen to twenty years and may be put up very rapidly on a light wooden framework. It has almost displaced inch boards in South Africa; it is used universally for roofing, excepting on a few public buildings and very costly residences. Galvanized iron siding is the most common material for native quarters in the towns and cities, warehouses, factories, mine buildings, preliminary farm buildings; it is also used for tight fencing.

Bricks.—Every town in the country has its brickyard, and every farmer makes his own bricks. Sun-dried bricks are used for native huts in the country, for farm buildings and for partitions in town and city dwellings. Kiln-burned bricks are the most common material for city buildings. Bricks are made and laid by native labor, and in the dry climate even sun-dried bricks last several decades, both for interior and exterior walls; where used in exterior walls they are plastered.

Cement and Stone.—Cement is manufactured in South Africa and retails in the interior and coast cities at $1.25 to $1.75 per bag. The country abounds in easily-worked building stone. Public works, the better class of dwellings and many farm buildings are stone or cement.

It is inevitable that where timber prices are high and substitutes cheap and durable, timber will be sparingly used. At present, timber is used only for false-work, or as a framing or trimming for other construction materials. There is no doubt, however, but that under proper direction the use of Canadian timber in South Africa may be greatly increased.

Sources of Imported Timber

The chief countries upon which South Africa depends for her timber supply are shown herewith, with approximate values of imports from each for 1914:—

Name of Country	Value of Imports 1914
Australia	$376,686
Sweden	372,596
Norway	114,164
United Kingdom	112,656
United States	105,663
Canada	63,377
Russia	43,740

Australia owes her pre-eminence in the list to Jarrah construction timbers and railway sleepers. The chief commodities from Sweden and Norway are 3-inch by 9-inch deals, flooring, ceiling and box shooks. The supplies from the United Kingdom consist principally of sleepers, sash and doors, handles and box shooks transhipped to South Africa from other countries. The United States supplies pitch-pine, Douglas fir, oak, sash and doors, handles and dressed lumber. The importations from Canada are practically confined to Douglas fir, Eastern Canadian deals and dressed lumber. Russia supplies White Sea deals.

From the standpoint of quantity and imports the most important part of the timber trade of South Africa is that listed under the headings "Pine" and "Unspecified unmanufactured goods." This class is also most important to Canada as it includes general building and construction timbers, the classes in which Canadian shippers can compete to the best advantage. The approximate origin of importations of this nature is shown below:—

Country of Origin	Value of Imports 1914
Sweden	$191,258
Norway	62,488
Canada	54,118
Russia	37,437
United States	17,766
Austria	6,760
Total from all countries	$470,256

The small quantities of building timbers secured from other countries are of little importance.

The quantity of rough lumber imported during the past five years has remained fairly constant, averaging in value $500,000 per year. The Canadian share of the trade has, however, diminished, dropping from $74,000 in value in 1910 to $32,000 in value in 1913; the decrease is probably due to a decrease in imports of Eastern Canadian deals, the supply of which in each year is taken up to a greater extent by

the United Kingdom and the United States. The share of the United States in this trade also shows a tendency to diminish.

Two General Classes Imported

The timber imported may be divided into two general classes:—

1. Lumber used in buildings.
2. Timbers used in public works, bridges, harbors and mines.

Building Timber.—The universal building lumber of South Africa for years has been Scandinavian or Russian deals. The chief size imported is 3-inch by 9-inch, the most popular lengths are 11 feet, 12 feet, 13 feet, 14 feet, a small proportion of lengths from 15 feet to 18 feet, and as many 19 feet to 24 feet lengths or longer as can be secured; odd lengths are desired. A small proportion of the import consists of 4½-inch by 3-inch, 3-inch by 2-inch, 1½-inch by 4½-inch. Though these sizes are landed $5 to $7.50 less per thousand feet than the 3-inch by 9-inch, the merchant prefers to import the 3-inch by 9-inch and re-saw it as required. Small quantities are also imported of 3-inch by 11-inch, 4-inch by 9-inch, 2-inch by 9-inch, 1½-inch by 9-inch and smaller fractions sawn from 3-inch by 9-inch.

The grades imported are thirds, fourths and fifths and correspond in qualities and uses to the "unsorted" from Eastern Canada and the "merchantable" and "common" of Western Canada.

The chief uses for Scandinavian and Russian deals are joists, rafters and plates in roofing (studding and planking), and for the local manufacturers of interior finish. The common sizes for joists are 3-inch by 9-inch and 1½-inch by 9-inch. Rafters, studding and roof plates (to support plaster walls and galvanized roofs) are usually 1½-inch by 4½-inch, 2-inch by 3-inch and 3-inch by 4½-inch.

Advantages of Scandinavian Article

The position now held in South Africa by Scandinavian and Russian deals is one which should to a very large extent be held by Canadian timber. The present advantages of the Scandinavian article are:

1. The ease with which it may be purchased.

As pointed out above, a direct fortnightly liner service exists between Scandinavian mills and South African ports. Any merchant or builder could, before the war, write or cable for 20,000 feet or more of any specification and delivery would be made within six weeks of the receipt of the order. The trade had been established for many years and all important builders or timber merchants in South Africa are in touch with Scandinavian shippers from whom they can secure regular monthly shipments of timber without being put to the expense of carrying a large stock.

The case with either Eastern Canadian deals or Douglas fir has been different; it is impossible to buy Douglas fir except by the full cargo, which restricts importation to those ready to invest large sums of money several months before the delivery of the timber. The same has been true concerning the purchase of Eastern Canadian deals though conditions are improving since it has been possible to import parcels by regular monthly sailings. If Eastern Canadian shippers have a surplus for export and can secure transportation when freight conditions become normal they will readily improve their trade by getting in touch through the Trade Commissioner at Cape Town with reliable firms of importers. The sentiment of the trade is in favor of using Canadian timber.

The inevitable result, when the small builder or merchant can buy Scandinavian timber direct, but must go to the large companies for Canadian timber, is that he imports the Scandinavian for himself and only uses or buys the other when he must.

A regular service from Western Canada to South African ports would bring Douglas fir within reach of the small importer in South Africa.

Smaller Margin of Profit

2. Scandinavian timber is handled on a smaller margin of profit.

The one advantage possessed by Douglas fir as compared with Scandinacian timber is its cheapness. The average cost landed at African port of the mixed third and fourth grade Swedish used, was, in normal times, $39.15 per thousand feet. The average cost of the Douglas fir was $30 per thousand feet. A large number of builders and merchants are importing Scandinavian timber in every port, but the trade in Douglas fir is restricted to the few who can finance it. The importers of Douglas fir usually charge about four times as high a profit per lineal foot on Douglas fir as is charged on Swedish timber. In normal times, the profit charged on Swedish was $4.50 per thousand, and on Douglas fir $18 to $19 per thousand, exclusive of any charge for re-sawing. The result of this system has been to keep Douglas fir prices higher than those of Swedish. Were the same profit charged on each, Swedish would sell at about $43.75, and Douglas fir at about $34.50. The quantity of Douglas fir used would immediately be doubled or trebled.

Government Purchases

3. Canadian timber was not accepted by the railroads and Government departments.

The railroads, all of which are Government-owned, and the Public Works Department, are the largest purchasers in South Africa of building lumber. All purchases are made by tender and few merchants can hope to do a large business unless they are able to secure a share of the railroad and government business. The largest purchases made by the railroads are for joists, studding and rafters in buildings, for sides and roofs of freight cars and for planking and decking on platforms and bridges. For years Scandinavian timber has been exclusively specified for the railroad requirements, and offerings of Eastern Canadian deals, even at lower prices, have been refused. The effect on Canadian trade has been serious and has been felt in two directions. Merchants not being able to sell Canadian deals to their largest customers have not stocked them. Carpenters and builders who have had railroad experience carry the prejudice against Canadian deals into private employment, and as a result the timber has been discredited throughout the country. Fortunately, Mr. Egan, Trade Commissioner, Cape Town, was successful in having Canadian red deals used experimentally in the railroad shops for coach building a few months ago. They were found satisfactory and assurance was given by the officials that henceforth Canadian deals would be accepted in competition with Swedish deals.

Fairly large quanitiies of timber have been used by the railroads for car flooring, sills and running boards. Pitch-pine alone has been used for these purposes. The officials in the car shops have believed that Douglas fir was unsuitable and have refused to accept it. Such has been their faith in their opinions that in October, 1915, when pitch-pine could not be secured for a certain car shop, they refused new sound Douglas fir offered them at $60 per thousand feet and paid $100 per thousand feet for second-hand pitch-pine from old buildings, which could only be re-sawn and used at considerable loss. This question was taken up with the general manager and engineering staff of the railroad and arrangements made that selected Douglas fir should be given a trial for freight car building purposes, for use in situations where pitch-pine, Swedish deals and teak are now used. Should such a trial prove satisfactory, as there is no reason to doubt, the effect on the reputation of the timber in South Africa will be great.

Arrangements were also made with the railroad officials that hereafter they will accept Douglas fir for joists, studding, etc., in buildings in competition with Scandinavian deals. This also will have a valuable effect upon the general standing of the timber.

One car shop uses 600,000 board feet of pitch-pine, 600,000 board feet of Swedish deals a year, and no Douglas fir. Large quantities of teak, costing $2.50 per cubic foot, are also used. The pitch-pine is used for freight car flooring. Flooring boards 7-foot 6-inch by 7-inch by 2¼-inch edge, grained cost 72 cents to $1.20 each when ready for use in the shops. Swedish deals are used for siding, ends and roofing in freight cars. Siding boards 2-inch by 6-inch, 8-inch by 11-foot, 12-foot, 13-foot, 16-foot and 17-foot cost on the average $1.10 to $1.32 each when ready to use in the shop. Douglas fir of equal grades equal to fully as severe a service can certainly be delivered to the railroad shops at a lower price.

Teak is now used in the framing of passenger coaches for sills, 4-inch by 14-inch by 63-ft., cant rails 3¼-inch by 5½-inch by 63-ft., and bottom sides 3½-inch by 10-inch by 63-ft. As teak cannot be secured in such long lengths they are spliced each once or twice. Admittedly climatic conditions under which South African coaches operate are severe, yet clear or selected Douglas fir well seasoned and manufactured should readily compete both for service and price. Teak uprights and finish are also used on passenger coaches.

Scandinavian Timber Known

4. The strength of Scandinavian timber is known.

A belief exists amongst builders, engineers and architects, though no facts can be brought forward to support it, that Scandinavian 3-inch by 9-inch deals are stronger and more reliable than either Canadian red or white deals or Douglas fir. Consequently, Scandinavian deals are always specified, except where lengths over 24 or 26 feet are required, when Douglas fir is used from necessity. The prospects for Canadian timber in the South African market would be improved if comparative tests were conducted on 3-inch by 9-inch dimensions in the various grades of Swedish (particularly third and fourth grades), Eastern Canadian and Douglas fir deals, and the results supplied to South African engineers, builders and architects.

The effect of prejudice and ignorance of Douglas fir was clearly shown recently in Cape Town. A certain steamship company when fitting up a large number of transports would not use Douglas fir for rifle racks even though it was offered at $7.50 per thousand feet cheaper than Swedish deals; they feared that Douglas fir was not strong enough and Swedish was used.

Swedish Timber Better Manufactured

5. Timber being valuable in South Africa, and even the third and fourth grades being sorted over to supply material to run through machines for the manufacture of mouldings, interior finish, box shooks

or sash and doors, great stress is laid by the importer on all pieces being true to size. This is particularly important with 3-inch by 9-inch, so much of which is re-sawn into smaller sizes. Swedish timber is nearly always exactly true to size. Timber from North America has not been, and some Canadian shipments containing a large number of pieces of 3-inch by 9-inch, one-half inch or more off size, have seriously hurt the reputation of Canadian deals. Very few complaints were heard concerning the character of manufacture of large timbers. Any shipper desirous of competing permanently in the South African market should send only timber true to size; if this is not done the business will be lost. A variation of one-quarter inch on 25 per cent. of the timber in the 3-inch by 9-inch size is the most that should be allowed.

6. This belief is firmly rooted throughout South Africa. Were it not so the use of Douglas fir would be several times as great.

(To be continued)

Large Increase in Stumpage Receipts

New Brunswick Has Largest Total on Record—Cut Approaching Limits of Annual Growth—Details of Output

The annual report of the Crown Lands Department for the Province of New Brunswick for the year ending October 31, 1915, has just been presented. It shows that the income of the Department has been the largest on record, a big increase being reported in the stumpage receipts. "A more favorable year for lumbering," the report says, "could hardly be anticipated, which accounts to some extent for the large quantity of lumber cut. At the opening of the season prices were not encouraging, but towards the middle of December a brisk demand for lumber products developed in British ports, with a consequent rise of prices, which stimulated cutting beyond the normal. The result was that a greater quantity of lumber was got out than could be marketed, owing to the shortage of shipping caused by the war, and consequently large stocks had to be held over. The following is a statement of the quantity cut on Crown Lands on which stumpage has been collected for the last eleven years, namely:

Year	Super ft.
1905	107,705,676
1906	141,449,449
1907	149,510,471
1908	152,318,333
1909	205,761,583
1910	281,716,402
1911	309,883,428
1912	282,893,141
1913	270,221,155
1914	270,234,773
1915	290,120,823

While perhaps it is a matter for congratulation that such a bouyant revenue from this source can be reported, it is undesirable to cut more lumber than the annual growth, which is estimated roughly at 300,000,000 superficial feet. While we have not yet exceeded the limit, the cut during the past few years has approached the maximum estimate. No one will dispute the contention made by the Department for some years that the indiscriminate cutting of the smaller logs is a practice to be avoided in the interests of the forests and the revenues of the Province. It is my firm opinion that many of the forests of the Province would be stimulated and improved if it were possible that nothing should be cut for at least a decade, in order that sections of the Province which have been heavily operated in the past might be renewed by undisturbed growth. In the attempt to reach a definite policy in this regard, the Department is handicapped by a lack of accurate knowledge of the Crown Lands, but it is hoped that the proposed classification of these lands will remove this difficulty, and will open the way for a very much more satisfactory administration than has been possible heretofore because of the lack of definite information that has prevailed.

The regulations were fairly well adhered to as regards size and the removal from the woods of tops up to five inches in diameter.

As trespassing has been frequent, on unlicensed Crown Lands, a rate of five dollars per thousand superficial feet has been imposed for lumber cut in trespass, which rate was carried into effect by an Order-in-Council and repealed the old rate of double stumpage. Persons who previously cut small quantities of lumber under trespass found it more advantageous to pay the double rate than to take out a license. With the five dollar rate the charge is nearly prohibitive.

The outlook for 1915-1916 is not bright for a large stumpage revenue, and at the time of writing this report would almost warrant the prediction that not much more than two-thirds of the lumber will be cut on Crown Lands this winter than was obtained last season.

The collection of stumpage was most satisfactory, notwithstanding the adverse conditions and the dulness of trade, showing that the financial depression that unhappily exists in many of the other Provinces of Canada was less marked here.

The receipts of the Department for the year and those for the year 1914 included the following:—

Receipts	Year 1914	Year 1915
Sale of Timber Licenses	$ 3,551.50	$ 1,759.00
Renewal of Timber Licenses	81,292.00	81,388.00
Stumpage	385,624.64	422,909.26
Bonuses Timber Licenses	162,288.00	1,971.50

Production During the Year

The following table shows the quantities and kinds of lumber cut from Crown Lands and the total stumpage for the year ending October 31, 1915:—

Quantity	Kinds of Lumber	Stumpage
183,790,316 S. Ft.	Spruce and Pine Logs	$299,823.55
71,893,960 "	Fir Logs	86,727.75
23,852,250 "	Cedar Logs	35,778.37
1,480,023 "	Hardwood Logs	1,850.03
7,875,520	Hemlock Logs	11,025.72
1,228,754 "	Poplar Logs	1,228.75
290,120,823 S. Ft.		
255 Cords	Wood (Fire and Pulp)	117.30
57,364 Pieces	Sleepers	2,868.20
1.830 "	Telegraph Poles	343.00
		$439,762.67
	Add Old Accounts $9,176.00	
	Less Allowances, etc... 1,632.39	
		$7,543.61
		$447,306.28
	Deduct unpaid Accounts	24,397.02
	Paid Provincial Treasurer	$422,909.26

Forest fires during the year destroyed timber on 39,052 acres, valued at $107,030, the cost of extinguishing the fires was $1.253. The total number of fires was 26.

Ontario Lands and Forests Report

The report of the Minister of Lands, Forests and Mines for the province of Ontario for the year ending October 31, 1915. has just been presented.

The revenue accrued from woods and forests for the year ending 31st October, 1915, was $1,629,640.60, a decrease of $379,481.83. The falling off is due almost entirely to decrease in number of railway ties taken out, 729,164 being taken out last season as against 5,439,845 the previous season.

The revenue collected during the year from woods and forests amounted to $1,528,104.82, a decrease of $146,783.11.

The revenue from timber dues was $928,351.38, a decrease of $184,129.00 as compared with last year.

The collections on account of bonus amounted to $507,241.43. an increase of $53,074.19 over that of the preceding year.

The collections from ground rentals amounted to $89,952.01 which is $13,958.30 less than amount collected from same source for the year ending October 31st, 1914.

The revenue from transfer fees was $2,560.00 as against $4,330.00 for preceding year.

The area under license last year was 15,711¼ square miles, a reduction in area of 1,621¼ square miles. The area under license varies from year to year for the following reasons: Areas cut over are dropped from the license; license does not issue on account of non-payment of ground rent; failure on the part of licensees to pay timber dues owing.

There was surrendered during the year 602¼ square miles. New licenses were issued for territory covering 312 square miles.

The production during the year included the following:—pine saw logs, 383,918,834 feet B. M., other saw logs 54,668,902 feet B. M.; boom and dimension timber, pine, 20,922,922 feet B. M., other ,413,160 566,861 feet B. M.; cedar 659,480 lineal feet; railroad ties, 729,164 feet B. M.; square timber, pine, 266,949 cubic feet; piling, tamarac pieces; pulpwood 301,061 cords.

National Wholesalers Hold Annual

Association Made Good Progress During a Strenuous Year—W. W. Knight the New President

G. C. Edwards, Retiring President of National Wholesalers

The National Wholesale Lumber Dealers' Association held their 24th annual convention at Philadelphia on March 15th and 16th. The president, Mr. Gordon C. Edwards of Ottawa, in his address stated that much work had been done in co-operation with other lumber organizations to promote the use of lumber by means of advertising and in other ways so as to combat the unfair arguments used against forest products. During the past two years, while Mr. Edwards was president of the Association, it had successfully weathered the great industrial crisis and was still splendidly equipped to look after the interests of its members. He dealt also with the situation in connection with export trade which had decreased greatly on account of high ocean freight rates and the difficulty of getting space in freight ships. This was a problem that the trade ought to consider seriously, because the lumber exported under normal conditions must be absorbed in the home market under such abnormal conditions. In conclusion, Mr. Edwards referred with great pleasure to his connection with the Association as its president, stating that the two years during which he occupied this position had been most agreeable and that he was grateful for the loyal support he had received from the members.

Mr. E. F. Perry, secretary of the Association, presented an interesting report during which he spoke chiefly of the various lines of work carried on by the Association. Its influence had been strongly exerted in connection with credits, fair dealing and correct trade rules. The Association was now stronger than at any previous time in its history. Speaking of advertising the secretary stated that the Association officers were studying the situation with a view to advertising lumber and its uses, but before much could be done along this line, other important matters must be attended to. While competition would always have a tendency to change prices, regular methods such as drawing up standard sizes, terms of sale, freight rates adjusted to value, etc.. would produce greater stability and greater efficiency. In his opinion, before the lumbermen of the country should spend large sums in advertising lumber as against substitutes, they should spend a liberal amount in trying to find standards along the lines suggested. If from $5,000 to $10,000 were properly spent they could give the architects and builders a lumber code that could be understood and that would net a big return to lumber shippers. Many lumbermen were still relying on merchandizing methods that were in vogue years ago, but with all the other business interests of the country advancing along sound, economic and commercial lines the lumber business must wake up or it would be left far behind.

Interesting reports were presented by the Bureau of Information, the Committee on Trade Rules, the Committee on Terms of Sale and Trade Ethics, the Committee on Forestry, the Committee on Fire Insurance, the Committee on Workmen's Compensation and the Committee on Coastwise Insurance.

The Committee on Terms of Sale and Trade Ethics reported that the terms adopted and approved by the Association had been adopted by a majority of the members, and the terms under which they proposed to sell their goods were 1½ per cent. discount within fifteen days from date of invoice, or sixty days net. These terms were fair and reasonable to all parties. Terms of sale in all cases ought to be considered part of the contract and to apply with equal force as the other questions of price, quantity and quality. The committee commended to the members the code of ethics adopted by the Lumber Trades Congress which embraced the most important matters relating to dealings between lumbermen.

Mr. R. S. Kellogg, secretary of the National Lumber Manufacturers' Association delivered an address upon Trade Extension and the Utilization of Lumber. In the course of his remarks he said that prices, production and terms of sale should be standardized. The scheme of trade-marking lumber had made a good beginning. The whole output of the Southern Cypress Manufacturers' Association would soon be trade-marked and each mill would have a serial number that would identify the source of product. This would be followed soon by the trade-marking of red and white shingles, hemlock and other products. He believed that the trade-mark would do more than anything else to ensure the consumer getting uniformity of production. It meant a great step in advance in the merchandizing of lumber. Advertising to the consumer would then create a definite demand for trade-marked lumber. He reported that a fairly adequate sum of money was already in sight for extensive advertising of this nature. The Southern Cypress Manufacturers' Association had arranged an annual expenditure of $100,000; the Southern Pine Association $100,000; The Western Pine Manufacturers $100,000; The Red Cedar people $60,000; North Carolina Pine Manufacturers $25,000; Committee of the National Lumber Manufacturers' Association $60,000, which would doubtless be increased. These totals, however, were too small, compared with the size of the industry and its importance. The cement industry, with one-sixth of the value of the lumber product, had available three-quarters of a million dollars annually for publicity.

The Nominating Committee offered the names of the following for trustees for terms expiring in 1918: Gorden C. Edwards, Ottawa, Ont.; Charles Hill, New York; H. I. George, Buffalo, N. Y.; C. I. Millard, Norfolk, Va.; T. A. Washington, Nashville, Tenn.; C. A. Goodman, Marinette, Wis.; J. W. McClure, Memphis, Tenn. For terms expiring in 1919—F. R. Babcock, Pittsburgh, Pa.; L. L. Barth, Chicago; J. Randall Williams, jr., Philadelphia, Pa.; R. L. Palmer, Boston, Mass.; T. M. Brown, Louisville, Ky.; Horace F. Taylor, Buffalo, N. Y.; W. S. Harland, Lockhart, Ala. The election of these was unanimous.

J. Randall Williams, sr., placed in nomination W. W. Knight, of Indianapolis, Ind., for president. The nomination was heartily seconded by J. V. Stimson, of Huntingburg, Ind. Mr. Knight was declared president and was introduced by retiring President Edwards as his successor amid a roar of applause. The new executive responded in a brief expression of thanks.

A meeting of the board of trustees was held immediately after the adjournment of the general session. This elected M. E. Preisch, of Buffalo, first vice president; B. Franklin Betts second vice president. Henry Cape, treasurer, and E. F. Perry, secretary, were re-elected to their respective positions. The trustees confirmed the choice of the convention in electing W. W. Knight president. W. W. Schupner was ordered continued as the head of the bureau of information.

Imports Into Australia for Twelve Months

Mr. H. O'Neill, 605 Culwulla Chambers, Castlereagh Street, Sydney, N.S.W., furnishes the following report showing the total quantity of timber imported from America, Japan, Norway, Sweden into Australia from July 1st, 1914, to June 30th, 1915.

Oregon	63,236,978
Oregon door stock	126,345
Oregon lath	1,266,380
Oregon pickets	1,254,478
Redwood	12,240,897
Redwood door stock	1,393,444
Redwood shingles	70,600
Baltic	10,651,392
Oak	5,027,689
Ash	603,146
Pine	1,205,490
Kauri	1,205,490
Sen	213,732
Yellow pine	430,307
Yellow pine door stock	40,765
Total	97,994,201

May Soon Re-open Panama Canal

Announcement by Col. Harding, acting governor of the Panama Canal zone, that conditions in the Gaillard cut justify predictions that the canal will be available for passage of large ships April 15, would be expected to have an immediate effect on the lumber market under conditions other than those which now prevail regarding ocean shipping. With Eastern terminals practically closed for the time being to rail shipments from the south and west the re-opening of the canal would mean a heavy movement of lumber from the Pacific Coast to eastern markets, but if western mills have not better facilities at their hands than are now available at Atlantic and Gulf ports, there seems very small chance of Pacific Coast mills flooding eastern markets. Even such shipments as southern mills have found ships to carry have been delayed on arriving at North Atlantic ports because of the congestion on the docks and the inability of the carriers to switch or move inland such cargoes as were unloaded. Weather conditions which have prevailed on the West coast for the past two months are also reported to have greatly curtailed production there. So it hardly seems probable that the opening of the canal at this time will mean

that Pacific Coast woods will be enabled to beat the southern products to the eastern markets.

Predicting when the canal could be used heretofore was rewarded with about as much verification as the proverbial weather reports, but since the last great slides and the complete closing of the canal to traffic, the Government engineers have constantly refrained from predictions of a definite date for re-opening. Col. Harding, who, it is understood, is to succeed Major-General Goethals as Governor of the canal zone, this time qualifies his prediction with the statement that there will probably be temporary delays after April 15, to meet exigencies of the dredging fleet in completing the canal to full depth, and in removing shoals that may develop. It will be recalled that General Goethals has wished to resign for some time to become a retired army officer, but the slides have conspired to keep him on the job. If Col. Harding's prediction comes true it is said at Washington that it will not only mean the resumption of traffic through the canal, but promotion for Harding and rest for General Goethals as well.—Southern Lumberman.

No More Ungraded Resawed Two Inch Hemlock

For some time past the practice of resawing two-inch hemlock piece stuff and shipping the product of the original piece, mill-worked to boards of various patterns, has long been considered unbusiness-like by the hemlock manufacturers of Wisconsin and Upper Michigan. A large portion of the retail trade have also taken the same view. The question has been under discussion at several of the meetings of the Northern Hemlock & Hardwood Manufacturers' Association, with the result that by a practically unanimous vote, the practice of selling two-inch resawed hemlock and shipping the product of the piece ungraded, has been made a thing of the past.

The resolution as adopted was as follows:

"We, your committee appointed to draft a resolution embodying our views regarding the practice of marketing the product of 2-inch hemlock, piece stuff resawed, firmly believe that our best interests can only be conserved by forever eliminating from our product the resawed piece stuff grade, and further believe that it would be the height of folly to spend our money advertising this product. We also believe that our friends, the retailers and consumers, will agree with us when they understand that we are going to give them grades that have standing in our organization, that will place our product on a higher plane, that can be reinspected by our inspectors, that every piece can be used in the grade in which it belongs and for the purpose intended, and will give the trade much greater satisfaction than our former practice.

"Therefore, we recommend to the board of directors they confirm the above."

The board of directors also instructed the sales managers' committee and the bureau of grades to do all in their power to make this resolution effective. That is, ungraded resawed hemlock no longer has any official standing, and practically all of those manufacturers have agreed not to sell such stock ungraded in the vicinity west of Lake Michigan. This does not mean that anyone should not resaw or obtain boards, if they so desire, but if this is done, the stock should be graded to a strictly board grade and the boards should be made of a standard that will invite criticism by the purchaser and will further stand an official inspection. The proposition has also been taken up with nonmembers of the association, and indications are that they will be pleased to join with the movement.

A large number of the Northern mills have already notified their trade of their action in regard to the resawed proposition.

The Situation in British Columbia

Mr. Rogers, president of the Vancouver Board of Trade, in his annual address, made the following reference to the lumber industry of the province:—"The chief contributor to the wealth of British Columbia is the lumber industry. During the past year not more than half our mills were in operation. The price of logs as well as lumber dropped to the lowest point obtained for years. The output diminished from that of over a billion feet in 1914, to less than eight hundred million feet in 1915. There has been a recent increase in prices for both logs and lumber, and now many large logging companies are beginning operations and mills are beginning to cut, which have laid idle for months. This condition of the industry was not occasioned through lack of demand, as much as through the great lack of bottoms to carry the commodity to the markets of the world. There seems to be a likelihood of the immediate building of ships in this province which will, no doubt, tend to relieve this situation. So our lumbermen look with a great deal of hope that the year 1916 may yet become a very profitable one. Your council discussed with the premier of Australia on his recent visit to this coast, the matter of establishing a preferential duty between Canada and that country on sawn timber and, although he did not say such an agreement would immediately eventuate, he held out promises of earnest consideration. If a fair preferential duty is obtained with Australia, we consider the lumber situation will be relieved immediately, and our province will have a preferred market of 240,000,000 feet placed at its disposal.

Lake States Lumber Production

The Lake States produced nearly 4,000,000,000 feet of lumber in 1914, which was a gain of 52,000,000 feet over 1913. This is a unique distinction for this lumbering region since both the south and west suffered a loss in output as compared with 1913, Minnesota is responsible for the gain, contributing 163,000,000 feet more than in 1913 and taking second place away from Michigan. In Michigan there was a slight decrease amounting to 1½ per cent. In Wisconsin the decrease amounted to over 100,000,000 feet, or nearly 7 per cent. However, Wisconsin still retains first position among the Lake States in lumber production and produced 1,391,000,000 board feet in 1914. The number of active mills reporting in 1914 was 1,181, as against 1,498 in 1913.

The following table shows the lumber sawed in the three states in 1914, 1913 and 1912:—

Lumber Production in Lake States

	1914		1913		1912	
State	Number active mills reporting	Lumber sawed M. ft. b.m.	Number active mills reporting	Lumber sawed M. ft. b.m.	Number active mills reporting	Lumber sawed M. ft. b.m.
Michigan	428	1,214,435	532	1,222,983	792	1,488,827
Minnesota	286	1,312,230	354	1,149,704	484	1,436,726
Wisconsin	467	1,391,001	612	1,493,353	792	1,498,876
Total	1,181	3,917,666	1,498	3,866,040	2,068	4,424,429

Twenty-two different species contributed to the lumber production in the Lake States in 1914. In Michigan and Wisconsin, hemlock yielded the largest amount of lumber. In Minnesota white pine supplied nearly 90 per cent. of the total for the State. In Michigan the softwoods, which include hemlock, white pine, tamarack, spruce, balsam fir, and cedar, yielded over 576,000,000 feet; in Wisconsin over 864,000,000 feet, and in Minnesota 1,258,634,000 feet, or 95 per cent. of the total production for that State. Cottonwood was the only hardwood that contributed appreciably to the lumber output of Minnesota.

Hemlock in Michigan and Wisconsin suffered a loss of 100,000,000 feet, or ten per cent., as compared with 1913. The total of 1,423,000,000 feet of white pine sawed in the three states is a loss of 95,000,000 feet. White pine declined over 85,000,000 feet in Wisconsin, but made a gain of 81,000,000 feet in Minnesota.

Mills producing annually 10,000,000 feet each reported a total production of 2,864,000,000 feet, or 70 per cent. of the output in the Lake States.

The following table shows the production by kinds of wood of the fifteen leading kinds for the year 1914:—

Quantity of Lumber Sawed, by Kinds of Wood

	Lumber Sawed (M. Feet, B.M.)			
Kinds of Wood	Michigan	Wisconsin	Minnesota	Total
Hemlock	416,131	590,484	300	1,006,915
Maple	370,271	156,363	599	527,233
White pine	91,487	223,433	1,108,021	1,422,941
Birch	84,342	190,468	6,854	281,664
Beech	70,337	4,257	.....	74,594
Basswood	43,568	92,077	9,685	145,330
Elm	41,790	51,640	4,259	97,689
Tamarack	26,787	36,685	53,131	116,603
Spruce	23,417	6,692	68,325	98,434
Balsam fir	10,900	2,017	28,398	41,315
Oak	9,707	15,440	7,793	32,940
Ash	8,893	15,310	2,009	26,212
Cottonwood	8,364	812	22,395	31,571
Cedar	7,724	5,049	459	13,232
Total	1,214,435	1,391,001	1,312,230	3,917,666

Prosperity Ahead for British Columbia

Mr. A. E. Rosevear of Winnipeg, general freight agent of the Grand Trunk Pacific Railway, during a recent visit to British Columbia, stated that after the war many millions of ties and immense quantities of timber would be required for railroad construction and for re-construction purposes in Europe. "Already shipments of lumber to Europe have been very large," he said. "Through the Seattle gateway alone heavy consignments have been shipped to Russia for railroad purposes, and when the war is over the demands will be many times multiplied. There should certainly be a great trade in lumber out of British Columbia to Europe when the war is through with."

Encouraging reports were coming in from the Prairies. Farmers were buying freely and there would soon be a heavy demand for lumber from the northwest.

Increasing Use of Treated Wood Block

A Market for Canadian Woods That Has Been Greatly Neglected—How the Materials Are Produced and Used

By W. G. Mitchell*

During the past decade there has been a steadily increasing interest among municipal highway engineers in the possibilities of creosoted wood block paving for city streets. During the same time there has been, in the United States particularly, a corresponding increase in the use of this type of pavement. This may be attributed to a number of factors. The general recognition of the economic importance of good roads and street surfaces has attracted to this field the attention of competent engineers of specialized training and experience, resulting in the development of marked improvements in practice. This has been accompanied by, or indeed perhaps, has been responsible for a public demand for higher standards in the maintenance of city streets. Again, during this time, there has been a considerable increase in volume, and a marked change in the character of city street traffic. The general use of heavy motor-driven vehicles particularly has imposed exacting service requirements upon street pavements, and these requirements have not been entirely met by some types of pavement which were satisfactory under former traffic conditions. Again, referring more particularly to conditions in the United States, there has been a most striking development in the wood preserving industry, due in part to economic demand, and in part to improvements in methods and practice of the preservative treatment of timber. This development, marked by the establishment of commercial timber treating plants throughout the country, has made it possible to obtain creosoted wood paving blocks at reasonable cost in practically any locality. But, apart from the factors noted above, all of which have contributed in directing favorable attention to wood block paving, the very encouraging service results which have been realized with this type of pavement have been responsible in largest measure for its increased use. The history of creosoted wood block paving has not been free from failures, but it may be noted with satisfaction that these failures have been made the subject of careful observation and experimental study, not only by those associated with commercial interests, but also by independent technical investigators. As a result the causes of many of these early difficulties have been located, whether in methods of treating blocks or in design and construction of pavement, and improvements in practice have been made accordingly.

Increased Use of Wood Block Paving in United States

Referring further to the marked increase in the use of wood block paving in the United States, it may be of interest to quote from statistics compiled and published by the United States Forest Service. In 1909, the total amount of timber treated as paving blocks for use in cities of the United States was 2,994,290 cubic feet, equivalent approximately to 1,150,000 square yards of pavement. In 1914, the timber treated for this purpose was 6,869,370 cubic feet, equal to about 2,617,000 square yards. In 1911 the reported area of creosoted wood block pavement in service in a number of the larger representative cities of that country was as follows:—New York, 650,000 square yards; Chicago, 700,000 square yards; Minneapolis, 950,000 square yards; Indianapolis, 500,000 square yards, and Cincinnati, 375,000 square yards. These figures constitute a substantial and convincing evidence of the fact that the merits of creosoted wood block paving for city streets have been proved beyond question.

Referring to the present use of wood block paving in England, and more particularly in London, as the world's greatest metropolitan district, it is interesting to note that creosoted wood block paving has there reached its most successful development. The significance of this statement can be appreciated fully when the traffic conditions of some of the principal thoroughfares of London are understood. Mr. Henry W. Durham, Chief Engineer of the Bureau of Highways, Borough of Manhattan, New York, commissioned in 1913 to make a personal investigation of paving materials and pavement construction and maintenance in European cities, in a report recently published, notes with reference to the wood block pavements of London—" . . . . a large extent of softwood pavements on its principal thoroughfares. (Borough of Westminster). The last are probably the finest pavements in the world. Particularly good is that on Parliament Street and Whitehall from Parliament Square to Trafalgar Square. It carries a heavy traffic, principally motor omnibuses and other motor vehicles. Having less traffic but a very extensive one of pleasure vehicles of all classes is the Mall, extending from the Admiralty Arch at Charing Cross to Buckingham Palace. This is also wood block on concrete foundation and presented the nearest approach to a perfect street surface observed anywhere." This favorable testimony from an independent and critical observer, is worthy of the careful consideration of Canadian highway engineers and others interested in the problem of city street paving. It is also significant to note in passing that the Baltic or Scotch pine heretofore used almost exclusively for the construction of creosoted softwood block pavements in England is all imported timber. The successful development and extensive use of creosoted wood paving in English cities in spite of the lack of available domestic supply of timber is a striking tribute to its superiority.

* Chief of the Division of Wood Preservation, Forest Products Laboratory of Canada.

History of Wood Block Paving

It may be well to consider briefly the history of the development of wood block paving. Untreated wood block pavements were in use in England at least eighty years ago. In the United States and Canada such pavements, generally built of round blocks, were quite widely used as early as 1850, and some cases of such pavements were to be found as recently as fifteen or twenty years ago. These blocks were laid on plank foundations or in some cases on macadam foundation only. These pavements obviously could not be entirely satisfactory, but they served a useful purpose during a certain development period in the United States and Canada. Later untreated rectangular wood blocks were adopted. This was an improvement in some respects, but early failure of such pavements from decay of blocks was the inevitable result. Later the development and more general use of preservative treatment of wood suggested the application of such treatment to wood paving blocks. According to first methods of treatment adopted for this purpose, blocks were dipped in hot creosote oil. Such treatment resulted in the absorption of from two to four pounds of oil per cubic foot of timber. This marked a distinct improvement in practice, and such dipped wood pavements may be considered the immediate step toward the development of modern creosoted wood block paving. Considerable areas of dipped block pavement were laid in the United States and Canada with satisfactory results. There are such pavements still in service in Canadian cities, many of which are now in good condition. It may be of passing interest to note that there are several dipped wood block bridge floors in the city of Ottawa, laid from six to eight years ago, which have given good service, and are at present in very satisfactory condition. However, the general adoption of pressure methods for impregnating timber with preservatives naturally led to the use of pressure treated paving blocks. Absorptions of creosote up to 20 pounds per cubic foot may be obtained by such methods, and with the heavier impregnation of preservatives the protective value of the treatment is obviously very much increased. The creosote oil injected within the block serves the double purpose of protecting the wood from decay and acting as a waterproof filling material. Pressure treated blocks are now used universally for wood paving, and it should be understood that claims made in this paper for creosoted wood block paving, refer to such methods of treatment.

Methods of Treatment

A brief description of the present commercial methods of treating paving blocks may be of interest. Blocks are cut from 3-in. or 4-in. stock, varying in width from 5 ins. to 10 ins. The stock is planed on one side to insure a straight edge, and is cut on gangs of small circular saws, on which provision is made for adjusting saw spacing, according to the depth of blocks required. In American practice, blocks are cut in 3-in., 3½-in. and 4-in. depths, according to the requirements of traffic conditions for which they are to be used. The sawn blocks from the gang pass to the conveyor, where defective blocks—those under size or showing heavy cracks, loose knots or decay—are removed. Inspected blocks are carried by conveyor to cylinder block cars. These block cars are from 7 ft. to 9 ft. long, of cylindrical shape, 5 ft. to 6 ft. in diameter, mounted on narrow gauge tracks. Cars are made with perforated steel plate sides and closing over to prevent blocks floating out in retort. Commercial pressure treating retorts or cylinders are usually 6½ ft. to 7 ft. in diameter and from 120 ft. to 130 ft. long. They are designed for working pressures up to 250 lbs. per square inch, although operating pressures during treatment of timber seldom exceed 160 lbs. to 175 lbs. per square inch. Retorts are charged with a train of loaded block cars. The capacity of a commercial retort of typical size is from 1800 to 2100 cubic feet of paving blocks, equivalent approximately to from 600 to 700 square yards of 4-in. block pavement.

After blocks are charged into retort they may be subjected to a preliminary steaming at temperatures ranging from 225 to 240 degs. F., for a period of from one to three hours, as may be required. If this feature of treatment is adopted it must be followed by a vacuum

drawn in the retort up to 20 ins. or 24 ins. mercury. Exhausting the retort after steaming is for the purpose of evaporating the water and withdrawing a part of the air contained within the wood. Preliminary steaming and vacuum before the admission of the preservative to the retort, is not always specified in the treatment of paving blocks. However, results of an experimental investigation by Mr. C. H. Teesdale at the United States Forest Products Laboratory, Madison, reported in a paper presented at the eleventh annual convention of the American Wood Preservers' Association, January, 1915, indicate that these features of treatment are desirable for blocks of some species at least. After steaming of blocks and exhaustion of the cylinder, or in some cases, as above noted, without any such preliminary treatment, creosote oil, previously heated to a temperature of from 170 to 200 degrees F. is admitted to the retort, and pressure applied gradually until the desired absorption of preservative has been attained, as indicated by gauges on oil stock tanks. The oil is then withdrawn from the retort, and if desired a subsequent short steaming period may be included in the treatment, for the purpose of cleaning the surface of the blocks. A final vacuum, after the injection of the preservative, for the purpose of withdrawing excess of oil from the wood, is a feature of one proprietary method of treatment which has been extensively used in the United States and Canada with good results.

The preservative used almost universally for paving block treatment is coal tar creosote oil,—either straight distillate product of coal gas or coke oven tar, or more generally in present commercial practice, a mixture of such distilled oil and filtered tar. These mixed "paving oils" are now very extensively used for paving block treatment in America, and it is probable that if they meet the requirements of approved detailed specifications as to methods of production, composition and physical properties, they are as satisfactory for this purpose as the higher priced straight distilled oils. The absorption of oil in paving block treatment, with the exception of Douglas fir blocks, is generally specified to be from 16 to 20 lbs. per cubic foot, in correct American practice. While absorptions of 20 lbs. per cubic foot were formerly generally required, the recent general tendency is toward somewhat lighter impregnations—16 to 18 lbs. per cubic foot. The writer is inclined to believe that absorptions of from 14 to 16 lbs. per cubic foot are sufficient for some Canadian woods for which heavier treatment have heretofore been specified. An absorption of 10 to 14 lbs. per cubic foot is the usual standard for the treatment of Douglas fir blocks.

Construction of Wood Block Pavements

The design and methods of construction of wood block pavements are in general similar to those of brick or other block pavements, although certain features have been developed to meet the special conditions. A concrete base is laid, 5 inches to 6 inches in thickness, conforming in general to the contour of the finished pavement, usually with a crown allowance of 8 inches on a fifty foot street width. On this a three-quarter-inch cushion of a 1.3 cement sand mortar is spread dry and struck off with a template or spacing strips. This cushion is sprinkled in advance of the placing blocks. These are laid with the grain vertical, in straight parallel courses, which may be at right angles or inclined to the street line. A ¾-in. or 1-in. expansion joint is allowed at each curb and a single or double course of header blocks placed parallel to the curb line. After laying, blocks are rolled to surface with a steam roller, and block joints filled with a suitable bituminous filler material. This is generally specified to be an asphalt cement or a mixture of coal tar pitch and asphalt. This material must be carefully squeegeed into joints to a depth of at least two-thirds the depth of blocks. The finished pavement is covered with a light layer of clean sand, which cleans the surface of the excess of filler and oil, and incidentally is partially worn into the blocks by traffic, forming a more resistant wearing surface. A thin cement grout washed over pavement after pouring bituminous filler is frequently used as an additional means of securing a clean surface.

It is unnecessary within the limits of this paper, to offer any more detailed description of methods of treatment of wood paving blocks or design and construction of pavement, all of which are covered in carefully developed specifications adopted by various municipal and highway engineering associations. Such approved specifications may be safely adopted, either entirely or with modifications to meet local conditions.

The initial cost of wood block paving is fairly high as compared with some other widely used types of pavement. The cost of completed pavement will range from $2.50 to $3.80 per square yard, varying with the depth of block used and with local conditions. Actual cost figures from construction of wood block pavements in Eastern Canada are:—$2.75 to $3.00 per square yard for 3-in. block pavement, $3.00 to $3.40 per yard for 3½-in. pavement, and $3.25 to $3.70 where 4-in. blocks are used. On the Pacific coast the cost of wood block pavements is somewhat lower than that indicated by the above figures. Transportation charges on treated blocks and the cost of actual pavement construction are the more important variable factors, and these may be estimated closely for any particular local conditions. However, admitting the relatively high cost of wood block paving, it must be realized that ultimate cost, estimated on service performance, and not initial cost only, is the fair and logical basis of comparison of various paving materials. On such a basis the economies of wood block paving for many conditions of use are strikingly apparent. Creosoted wood block paving is not recommended for universal use. There are many conditions where it would not be possible to realize in service its maximum possible economy. But where durability, comparative noiselessness and ease of cleaning are pavement requisites of first importance, it has a strong claim to first consideration.

Woods Suitable for Block Paving

With reference to the various wood species which have been successfully used for creosoted wood block paving, it may be noted that a considerable number of woods have been proved to be adapted to such service. In England, Baltic pine has been used most extensively and with excellent results. In the United States the woods now in general use for paving are southern yellow pine, Norway pine, Douglas fir, hemlock, tamarack and black gum. In Canada Norway pine, Douglas fir, and tamarack have been used most largely, and with good results. In the Canadian west, Douglas fir and possibly hemlock and tamarack will furnish the supply of timber stock for wood paving, and it is safe to assume that there will be a marked increase in the use of woods for such purpose. In Eastern Canada, the logical choice of native timber for paving block stock is Norway pine. This species is so well known to members of this association that descriptive comment is unnecessary. However, it may be of interest to note that in structural and physical characteristics this wood resembles rather closely the Baltic pine of Europe, the merits of which for wood paving service have been so conclusively demonstrated in England. Norway pine, as previously noted, is already widely and favorably known as a wood paving block timber, both in the United States and Canada, and the growing recognition of its merits for this purpose will undoubtedly lead to its much more general use in this country.

It has not been the purpose of this paper to offer any detailed discussion of the more technical features of this particular field of wood preservation, but rather to indicate in a general way the present status of creosoted wood blocks as a modern paving material. It may be noted that this case is but one of many in which the development of methods of preservative treatment has made possible the more efficient and economical use of timber, thus enabling this oldest and most important of structural materials to hold its place under modern requirements.

The features of the wood block paving situation of direct interest to Canada may be briefly considered in summary. This type of paving has been very successfully developed and widely adopted in other countries. Its merits have been proved such as to warrant its extensive use in countries where the necessary timber stock must be imported. Wood paving has been used sufficiently in Canada to demonstrate that it is perfectly suitable for climatic and traffic conditions here. Canadian highway engineers are in a position to benefit by the results of experience where such paving has been more widely used than in our own country. Detailed standardized specifications representative of best present practice may be safely adopted. Canada has large and immediately available supplies of timber suitable for this purpose. The successful development of creosoted wood block paving has opened a large field for the logical and economical utilization of a part of these timber resources. Never before in the industrial history of this country has the necessity for the most efficient development of our natural resources been more generally appreciated than at the present time. The possibilities of creosoted wood block paving are therefore entitled to very careful consideration.

Mr. Robson Black, secretary of the Canadian Forestry Association, addressed the Science Undegraduates' Society of McGill University, Montreal, on March 22, on "The Progress of Forest Protection in Canada." Referring to the work of the St. Maurice Forest Protective Association, he stated that if the fire prevention system were adopted in other parts of the Dominion it would result in an immense saving. Canada had not sufficiently recognized the importance of her wealth in forests as compared with other natural resources, although there was now an inclination to regard more seriously the question of forest conservation. The Dominion was behind European countries in adopting means to protect her forests, but ahead of the United States in this matter.

California, the Inland Empire, and the Pacific Northwest States again produced over 8,000,000,000 feet of lumber in 1914. This, however, was a loss of 735,000,000 feet, or eight per cent. as compared with 1913, in this important lumber-producing region, embracing Washington, Oregon, California, Idaho and Montana. The yield was about the same as in 1912. The figures represent returns from 1,359 active sawmills in 1914, or 73 more than reported in 1913. In Washington the loss was 646,000,000 feet, in Oregon 280,000,000 feet, and in Montana 40,000,000 feet. In Idaho and California the production increased.

The Reader's Viewpoint on Trade Topics

Immigration into Canada After the War—A Serious Problem to Solve—Douglas Fir Popular in India

Articles or letters to the Editor of the Canada Lumberman, dealing with trade conditions, or discussing questions of interest to manufacturers, wholesalers or retailers of lumber are always welcomed by our readers. Here are a few that have been received lately:—

Canada's Problems After the War

Editor Canada Lumberman:— Toronto, March 10, 1916.

Before the tremendous task of the Allies is finished, can thought be spared for what will follow upon peace?

Assuredly it should be, if what then must happen bears as importantly upon the future of the British Commonwealth as the war itself, and if, by taking thought we can in anywise direct events.

One hears, not without admiration, that Germany is already organizing for the revival and extension of trade, when trade becomes again possible to her. If, in the face of certain and crushing defeat, this is the temper of Germany, can we grudge time, labor and money for a matter still more vital?

The war must be followed by such poverty as the world has never known, and by a widespread impulse to escape from debt-laden countries to other lands; at one stroke to shake off a crushing burden of obligation, and become sharers in wealth that the war has left untouched or possibly increased. May it not be reckoned upon with certainty that the emigration from England and the continental countries will only be limited by the capacity of ships to carry the people? If this be true, will not the years after the war be important beyond measure to Canada? We have it in our power to control, restrict, encourage the stream of immigration; to fill up the empty places with English, Scotch and Irish, or with an indiscriminate horde from war-ruined Europe; to secure for Canada an Anglo-Saxon backbone, or allow it to become a conglomeration of nationalities? The choice is given us now; it will pass, and is not likely to return.

The United States, easily the richest country in the world, offers powerful attractions, nor are signs lacking there of an intention to discourage a certain class of immigration, which will naturally be diverted to us unless we guard ourselves against it. The double tendency will operate,—to force upon us what we do not want, and withhold from us what we desire.

The Argentine will also exercise a pull upon the people from the British Isles, and Canada must be hospitably ready, and well prepared, if the men of our race are to strengthen us and not be lost to the flag.

The great westward movement cannot be stayed; but it may be guided to a destination, and the considerations which will determine that destination are very plain. There must be prospect of work, a chance of better conditions, and some assurance that existence can be maintained till a new career is entered upon. Only the last point need concern us; there is no doubt of the country's ability to sustain a vastly greater population.

Immigration will be less critical than in the past. Fleeing from intolerable misery and starvation (would that it might not be so, but who can doubt it?) they will gladly accept any opportunity of earning their bread. A large proportion of those who seek a new home in Canada must go upon the land, and it would be cruel to them, and unfair to ourselves, to suggest that they could be otherwise provided for. Warned as to this they will be ready for the adventure, but will they be fit for it?

Most of them will lack experience in agriculture, and all in the conditions and customs of a new country. But it would surely be possible, and in a very short time, to qualify the class of immigrants referred to, as farm hands, at a cost quite trifling when measured by the result to themselves and to Canada. Barracks or cantonments with suitable land might be provided in all the provinces where the elements of farming could be learned, and something of the local ways.

These would be depots for labor required in the neighborhood, and men could be drafted out when and where required. It is a manner of life with which the war would have made most of them most familiar. Those with a little capital would be supplied with information to guide them as to settling in the different provinces, and if they could be to some extent financed in their ventures, it would be a use of public funds bringing with the years an increased return. Authentic accounts of labor situations everywhere would be circulated from a central bureau, which would be charged also with the discovery of employment for mechanics and domestic servants of all classes. Existing institutions, while they are quite unable to deal with so broad a scheme, could co-operate effectively in some respects.

These camps, efficiently conducted, would partially support themselves; they would bridge over the weeks or months when an immigrant is finding his feet and seeking for work under strange skies,—ensuring him at least a roof over his head during this depressing time, and the results attained and the reports made would regulate the amount and kind of immigration.

It is said that our hospital and commissariat systems approach perfection. If we can organize for war, and the purpose of war, can we not organize for peace and for the sake of the generations to come?

Were France to contribute to this tide of humanity nothing could be more fortunate for us, and I doubt not that her sons would receive a like welcome in Canada.

The question is worth thinking about. Should this bring the conclusions that millions will soon be seeking new homes across the ocean, that some of these will make better citizens than others, that we want the best, and particularly those of our own blood, we can hardly stop at that point and dismiss the matter from mind. It is absurdly unlikely that we will get what we want without working for it. There is no warrant for believing that Providence favors Canada to the extent of putting itself about to do what Canadians are not willing to foresee and ordain for themselves.

Were Germany in our shoes she would not trust to luck, and those who scorn to borrow ideas from Germany have learned but little from this war.—Canadian.

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*Editor's Note.—Written by a prominent resident of Toronto upon his return after passing the winter in England, where he has had exceptional opportunities of observing conditions as they exist.

B. C. Shipping Problems—Trade Improving

Editor Canada Lumberman: Vancouver, B. C., March 8th, 1916.

Just a few lines from Vancouver and the West Coast of B. C. re export lumber trade.

At present the export demand for lumber is good, but we have no boats in which to ship this lumber. The B. C. Government have under advisement a plan to build possibly ten boats, but whether or not these plans are carried out at this session of parliament remains to be seen. It is proposed to build wooden sailing ships with auxiliary power, these boats to have a carrying capacity of 1½ million feet of lumber. A very large concern from the East have made the Government a proposition to build anywhere from ten to one hundred boats on a tonnage basis, claiming that they would deliver the first boat within four months and others to be delivered every few months thereafter until the demand is supplied, but I am afraid we are not in a position to accept this offer at present.

While we are on the subject of boats we may say:—If some of our boat builders in Eastern Canada would turn their attention to this section I am satisfied they would find a new and rich field to explore. In short, we have the timber; the mills can furnish the lumber on short notice, and there is a demand for every foot of lumber that can be cut, running the mills at full capacity. To justify this action we may say that the rates are sufficiently high at this time—and will be for the next few years—to encourage independent ship-building. We cannot hope, however, to secure all the boats we need without Government aid.

The lumber business generally is decidedly better than it was five or six months ago. The price of lumber has advanced $4 per M. since my last communication, and the mill men are very much encouraged. The demand for standing timber naturally follows and a number of deals for immediate logging purposes have been made this year, and other deals of a speculative nature are now under way. Everything considered, we all feel encouraged, and if we can solve the problem of securing bottoms there will be a revival of business beyond our most sanguine expectations. Especially will this be true if the war terminates within a reasonable period. The demand for lumber from the Prairies has been in excess of anticipations.—C. S. Battle.

A Busy Season for B.C. Plants

Editor, Canada Lumberman:— Vancouver, B.C.

A contract was made in December with a London firm to supply about twelve hundred tons measure of box boards. The Canadian Pacific Railway Company very kindly met us in the matter of freights and made a through rate from the coast to London, which enabled us to take on this business.

A little later on an inquiry for 320,000 ammunition cases required by the Imperial Government was placed before the British Columbia box manufacturers by the Forestry Branch of the Province, and after considerable negotiations back and forth with the Imperial Government authorities and the C. P. R. freight department, the business was finally undertaken.

The two orders mentioned kept the box factories going throughout the months of December, January and February. Some have not as yet fully completed their portion of the business.

On account of the great cost of getting the box boards to the United Kingdom there is but little prospect of our continuing to do any considerable volume of business in that market; there is, therefore, no present occasion for the B. C. box-makers to increase the size of their plants.

A large volume of orders for all grades of lumber, also shingles, is now coming in to the coast mills from Alberta, Saskatchewan, Manitoba and

Ontario. I do not think that the demand from these provinces has been better at any time during the past five years.

The government of this province has just announced that legislation will be brought down immediately to assist in the building of wooden ships, suitable for lumber carriers. The Legislature is now in session and we are expecting to be in position to undertake the construction of two ships almost immediately. Some of the ships which will be built under the government plan should be completed by autumn. The timbers and general lumber which will be required for the construction of the ships and the preparing of cargoes therefor by the time they are completed gives every prospect of a busy season for coast mills.

Cameron Lumber Company, Limited,
J. O. Cameron, President.

In the Public Eye

A budget of comment on men and things of moment presented in the interest of our readers, independent of party politics and with malice toward no one.

Many of my friends have been wondering what has become of me recently, and enquiring about my silence. I have not been asleep; on the other hand I may tell those who have made enquiry that I have been very much awake, watching with wide open eyes the course of events at Ottawa, and I have seen the storm clouds gathering for an outbreak that is likely to end at an early date in a political cyclone. But what was the use of continually hammering away and telling about crooked letting of contracts for shells and shell boxes? I just got sick and tired of the job for a while, but I could see the chickens poking their heads over the horizon on their way home to roost, and so I settled down for a time to wait until they began to flutter into the government coop and start something. Have not a good many of the flock reached home now, and are not others on the way?

"I told you so"—that is the way I feel about it all just now. When I began saying things about profiteering and crooked contracts generally in connection with supplying war materials, perhaps some of my friends thought that I was going it pretty strong. I only wish I could have gone it a good deal stronger. As it is, however, this paper takes a good deal of pride in the fact that—at a time when the public knew very little about the real state of affairs—it was the first paper in Canada that had courage enough to come out clearly and draw public attention to what the Shell Committee was doing—from that day to this, every single day has been adding to the justification of our course.

* * *

Today we are told on the responsibility of a member of parliament that things appear to be even more rotten than we had thought. The latest charges are briefly as follows:—

That while Canadian firms were unable to get contracts for the production of time fuses, two United States companies, which were simply middlemen, received fuse orders amounting to $23,000,000 and were given cash advances amounting to $3,252,900 as a so-called inducement for taking the contracts;

That one of these companies was the American Ammunition Company, a mushroom company, with capital of $1,000, having no plant, which received orders for about $12,000,000 worth of fuses and an advance of $1,565,400 in cash;

That the other company was the National Arms and Fuse Company which got a contract for $11,250,000 worth of fuses and an advance of $1,687,500, being also a mushroom company, with capital of $3,000, and no plant.

The charge is also made on the same responsibility that one E. B. Caldwell, president of the International Arms and Fuse Company; one B. F. Yoakum, New York, and one E. N. Bassick, Bridgeport, Conn., entered into a written agreement to divide $1,000,000 for getting contracts from the shell committee, before such contracts were in writing.

Also on the same responsibility the charge is made that Col. J. Wesley Allison was in an agreement with Yoakum and one Eugene Lignanti, an orchestra leader of Montreal, to secure contracts, and that Lignati disposed of his one-tenth interest for $50,000.

And lastly, in connection with these matters, it is charged by the same member of parliament, that Sam Hughes gave his formal approval of Allison's transactions.

* * *

Are not the indications pretty strong that the government we have in Canada today is about the rottenest we ever had, and that it is led by the weakest leader that has ever been at the head of a party during the whole history of Canada? While we in Canada have been straining every nerve and every muscle to do our share as a part of the Empire, to lead cleaner lives, and to assist in the great task of saving the Empire from its foes, have our representatives in Parliament been wallowing in the lowest and dirtiest of profiteering filth?

Those who give their allegiance to the Conservative party have a sore trial to face. Those who are clean and honest must insist on a new leader and a number of changes in the cabinet. Far better for them to go to defeat with a clean heart and clean hands than to share in the dirty work of their political friends. I repeat that the evidence is growing stronger that Sir Robert Borden is the leader of the rottenest government we have ever had; that he has failed to hold his pussy footed followers in check, and that he must therefore give way to someone who will do so.

* * *

There are many other things besides these war contract matters which the country want to learn about. Many of us would like to know, for instance, about the lot of Canadian officers now in England, some 1,500 I am told, who are doing nothing so far as we can learn, but are drawing their pay just the same—living at the expense of the country.

* * *

Now that possibly the most strenuous period of the war is over, the Government seems to be willing to make something in the way of a bluff at protecting the Canadian people, by appearing to prohibit the export of nickel to our enemies. Just what this bluff is based upon we may not know, but it is said that the government's nickel policy is really controlled by two ministers, one at Ottawa and one at Toronto. I do not know about this, but would like someone to ask the government about it.

* * *

In conclusion, I do not think that the Conservative party is the only one in need of a new leader. A new leader for the Liberal party would be a good thing too. I doubt very much whether the Liberal party will ever get anywhere with Sir Wilfrid Laurier as its leader.

SEARCHLIGHT.

Export Markets Should be Worked More Thoroughly

Editor Canada Lumberman:— Calcutta, India, February 5, 1916.

Your issue of November 1 just arrived, the first I have seen for months. It is excellent. I wish your paper went to all the big lumber importers in foreign countries. I have actually run across many who express doubt that Canada is as good a market to buy lumber in as the United States. That they believe the United States better, regardless of what they say, is shown by the fact that in nine months, in five countries, I have only run across (in an expedition which has brought me in contact with all the lumber importers, too) four importers who send enquiries direct to Canada either for lumber, timbers, doors, shooks or other wooden articles. They all prefer to have their foreign buying agents in the United States.

Now is the time to combine sentiment, business and our productive capacity and start a change.

I see B. C. Douglas fir is suggested for shell boxes in Canada. You will be surprised to learn that Douglas fir has been the favorite wood in India for ammunition boxes for some months. "A prophet is not without honor save in his own country."

Keep the good work going, but why don't those manufacturers, whose capacity you so convincingly portray, export doors and box shooks instead of letting the United States do all the trade in South Africa? They can get bona fide enquiries any day from the Canadian Trade Commissioner, Cape Town, South Africa. I sent some in myself.—H. R. MacMillan.

Cape Breton Trade Conditions

Editor Canada Lumberman: Sydney, C. B., March 15.

During the past year the consumption of lumber in Cape Breton was not so large as for several years previous, and the production has been larger; consequently the imports have been less and the exports about the same as in 1914.

The building trade in the city and towns was not active, but the farming and fishing sections showed about the same activity as in recent years.

A large pulp mill is under construction at St. Anns by the Cape Breton Pulp Co., and it is proposed to begin operations during the coming season.

On account of the scarcity of small lumber carrying vessels and the high rates of freight, it is not likely that much lumber will be shipped to the United States this season.—R. R. Chappell.

Quick Results

Editor Canada Lumberman: Buffalo, N. Y., March 22.

We note with a great deal of satisfaction that the campaign you made last year in regard to the inspection of Canadian hardwoods has very evidently borne fruit. We notice this in our own business and are able to buy considerably more stock there this year than we have in the past. **It should be a source of gratification to you that you are able to make your influence so quickly and strongly felt.**

Yours very truly,
Blakeslee, Perrin & Darling.
Chas. N. Perrin, Sec'y.

Opportunities for Canadian Lumber in France

A memorandum on the importation of Canadian lumber into France, prepared by a wholesale lumber firm in Havre, has been forwarded to the Department of Trade and Commerce by Mr. Philippe Roy, General Commissioner for Canada in Paris. Canadian lumber exporters, the report says, have an excellent opportunity just now of opening up a large trade with France and replacing the lumber formerly imported from Sweden and Norway:—

The firm in question, as is the case with all French concerns known as dealers in lumber from the Baltic, is exclusively interested in the importation and sale of lumber for building purposes. Their requirements have been so far entirely taken care of by importing Baltic lumber, that is to say, from Sweden, Norway, Finland and the Baltic provinces of Russia. The articles of agreement for the purchase of timber from Sweden or Russia are the types of contract acceptable. The only difference between the contract in Sweden and that in Russia lies in the fact that the former stipulates prices f.o.b. and the latter c.i.f. quotations.

Requirements of Contract

The principal clauses are as follows:—

Standard of sale—Petrograd standard (165 English cubic feet).

Dimensions. Thickness and width in English inches, as follows:

4 x 9	2½ x 6½	1½ x 9	1 x 9
3 x 11	2½ x 6	1½ x 8	1 x 8
3 x 9	2 x 6	1½ x 7	1 x 7
3 x 8	2 x 5	1½ x 6	1 x 6
3 x 7	2 x 4½	1½ x 4½	1 x 5
2½ x 7	2 x 4	1½ x 4	1 x 4½
			1 x 4

Length—In metric figures, i.e., from 33 by 33 centimetres.

Price—In francs or pounds sterling at a fixed rate of exchange determined by the contract, c.i.f. as mentioned above.

Payments by draft accepted by the buyer, against documents at three days' sight, without discount of 2½ per cent., or at four months, at the option of the buyer. These conditions imply great confidence on the part of the seller and were very liberally offered by the Baltic exporters, which explains their almost complete capture of the lumber trade in northern and western Europe.

Grades 1 and 2 are equivalent to grades of sale in France known as Joiners 1 and Good Joiners 2. Grades 3 and 4 are similar to the grades of sale in France known as Good Scaffoldings and Scaffoldings.

Canadian lumber is not unknown in France. At the time of sailing vessels the importation was even very active, thanks to the higher rates of freight and the utilization of this lumber in naval construction. As soon as the use of iron began with the appearance of steam vessels, these favorable conditions disappeared.

Moreover, at the same period, Swedish exporters, with the encouragement of their Government and with a degree of ability and daring which must be admitted, laid plans for the utilization of their forests, the enlarged production of their sawmills and the extending of their banking system, and thus secured the complete mastery of the trade in building timber in all the countries located on the North Sea, the Atlantic Ocean and western Mediterranean.

Canadian imports into France were reduced to the appearance in French ports of small consignments in the years in which the Baltic production was inferior to the needs of the general consumption. One of the other reasons for the commercial supremacy of this production over that of Canada is the organization adopted by the Swedish sawmills for the sale of their products.

These Swedish sawmills are represented in France by general agents residing in Paris, who cover from there all the French ports. These agents deal either on behalf of the sawmills, or in their own name, and guarantee to the buyer the execution of the contract. This habit of applying to Paris agents has become such an established custom with lumber importers in France, that the few deals in Canadian lumber which have been transacted have been arranged through these agents.

Canadian Opportunities

Few cases are known where deals have been closed direct between Canadian lumber mills and French importers. If producers in the Dominion desire to extend their connections with France, they would have every interest in opening agencies in Paris. These relations can all the better be developed as the difficulties of importing Baltic lumber since the beginning of the war have induced French lumber dealers to renew their relations with Canada. Moreover, after hostilities cease the requirements in construction lumber will certainly be considerable and will exceed the Baltic production, especially if it is remembered that the port of Riga which exported yearly nearly one-fourth of this lumber, has suffered from the fact that the forests of its back country have been destroyed by war; that sentiments which were dormant have been awakened by our mutual trials and co-operation, adding new life to the old sympathy which has united France and Canada.

With the exception of spruce lumber of quite superior grade, Canadian fir cannot compete in France with other varieties of lumber known as Riga, and will thus always have to be quoted at prices slightly lower than lumber from Sweden.—Trade and Commerce Bulletin.

Wooden Goods for South Africa

Mr. W. J. Egan, Trade Commissioner, Cape Town, South Africa, has forwarded the following illustrations to the Department of Trade and Commerce as indicative of kinds of wooden flour pails, butter tubs and fawcets in demand in South Africa.

Flour pails made in wood as shown in the illustration are good sellers in South Africa. They are packed in nests of three, fifteen pounds to the nest. Finish and pattern must be as illustrated.

There is demand for a supply of wood butter tubs similar to the illustration. They arrive packed in nests of three. The sizes should be made to hold 20, 40 and 60 pounds. Usual orders amount to about 100 nests.

Wood fawcets are imported in large quantities. The fawcet shown has a polished finish and is a popular seller. The sizes stocked are as follows:—

Nos.	0	0	1	2	3	4
Lengths	6½	7	7½	8	8½	9 inches

Samples with details covering packing, weights and quotations

f. o. b. Canadian ports, if forwarded to Mr. Egan, will be submitted to South African inquirers or to prospective representatives if it is desired to place the line with local agents, which is the most satisfactory way of securing and holding trade in South Africa.

British Columbia's Fine Finish Materials

Carefully planned publicity has recently been bringing splendid results in the case of the various classes of lumber and timber produced in British Columbia. In Eastern Canada, this is especially noticeable. Canadians have always naturally wished to make extensive use of their own manufactured products whenever possible, and, in Eastern Canada, the products of British Columbia have suffered greatly in the past on account of the fact that architects, contractors and consumers knew so little about them as compared with other woods used for similar purposes. This has all been changed during the past year or two, especially since the extensive campaign of advertising British Columbia forest products was put into operation by the British Columbia Government. We have made frequent reference to this campaign in our columns and we are able in this issue to show a few attractive illustrations of British Columbia timbers and interior finish in actual use. The steadily increasing cost of many hardwoods which have been great favorites for interior finish for many years, is an important factor in the growing popularity of British Columbia woods for similar purposes. Many British Columbia woods have been found to be exceedingly well adapted for such uses.

Douglas fir, western hemlock, western red cedar, western spruce, western larch and western soft pine are becoming increasingly popular as finishing material. They have excellent wearing and time resisting qualities, as well as beautiful figures. In regard to figure they permit of two very distinct types, the flat-grain, giving a beautiful watered-silk effect, and the vertical sawn grain, a restful, pleasing, edge-grain effect.

One of our illustrations gives an idea of the appearance of the interior of the Canadian Pacific Railway Company's wharf reception

Fig. 1—Douglas Fir for Roof Supports, Finish and Floors. Wharf Reception Room, C. P. R., Vancouver.

Fig. 2—Beautifully decorated All-Wood Hall and Staircase; Douglas Fir Floor, Wall Panels and Ceiling.

room at Vancouver, in which Douglas fir was used for roof supports, finish and floors. The effect is very restful, pleasing and quiet. Another illustration shows the hall and staircase in a private residence, in which panelled walls, beam ceiling, staircase and floors are all Douglas fir, giving a homelike and exceptionally beautiful appearance. A room panelled with cedar and finished with wax polish, with an edge-grain Douglas fir floor, in its natural shade is very delightful to the eye, combining comfort, beauty and durability.

Douglas fir is a particularly suitable wood for interior finish. The stock from which interior trim is manufactured is free from knots, shakes, or other defects, and usually is cut edge-grain. The mills of British Columbia pay particular attention to good finish, all stock being thoroughly kiln-dried and carefully manufactured. This wood holds oil, stain or paint splendidly. It can also be finished in wax or varnish, either dull or polished, with good results. As a flooring material, edge-grain Douglas fir ranks easily among the best that can be obtained. It is straight-grained, hard and wear resisting, besides producing a very attractive floor. As a door stock also, Douglas fir ranks among the best. All stock for rails, stiles and muntins is cut edge-grain, and the panels are solid or three-ply rotary cut veneers.

Another of British Columbia's attractive woods for interior finish is western red cedar, the color of which, in its natural state, is a quiet, slightly reddish brown. It is straight grained, easy to work, free from checking or warping, and much in demand for the highest class of panelling for walls and ceilings. This wood is cut either flat-grain or edge-grain and takes any finish of oil, wax, paint or varnish. Cedar panelling in plain oil finish mellows down with age to a restful, pleasing effect, very suitable for libraries or dens.

Lumber Grades and Other Problems

Reflections of a Lumberman on a Few Questions of Present Day Importance to the Trade

By E. H. Newton

From time to time, the question of uniform grading of lumber products and shingles comes up, elicits the usual variance of discussion and excites the usual amount of interest given to such matters of universal preponderance, and then, as if to show our preference for living in a state of mediocrity, we allow the question to be lost sight of, and to sag back and remain in the hands of that old thief of time, whose other name is procrastination.

The Editor of the Canada Lumberman has once again raised the issue, and let us hope that those whose office places them within the proper sphere to take the initiative in such matters will not look lightly upon the subject, but rather seize it as an opportunity to do something along educational lines upon a subject where education and general instruction are badly needed.

Good Practical Rules Required

What we want is not simply a stiff and precise set of sterotyped rules gotten up with such a maximum of brevity as to make them capable of being misinterpreted, or otherwise confusing to those not well versed in the hieroglyphics or other characters used to describe lumber, and which are so well known and sometimes so confusing as to leave room for a difference of opinion even between the more practical minds. We want a set of grading rules which will describe the different grades from the highest to the lowest in detail in all their practical forms of manufacture, and also indicate the suitableness, or adaptability of each grade for any purpose not already or otherwise indicated.

Such an educational compilation of information placed in the hands of all who might be benefited by a universal and more general knowledge of the business, as well as of the purpose sought and worked out, would have a double effect, and would redound to the benefit and satisfaction of all concerned. It is a safe assertion to make that probably fifty per cent. of the business handled in lumber to-day carries some element of uncertainty, and on this account errors in filling the orders occur, or annoying delays are frequently occasioned while telegrams or letters are being exchanged, as the exigency of the case may seem to require, all of which might be reduced to a minimum if the man who writes up the business had a full and complete guide to order by, and in which might be emphasized the necessity of giving full and complete information with each order which would facilitate the application of intelligence by the mill filling it, obviate unnecessary delays and reduce almost to the vanishing point the excuse for making errors.

For the purpose of illustration I will cite a single instance which came before me recently, and which describes the modus operanda which is seemingly becoming more and more the rule with those writing out inquiries, and even orders: An inquiry was submitted to the mills for quotations, calling for a number of carloads of timbers and other specifications, much of which ran up to sixty feet in length, without indicating anything about the quality, or for what purpose it was to be used. This timber might quite properly be required in select grade, select common, or number one common, according to the purpose for which it is to be used, and yet there was no indication or information accompanying the inquiry. The local representative of the company which had submitted it was called up and asked for the information, but he could not give it, and yet the mills are expected to figure on this kind of business.

Orders Should Be Definite and Specific

Another difficulty which is increased beyond all reasonable proportion is that of demanding specified lengths where they are not needed. In most mills, and more particularly those situated in confined areas, it is much more convenient to fill orders calling for random lengths than it is those calling for specified lengths, and therefore where lumber is to be cut up into other lengths than those ordered it would be a decided advantage to the mill filling such order if it were given this information, together with the privilege of acting upon it. It surely is an unwarrantable hardship for the mill to pick over a pile of random length shiplap as is often done in order to load a car with all one length, when it is a well-known fact that in most cases random even lengths in shiplap are preferable in a building, and when it is ordered all one length some of it has to be cut in order that the joints may not all come in one place.

Easygoing Methods Lead Nowhere

I have spent quite a respectable number of years in the lumber and shingle business, and from the positions which I have occupied, with a due amount of application I have been able to camp upon the most difficult grounds until I had studied them thoroughly. Step by step and year by year I have gone along, as many others have done, watching the business in all its varying stages, and searching assiduously for the cause and effect of things as they happen. Always studying the business in the light of practicability, I have discovered many of the diverging points where thought runs off until it exhausts itself along the lines of incompatability. It is the business coming in off these branch lines which is giving us most of our worries to-day. Most of these branch lines lead off to a place called "Dontgivadamgulch," and the fellow who handles the business there is never particularly anxious to take worries into the camp, but rather prefers to pass them all on the mill.

Now, if this man could only be educated to think, and to understand more about the business in a general way, and to talk lumber intelligently and in a masterful way, very much of the existing inharmonious entanglement could be obviated. I know it is a difficult problem, but it is well worth the effort. The last thing that some men want to do seemingly is to think, and particularly is this so when you ask them to think for the benefit of someone else. Have you ever met the fellow who acts first and thinks afterwards? He is the chap of whom it is said that his "hindsight is better than his foresight." Some of those fellows are smart in a way, but it is usually only superficial. Ask them a question, and perhaps they will answer you before you have finished, but they have not thought, but answered first, and will think later, if at all.

I do not believe there is another industry in the province of British Columbia to-day, or in Canada, for that matter, which has been run in such a haphazard way, or in which there is such an opportunity for educational work as in the lumber business, but let us hope that by a united effort, order, satisfaction, contentment, and even pleasure may take the place of demoralization, which is now passing, we hope, for good.

Making Bungs and Faucets

The bung's business is to hold liquid in a barrel or keg, the faucet's is to draw it out. The making of these two small articles is treated as a single industry in statistical compilations, though they are not generally the product of the same factory. They are so intimately connected with cooperage that they are naturally classed with that industry. Though the articles are small, they call for a large amount of wood for their production. Their yearly total needs in the U. S. according to latest figures, exceeds 21,000,000 feet, and includes seventeen kinds of wood, twelve of which are hardwoods, five soft. In quantity, yellow poplar amounts to more than all others combined, as the following table shows.

Wood for Bungs and Faucets

Wood	Feet Annually
Yellow poplar	17,810,000
Maple	854,900
Beech	850,000
Red gum	325,000
Birch	305,000
White pine	287,000
Oak	250,000
Spruce	110,000
Elm	100,000
Sycamore	100,000
Walnut	56,000
Cedar	30,000
Butternut	14,600
Rosewood	10,642
Hickory	6,000
Redwood	2,000
Western yellow pine	1,200
Total	21,112,342

More barrel bungs are made in Ohio than in any other state and almost as many as in all other states together. That state's total bill of bung wood is 10,084,000 feet, nearly all of which is yellow poplar. The industry is centered in and around Cincinnati where it has grown from a small beginning many years ago. This is doubtless due to the fact that Cincinnati has long been a cooperage center. During early years when the Cincinnati coopers obtained their white oak staves in southern Ohio and in the adjacent parts of Indiana and Kentucky, the yellow poplar for bungs was procured in the same region and most of it within twenty-five miles of the city. But that time past long ago. They now bring staves from Arkansas and Mississippi and yellow popular for bungs from West Virginia and eastern Kentucky and Tennessee.

It might be supposed that the bung being small, one wood will do as well as another. Such is far from the case. Some of the demands are exacting. The wood must be straight-grained, soft, strong, easily worked ,and it must not sheer easily. It must possess a uniform structure so that the wood will make a uniform contact with the wood

around it. Hard and soft streaks in a wood spoils it for bungs. It must not be sufficiently porous to permit seepage. It would be poor economy to pay high prices for white oak staves in order to get a non-leakable wood, and then use a bung through which leakage may take place. Yellow poplar meets these requirements so well that it has been accorded first place as a bung wood in competition with all the timber of this country.

The wood represented in the foregoing table is worked into faucets as well as bungs, but the material going into the two articles is not separately tabulated and the line between bungs and faucets cannot be drawn in a way to show how much each uses. It is known that bungs take more than half.

Faucets are made in many parts of the country, and for drawing from barrels and casks liquids of numerous kinds. There is some choice of woods, but many are suitable. Prejudice for a long time controlled the making of faucets, for it was once supposed that the faucet exercised a good or a bad influence upon the liquid which passed through it. That superstition was not confined to any particular part of the country; but it has about died out under the influence of better education among the people. However, it is said that to this day country merchants in some rural districts insist on having applewood faucets for vinegar barrels, because some of their customers will not buy vinegar which is not drawn from the barrel through a faucet of applewood.

That is a survival of the old superstition that applewood improved cider and vinegar by contact with it.

Decreased Lumber Consumption

One of the direct causes of depression in the lumber industry is a decreased consumption of lumber, which is perhaps more to blame than an increased production. Just how much this consumption has decreased per capita is shown in some data that have just been worked up on this subject. In 1905 the per capita lumber consumption of United States was 334 board feet; in 1909 this had increased to 474 board feet per person, but in 1913 this amount had decreased so materially that only 362 feet were consumed. The figures during the past ten years are as follows:

1905—334 board feet per capita.
1907—434 board feet per capita.
1909—474 board feet per capita.
1911—377 board feet per capita
1913—362 board feet per capita.

A careful study of these figures will point out to the lumbermen wherein lies their only hope of permanent betterment of trade. New and increased uses for wood, based on an exact knowledge as to when and what wood is best suited for the purpose at hand, it is believed, can be developed to the point which will raise the per capita consumption, hence the total production, sufficiently to make the lumber business a continuously profitable and stable industry. Reaction from the extensive promotion work on the part of the substitute building materials people during the past five years, is beginning to be manifested in a return to wood, recognizing it as the most economical type of construction, embodying at the same time the maximum of beauty and utility.—Bulletin of the West Coast Lumbermen's Association.

The Bonus System in Making Shell Boxes

In one of the eastern plants making shell boxes a bonus system has been introduced that has produced good results.

First, the number of times a given operation can be performed in a day has been ascertained as nearly as possible. Then an hourly rate is fixed on this basis, and the operator encouraged to get the best possible out of his machine. Payment for results is made as follows: of all that is produced over the fixed rate the man is paid half and his employer takes the other half. If the operator does not succeed for any reason in making any bonus he is still paid his regular hourly rate. For example, suppose the rate for an operation is 35 operations per hour, and in one week of 50 hours he makes 2,500, which is 750 over the fixed rate, the operator is paid for 375, or 21½ per cent. on his wages for the week. If it is found that a helper would assist the output of a certain operation the helper is paid a bonus the same as a mechanic, allowance being made for the helper in fixing the rate. Each week or pay period stands by itself. Care has been taken to fix the rates so that the man can make a bonus, experience having proved that if he can only make three or four per cent. he does not think it worth the exertion, and makes no effort. In order to protect the employers in case any rate of operations is fixed too low, it is stipulated that not more than fifty per cent. bonus is to be paid on any one pay.

To protect the employer against inferior work and save cost of inspections of machines the operator is only paid for material that ultimately passes the Government inspection. This makes every man see that every other man turns out good work.

The system has produced noticeable results in the way of output. On one operation that, before the bonus was introduced, took two men and two machines to get between six and seven hundred operations per day, now one man and one machine is producing just over 500 per day, an increase of almost 30 per cent. Another took five men to produce 1,000 per day; now two men produce 600 to 650 per day, an increase of 62 per cent. in each case. The operator gets half of the money saved and the employer half, but the employer gets all the increased output.

On the other hand, on some of the operations this bonus has not affected the output much, there being in some cases increases of only five to six per cent. Taking all the operations into account, both machine and bench, the increased output has been nearly forty per cent., and the bonus paid twenty per cent.

The effect of this extra speed on some of the operations has spread over all, so that the total cost has declined a little over 35 per cent. since the system has been introduced.

To get the best results there must be confidence between master and man, no cutting of rates. The rate must be fixed so that the operators can earn some bonus. The effect has been that the operator has devised many short cuts that help production and improve the grade of the work.

Advertising, the Keynote to Success for Lumber Industry

Advertising as the keynote of success in the lumber industry was the basic point of the address of Secretary R. S. Kellogg, of the National Lumber Manufacturers' Association, in an address on "Use Wood Where Wood Is Best," before the National Wholesale Lumber Dealers' Association, Wednesday, March 15, at Philadelphia.

"Advertising, lots of it, honest advertising, efficient advertising," he declared, "has made the lumber trade sit up and take notice in the last year or two and realize the possibilities that have been overlooked in years gone by, The lumber trade to-day, as a result, has revolutionized the methods of merchandizing its products, and this applies not only to the manufacturer, but to the wholesaler and to the retailer.

"The cypress and southern pine manufacturers, for example, are spending $100,000 each year in the advocating of their product. The hemlock men of Wisconsin are just starting out to spend $25,000 a year for five years in advertising hemlock. The Douglas fir, North Carolina pine, red gum, red and white cedar men are doing the same kind of work.

"But back of all this is the bigger thing, honesty and efficiency in advertising. Newspapers to-day are asking that the advertisements offered for their columns be honest. We are advocating honesty and efficiency in our own business to-day, not because of the morality of the problem alone, but because it pays to be right.

"The National Lumber Manufacturers' Association to-day is working through all its varied channels to secure efficiency in the handling of the lumber of the nation. Our manufacturers are trying to be efficient in production, we are trying to help our customers to be efficient in their merchandizing, but above all we are all working together for efficiency and honesty in advertising. We want more advertising in this business of ours. The manufacturers are advertising to help the retail and wholesale distribution of lumber, and the wholesalers and the retailers should join hands with us and spend their money in extensive advertising of the use of wood where wood is best.

"That is the one great problem in our advertising to-day, the advocacy of the use of wood only where wood is best, and of the kind of wood that is best for a specific purpose. In honest advertising we must advertise the kind of wood for a given purpose that is best fitted for that purpose. If we try to sell an inferior wood for a particular purpose, we harm not only the individual seller of this wood, but the lumber business as a whole.

"While the manufacturers are spending well toward $500,000 a year on various special advertising campaigns for special woods, we are trying to educate the wholesalers and the retailers of the country to co-operate with us not only by assisting in this advertising, but by becoming efficient salesmen. The manufacturers are advertising to make a market for lumber for the dealer, and the manufacturers are helping in this campaign by raising the standards of the various kinds of lumber, and trademarking much of it, so that the man who buys a stick of wood knows that its quality is backed by a big manufacturers' organization, pledging its faith that this stick of timber will do what is claimed for it.

"The manufacturers are helping the dealers not only in this way but by sending out travelling exhibits, engineering bulletins, and aiding the dealers to secure the most reliable information about the qualities of the lumber they handle.

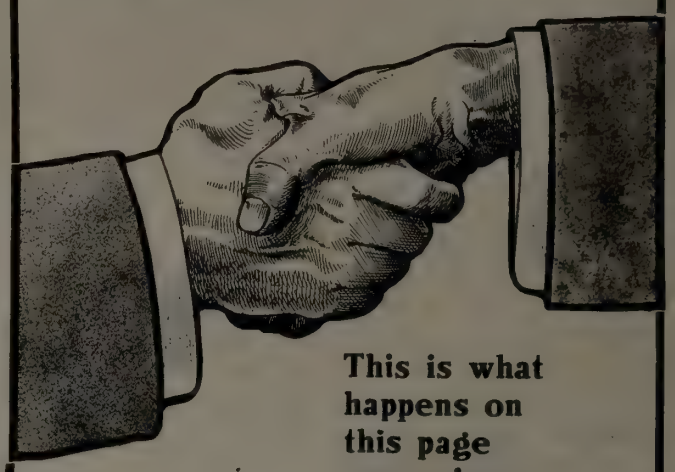
"Now, in co-operation with the manufacturers, we believe the dealers can help themselves by becoming authorities upon building construction in their home cities, spreading information on the various uses of lumber, co-operating with manual training schools, meeting mail order competition with superior goods and service, and by going into the broad problems of community development; in other words, becoming building experts for their home communities."

WANTED & FOR SALE DEPARTMENT

Mr. Buyer

Are you in the market for a special bill of lumber? Would you like to pick up a real good second-hand planer or perhaps some logging equipment? Have you a vacancy in your plant for a filer or other employee? If you answer "Yes" to any of these, advertise on this page. It is the "Master of Ceremonies" and will introduce you to the man you want.

The Master of Ceremonies



This is what happens on this page every issue

Mr. Seller

You are looking for the man who is looking for you—you have for sale what he wants. All that is needed is an "Ad" on this page to bring you together. Appeal to this "Master of Ceremonies" and send us a small ad. today. What can we sell for you—or perhaps we can find you a job.

Send along your ad.

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Lumber Wanted

Soft Elm, Ash, Maple, Birch, Beech, Basswood. Dry or new cut. Cash when loaded. Box 373, Canada Lumberman, Toronto, Ont. 6-7

Cedar Wanted

Good cedar for boat building. Best prices paid for the right material. Write for particulars. The Peterborough Canoe Company, Limited, Peterborough, Ontario. 6-9

Red Pine Wanted

Wanted to buy a stock of Red Pine. Apply Box 363, Canada Lumberman, Toronto, Ont. 6-8

Hemlock, Pine, Basswood

Wanted to buy one million feet Hemlock, also 1-inch Cull Pine and 1-inch Cull Basswood. Box 364, Canada Lumberman, Toronto, Ont. 6-8

Lumber Wanted

Wanted several cars maple, beech or birch squares 1, 1⅛, 1¼ in. x 42 to 60 in. in length. Write for particulars. J. Finlay & Sons Co., Norwood, Ont. 5-8

Basswood Wanted

Wanted 200,000 feet of 1-inch White winter cut Basswood to grade No. 1 Common and Better, to be plump 1-in. thick when dry. State price F. O. B. cars shipping point. Address, Box 308, Canada Lumberman, Toronto, Ont. 4-t.f.

Basswood and Hemlock

Wanted to buy: inch cull Basswood, and 1 in. and 2 in. Hemlock. Apply M. Brennen & Sons, Hamilton, Ont. 7-8

Logs Wanted

Several cars Rock Elm logs. Quote price to St. Marys Wood Specialty Company, Limited, St. Marys, Ont. 4-7

Wanted

We are in the market for a large quantity of 2-in. Spruce Plank 4 in. and up wide, 8 feet and up long. Good merchantable stock. Kindly write us your lowest price. Box 334, Canada Lumberman, Toronto, Ont. 5-t.f.

Wanted

Several cars 16/4 Birch, No. 2 common and better grade. Must be dry and ready for immediate shipment. Write us your lowest price and full particulars. Box 333, Canada Lumberman, Toronto, Ont. 5-t.f.

Wanted

Wanted for shipment whenever in shipping condition:
2,000,000 ft. 3 in. No. 1 Com. & Bet. Soft Elm.
1,000,000 ft. 2½ in. No. 1 Com. & Bet. Soft Elm.
1,000,000 ft. 2 in. No. 1 Com. & Bet. Hard Maple.
500,000 ft. 2½ in. No. 1 Com. & Bet. Hard Maple.
Box 332, Canada Lumberman, Toronto, Ont. 5-8

Spruce Pulpwood Wanted

Spruce Pulpwood wanted of good size, merchantable quality, four-foot peeled preferred, on cars shipping point. Box 323 Canada Lumberman, Toronto, Ont. 4-7

Wanted

200,000 ft. 3-in. No. 1 Common and Better Soft Elm.
200,000 ft. 2-in. No. 1 Common and Better Soft Elm.
200,000 ft. 4/4 No. 2 Com. and Bet. Basswood.
200,000 ft. 8/4 and 12/4 No. 1 Common and Better Hard Maple.
100,000 ft. 4/4 No. 2 C. and B. Brown Ash.
200,000 ft. 4/4 Crating Elm and Basswood.
Will contract now to take stock when in shipping condition. Box 380, Canada Lumberman, Toronto, Ont. 7-7

For Sale–Lumber

Hemlock Ties

FOR SALE—Considerable quantity of hemlock ties suitable for Electric Railways, Sidings, etc., ready for immediate shipment. Monteith Bros., Rosseau, Ont. 6-10

Poplar For Sale

For sale two cars 1-in. Poplar cut March, 1915. Enquire by letter to Knight Bros. & McKinnon, Limited, Box 569 Cobalt, Ont. 4-tf.

For Sale

65,000 Feet GOOD DRY B. C. FIR

2½ to 5 in. thick by 6 to 12 in. wide. 60 ft. to 78 ft. long. Immediate delivery. George Kersley, 224 St. James Street, Montreal. 7-10

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que.

For Sale–Machinery

Hoist For Sale

For sale cheap, steam hoist for loading logs. Apply to Cain Coal Company, North Cobalt, Ont. 6-7

For Sale

About 200 9/16 in. Boom Chains, and about 600 ½ in. Boom Chains. 1 set Pine Storage Booms of about 100 pieces, with ¾ in. shackle chains, and 1 set Pine Storage Booms of about 100 pieces with ⅞ in. shackle chains. Also a quantity of White Pine and Hemlock Booms. Box 379, Canada Lumberman, Toronto, Ont. 7-7

Producer Gas Engine

For sale, second hand 45 H.P. Producer Gas Engine with gas producer, air pump for starting, blower, and small gasoline engine complete and in good condition. Burns pea coal, could be operated at a cost of about $1 per day. Will be sold at a very low price. Canadian-Warren Axe & Tool Company, Ltd., 7-10 St. Catharines, Ont.

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

Engine For Sale

Corliss Engine, 150 H.P., 18 cylinder, 24 inch leather belt, with pump, first class condition, no fault, changing to Electric. Inspect at Guelph Lumber Co., Guelph, Ont. 5-8

Planer and Matcher

Berlin No. 94 Planer and Matcher in good condition, with furring attachment and six circular saws. Capacity 100 feet per minute. Also two sets of thin knives, one set of matcher heads, one set of square heads, one jointer bar and overhead countershaft. Price, $750.00 f.o.b. Drummondville. Reply Campbell, MacLaurin Lumber Company, Limited, Drummondville, Que. 6-7

Wood-Working Machinery

1—36" Crescent band saw, A1 condition	$75.00
1—24" Cowan double surfacer, A 1 condition	375.00
1—8" Crescent jointer	75.00
1—Variety saw table, iron	85.00
1—Wood frame, 8 ft. saw table	60.00
1—Combination drill and mortiser, McGregor-Gourlay, 4" stroke, table ¼ x 5½, raise and lower 12", side movement 10", knife 1" wide	50.00

Pollard Manufacturing Company, Ltd.,
5-8 Niagara Falls, Ont.

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

Wanted position as band saw filer, long experience and good references. Box 300, Canada Lumberman, Toronto, Ont. 3-7

BAND SAWYER wants position, left hand mill. Good references. Box 335, Canada Lumberman, Toronto, Ont. 5-8

BAND SAWYER wants position. Three years' experience on double and two on single cut. First class recommendations. Box 342, Canada Lumberman, Toronto, Ont. 5-7

LATH MILL MAN wants position to run a lath mill by the day or per thousand. Will go anywhere; ten years' experience. Reference. Box 369, Canada Lumberman, Toronto, Ont. 6-8

BAND SAWYER wants position, single or double cut, best of references and sober. Box 383, Canada Lumbarman, Toronto, Ont. 7-7

BAND, RESAW OR ROTARY SAWYER wants position. Six years' experience; sober and good references. Box 353, Canada Lumberman, Toronto, Ont. 6-9

BAND SAW FILER wants position, double or single cut. Twelve years' experience, first class references. Box 317, Canada Lumberman, Toronto, Ont. 4-9

EXPERIENCED LUMBERMAN wants position in lumber factory. Can take full charge of same and understand all the different machines, also filing. First-class references. Box 358, Canada Lumberman, Toronto, Ont. 6-8

DOUBLE BAND SAW FILER wants position, first-class references.

BAND MILL FOREMAN wants position, first-class millwright, and can handle men to good advantage. Box 359, Canada Lumberman, Toronto, Ont. 6-11

EXPERIENCED MANAGER—Have had twelve years' experience wholesaling American Hardwoods and Yellow Pine, thoroughly acquainted with source of supply. At present with large American wholesale concern as Manager; desire to return to Canada, and wish to get in touch with wholesaler or large consumer as buyer who has had trouble in securing Southern Hardwoods and Yellow Pine at right prices. Have also had experience shipping heavy oak and yellow pine timbers, ties and car material into Canada. Can show results, thoroughly competent to handle office work and correspondence covering buying and selling. Box 348, Canada Lumberman, Toronto, Ont. 7-7

Wanted—Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

TIMBER CRUISER and traveller wanted. Apply Box 365, Canada Lumberman, Toronto, Ont. 6-8

GREEN LUMBER CULLER wanted for large Ottawa Valley mill. Must be experienced. Give references, experience and wages expected. Box 356, Canada Lumberman, Toronto, Ont. 6-7

MECHANIC AND SAWYER wanted for mill of 20 M. capacity in the North. Must be first class, capable and sober with full year work. Box 377, Canada Lumberman, Toronto, Ont. 7-7

WANTED—SALES MANAGER in large lumber business, sales principally to United States markets. Must be thoroughly acquainted with production and classification of Spruce lumber, rough and dressed. Good salary for suitable man. Apply Box 362, Canada Lumberman, Toronto, Ont. 6-7

SUPERINTENDENT WANTED for woodenware and wood novelty plant. Man familiar with manufacturing all kinds of wooden household articles. State experience, items you have been handling, where now employed, salary expected, etc. Give full particulars. Box 357, Canada Lumberman, Toronto, Ont. 6-7

Business Chances

Tie Contractor Wanted

Wanted a responsible contractor who would undertake to get out a quantity of ties in Ontario. Apply Box 366, Canada Lumberman, Toronto, Ont. 6-8

Planing Mill For Sale

Modern planing mill and lumber yard in growing town in Niagara Peninsula. Write Room 67, 18 Toronto Street, Toronto, Ont. 7-8

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

Miscellaneous

Timber Limits For Sale

Berths No. 2 and No. 4 Nipissing, and Berth No. 4 Gurd. Hemlock, Birch, Pine and Spruce. Would sell berths separately. Close to Lake Nipissing. Great opportunity for jobbers on Nipissing berths. For particulars address Box 381, Canada Lumberman, Toronto, Ont. 7-10

30 Replies

are often received to "Wanted" and "For Sale" ads. on this page. Even 50 replies are not an uncommon return from the investment of the small amount a condensed ad. costs. And isn't that good business—to get right into close touch with so many people interested in what you have to buy or sell? For you can be sure their transactions with you will not end when they have closed the business your single ad. announced.

Build Lumber Carrier

Of the same type as that suggested as suitable to be built for carrying the lumber of British Columbia to foreign markets will be a vessel to be built immediately on Puget Sound for American lumbermen. She will be the first auxiliary powered lumber carrier to be built on Puget Sound and will be constructed at the Babare yards, at Old Town, Tacoma. She will be 215 feet over all, 42 feet beam, 14 feet depth of hold and rigged as a four-masted schooner. Although the engines have been ordered for the vessel she may make her first voyage under sail. She will be able to carry a little more than 1,000,000 feet of lumber and will cost, when completed, approximately $100,000. She will be operated in the off-shore trade, to South Africa or Australia and may be sent through the Panama Canal to New York.

Overhead a Bugaboo

Mostly every aggressive manufacturer some time in his life wants to increase his business in order to reduce his overhead charges. In many cases this is the worst bugaboo in the world. We should certainly apologize to Mr. Overhead. We do believe he is part of the cost of doing business, but when you figure out that you have a lot of waste material, and you spirited up the force to increase the number of boxes made, and if you put in ten more machines in order to increase the number of boxes turned out of the factory, you naturally would have a bigger spread to cover the cost of manufacture, including overhead. The trouble with Mr. Overhead is that when he gets to whooping in the ear of the man that he could do $100,000 more business and practically at no overhead, then we urge you, gentle reader, to diagnose all this proposition and be ready to work a new deal out, charging overhead at the same percentage as heretofore, and you will no doubt have more money than if you figure you are going to save half or three-fourths of your overhead because you have increased the capacity of one department or another.—Barrel & Box.

Logging is being hindered very much up the B. C. coast at present, as a result of storms, according to a report from Timber Inspector George D. McKay. In many cases loggers have had to make their booms up two and three times even in sheltered waters, while towing has been out of the question.

Twenty flatcars loaded with lumber from Everett, Wash., came into British Columbia recently for shipment eastward over the C. P. R., according to a Vancouver report. This is in the face of the fact that many B. C. mills are idle.

Union Lumber Co.
Limited

Dry White Pine
Norway
Spruce
and Lath

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

Competent Manager Wanted

A large lumber plant and mill in Toronto has an excellent opportunity to offer a man of real ability as head office manager. This vacancy has been made by the death of the late manager. Propositions of straight salary, salary and commission, an interest in the business, or even a sale of the business as a going concern, will be considered.

This is a large proposition and only the competent man of proven ability and experience need apply.

Box 374 Canada Lumberman
Toronto, Ontario

Review of Current Trade Conditions

Ontario

Although there is still nothing definite to report that is interesting, in connection with the building situation in Ontario, there are general signs of improvement today which are encouraging the lumber trade as a whole. In the larger cities, architects are beginning to see a little more light than they have for some time past. Quite a number of them report that they are doing preliminary work in connection with projected buildings, only a few of which have reached the contract stage, but a number of which are expected to do so early in the spring. In the country districts there is promise of a fair amount of building on the part of farmers.

Industrial users of lumber are far more active than they have been for some time. The furniture, implement and piano manufacturers are doing well and report that trade is improving rapidly, a situation which is making things more active for the hardwood trade. A prominent hardwood firm report that they have recently had one of the best weeks that they have experienced for a long time.

The white pine situation is also showing improvement. Along the North Shore of Lake Huron and in the Georgian Bay district, stocks are going out steadily by rail, much of them going to Buffalo, Cleveland and other lake points. When these stocks are moved by rail during the winter to United States points the situation is quite encouarging. Manufacturers in Northern Ontario have taken out a fair sized stock. A traveller who recently visited many of these firms, reports that, so far as he can estimate, the cut is about normal. They have had a favorable season for logging operations and the outlook for the drives could not be more encouraging than it is. Northern Ontario firms are also shipping fair quantities of hemlock, much of which is going to United States points.

The appearance of a considerable number of shell box orders upon the Ontario and Quebec markets is also making the trade feel more contented about the outlook. It was a long time since new shell box orders had come to light. About March 17th the Imperial Munitions Board alloted contracts for the production of a little over one million boxes of various descriptions. About 65 per cent. of these orders went to Quebec firms and the balance to Ontario firms. These will make a good demand for spruce, pine, birch and maple, in 1 in. stock, and as most of these woods are already scarce, it is likely that prices will stiffen. These orders are the result of tenders called for by the Board and a number of lumbermen who have heard details of the prices are expressing the opinion that they are a little too close to the actual cost of production and that higher prices for lumber may bring about a pretty serious situation for those who have undertaken the contracts.

Eastern Canada

The first of April will see the mills at St. John, N. B., in operation. The outlook for the present season is very uncertain as manufacturers cannot see far into the future. So far as prices are concerned there is no uncertainty of any importance, but manufacturers cannot figure on their ability to clear their stocks, as tonnage is so scarce. Practically all shipments from St. John are being handled by the Admiralty. If the present rate of shipment continues most of the stock will be moved. British buyers are not purchasing far ahead. Deals are being quoted at about $19 for an ordinary English specification. At the opening of spring, stocks of deals at St. John will be pretty well cleaned up, giving the mills clear wharves. Spruce boards are selling at about $17 to $18 for good merchantable stock. The American market is firm, but orders are scarce on account of the difficulty in making delivery, as embargoes have been placed by the railroad companies upon these stocks. Coastwise freights are high, having reached $5 per thousand for New York.

The driving outlook is promising, with plenty of snow at the head waters. Jobbers have had a good winter, although logging expenses have been a bit higher. The quantity of logs coming down the St. John will be about the same as in 1915.

The base price for spruce frames at Boston continues firm at $27. The recent embargo against lumber shipments into the United States announced by the Intercolonial Railroad is cutting off the competition of Canadian spruce and strengthening the Boston market. Random quotations are firm, present prices being: 2 x 3, $21.50 to $22; 2 x 4, $22.50 to $23; 2 x 5, 2 x 6 and 2 x 7, $21.50 to $22; 2 x 8, $25 to $26; 2 x 10, $27; 2 x 12, $28. The hardwood market at Boston is improving and the demand is better than it has been for some months. Prices are firm. One-inch 1st and 2nd maple is bringing $41 to $44, and basswood of the same grade is firm at $44 to $45. Stocks of really dry basswood are scarce and higher prices are expected in the near future. There is a good demand for 1-in. 1st and 2nd red birch at $56 to $59 and sap birch at $45 to $47. The trade in hemlock at Boston is good and prices are firm. Stock lengths of eastern clipped boards are selling at $22 to $23. Shingles are quiet at Boston. The best white cedar extras are bringing up to $3.60; clears $3 to $3.10 and 2nd clears $2.30 to $2.40. Lath continue firm, although the demand is only moderate. For 1½-inch lath the lowest price now is $4, and for 1⅝-in. most sellers are asking $4.25.

Great Britain

There has been a moderate reduction in the demand for lumber at London recently, but spot values continue to show increases as shippers' quotations c.i.f. are still on a steady up grade. Importers of deals and battens from South Swedish ports are obtaining £28 10s. c.i.f. for 3 x 9 and 3 x 8 unsorted red wood, £26 for 3 x 7 and 2½ x 7 and £25 10s. for 2 x 6 and 2 x 4. At Foy, Morgan & Company's recent auction sale, 3 x 11 5th Quebec spruce sold at £26 5s. per standard. 3 x 7 unsorted St. John spruce brought £26 10s. St. John red pine 1st, 2nd and 3rd, 3 x 8 and 3 x 6 sold at £26 and 1st, 2nd, 3rd and unsorted red brought £24 5s. A lot of clear silver spruce from Portland, Oregon, was sold at £30 per standard for 1 x 10/12 and £28 for 1 x 7/9.

The volume of business at Liverpool has been rather light. Stocks are depleted and most of the trade in progress is between merchants and country buyers, in small quantities. All goods are firm in price with an upward tendency and there seems to be no likelihood of easier prices, while freights continue at their present high levels. There is practically no c.i.f. business in progress. Spruce c.i.f. prices are firm, merchants asking in the neighborhood of £28 for 3 x 7 and 8 in. and £30 for 3 x 9 in. and £33 for 3 x 11 in. Arrivals are practically nil. There is practically no c.i.f. market for birch at present. The spot market, however, is very firm and the consumptive demand is good, so that values are sure to rise. At Manchester, the price of timber continues to advance rapidly, with apparently no limit. A small cargo of the usual average spruce was sold lately at £29 per standard, and 7 x 3 spruce was offered at £30 per standard ex quay, with other sizes in proportion. Fine stocks at Manchester are becoming very light. Imports of this wood are not likely to arrive until June and prices are therefore expected to go higher.

At Glasgow, the lumber market continues quite active, the demand having improved considerably of late. A few consignment lots of spruce have recently arrived and have been sold at prices much beyond those hitherto obtained. A little contracting is reported on an f.o.b. basis, but buyers continue to object to entering into contracts of this kind while freights continue so uncertain. There is a good demand for first quality Pacific Coast spruce. Stocks are now exhausted and even the lower grades are scarce.

United States

Industrial conditions throughout the United States continue on an active scale, with the general production below the demand. Car shortages and embargoes have become still more serious and vessels for export shipments continue to be lacking. Steel companies report record orders and the leading producer has announced its intention of spending $35,000,000 on a new plant and improvements. The freight embargo situation and the shortage of transportation facilities continue to restrict the movement of lumber. Railroads are adding to their rolling stock as rapidly as possible, but the car shortage is likely to continue for some time. The worst congestion of cars has been in New York and other eastern seaboard points, but an extensive congestion also exists at Seattle, Wash., where 5,000 cars of freight destined for Russia were reported last week. A similar condition, it is understood, exists at Vancouver, B. C.

The export situation shows no change of importance, the chief factor still being the shortage of tonnage. The Pacific Coast is experiencing a very large demand for lumber for shipment to Australia. No less than eighty vessels are listed as having sailed or being under charter to sail from Pacific ports for Australia before September, all loaded with lumber.

In spite of the numerous obstacles in the way of making shipments of lumber there is a steady increase in the consumption in the chief United States cities. Receipts of lumber at Chicago from January 1st to March 11th amounted to 506,667,000 feet compared with 362,832,000 feet during the corresponding period of 1915. Shipments

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

from Chicago during the same period amounted to 230,241,000 feet as compared with 194,898,000 feet during the corresponding period of 1915. The yellow pine situation is quite encouraging with extensive shipments and orders on the books of all mills, although much greater shipments would be made if cars were available.

Northern pine at Chicago continues strong. There is good demand for all yard stock requirements and there is a fair movement of lower grades for box purposes. At Buffalo, the white pine trade shows a little improvement, although the unpleasant weather has been holding back orders to some extent. Prices are firm. At North Tonawanda, there is a good movement of cutting up stock and improvement is reported in common stock. Enquiries and orders are becoming more numerous. Prices have been advancing on a few items, stocks of which are short.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Montreal Trade Still Quiet

Montreal, March 24th; (Special to the Canada Lumberman):—So far as local trade is concerned, the market is dull, due to the inactivity in the building business. The unusually severe weather conditions, for this time of the year, have handicapped operations, which are not expected to be on an extensive scale this season. Orders from the United States are moderate. This section of the market is, however, the brightest spot in the general situation. It is reported that there is shortage of cars at some provincial points, making it difficult to ship lumber from the mills.

So far only three Montreal firms have received orders for additional shell boxes, as the result of the tenders which were recently submitted. These are for the smaller boxes, and the prices are understood to be low—so low, in fact, that offers by the Commission to other local firms on the same basis have been refused. The Commission have called for fresh bids on some of the larger sizes, and have, it is stated, changed the specifications with a view of obtaining cheaper boxes. These tenders were to be in Ottawa by the 25th inst.

With regards to exports, the position is still one of doubt, particularly with reference to the tonnage which will be available. From present indications there will be a shortage on the liners. A small amount of additional space has been booked at rates round about three hundred shillings.

The demand for sulphite pulp is exceptionally good, a condition which is likely to continue for some time. Prices have again risen, with a likelihood of still further advances. Canadian mills can readily sell all the pulp available, and practically every mill has orders for a long time ahead. It is a considerable period since there was such a buoyant market, every ton of pulp being shipped out as soon as manufactured. The Riordon Pulp and Paper Company has recently exported some pulp to England. Ground wood is in fair request. Newsprint continues to be in brisk demand for foreign and home account.

St. John Deal Stocks Cleaned Up

St. John, N.B., March 21st; (Special to the Canada Lumberman): Within the next two weeks, the mills at St. John will begin to turn their wheels and get under way for the season of 1916. Just what the coming season will bring forth is hard to say. Under ordinary conditions the manufacturers can look ahead and see pretty clearly what is at the other end. This season he is very much in the dark, and cannot tell just what the future has in store for him. Price is not the greatest question, but how the manufacturer is going to get clear of his stock after he saws it. Tonnage is simply out of the question and the only shipments are those being made by the Admiralty, who are finding all the bottoms, and as every vessel is under the absolute control of the Government they are really the only ones who can do any positive shipping. About all shipments from this port are being made for account of the Government, and have been fairly heavy. Should the present rate of shipments keep up, no doubt a good portion of the sawn stocks for 1916 will be moved. If it should slow up it will mean stagnation for the mills. British buyers do not seem disposed to make any very extended purchases at the moment, so it is really hard to tell just what price can be had for deals. Probably $19 would be a high price at the present time, for an English specification fifty per cent. 9 in. and up, with the strips and fourths at reduced prices, viz., about $2.50 per thousand less.

Stocks of deals will be well cleaned up at St. John when the spring opens, and mills will have a start with clear wharves, which, as explained above, will no doubt be needed.

Spruce boards are out of the question and cannot be had at any low prices unless of a very inferior grade, and then one has to go outside for some distance to find any. It is to be hoped that the spruce board market will not follow last year's market, which was a very dead one. Price was no question. It was find a buyer. At the present moment any person having boards can ask and find buyers at about $17 to $18 for good merchantable stock.

The only stocks of American sizes are held by Stetson, Cutler & Company, who are shipping considerable to the English market, as they have a very long and broad average stock from long and large logs cut in Maine. Very extreme prices are being paid for special orders cut from these logs. The American market remains firm, but no orders are being placed here, as it is useless, as deliveries cannot be made to B. & M. or N. Y., N. H. & H. points, embargos having been placed on these lines for some time. Just when the embargoes will be taken off seems pure guessing. 2 x 3 in., 2 x 6 in., and 2 x 7 in. are quoted at $21, 2 x 4 in., $22.50, 2 x 8 in., $25, 2 x 10 in., $26.50 Boston, but no sales from St. John are being made. Some shipments are being made to New York at private prices, all cargo lots. Freights coastwise are like oceanwise, having advanced to $5 per thousand for New York within the past ten days, with seemingly no let up. Ocean freights are the much discussed question. Three hundred shillings per standard has been paid, and whether it will end there remains to be seen. This price means roughly $36 per thousand feet and seems to the seller like a fairy tale.

The outlook for driving is very good all over the province of New Brunswick and Quebec. At the headwaters of the St. John over Quebec and Maine, 4½ feet of snow covers everything, and sometimes four inches of crust is mixed through it. This coming late, as it has, will no doubt be well preserved, as it is now nearing the breaking up time. Therefore, with warm weather and rains, good water should prevail and be well upheld. Jobbers all over the country have had a good winter, but logging expenses have been somewhat higher owing to increase in the prices of all feeds used in camps, both for men and beasts. Wages were about the same as a year ago.

The quantity of logs to come down the St. John River has been well discussed before and will be about the same as in 1915. It is expected that a very large drift drive of logs will take place in 1916, as many old logs remain in the river from last year, and will no doubt come out with the ice, unless the booms at Fredericton can be closed before they get past. Then they must come on to St. John and be picked up in the lower reaches of the river.

The cut of cedar on the St. John this winter is practically nothing. Shingles being low in price during the last season or two caused operators to retrench in their cutting.

The shingle market remains sluggish, but with a small cut here the west market will no doubt care for them all and will help outside points in the east to get better prices.

London Market Report

Churchill & Sim, London, Eng., in their monthly wood circular, say:—A further decrease in the aggregate delivery of wood in the Port of London of some 4,500 standards is shown during February. There has been no great shortage in the supplies to hand from Sweden and Norway, but the Russian and Canadian figures marked a large falling off in January, and materially affected the overside returns. The demand for piled stock shows no sign of diminution, but is still strong and active for what little is available for immediate use. Prices have again improved all round, especially for floorings and matchings, which are none too plentiful and exhibit the greatest increases in the February values. Forward business has been much hampered by the difficulty and dearness of tonnage, and the earlier chartering rates from both Sweden and the White Sea have proved very advantageous bargains as compared with recent fixtures. There is, apparently, no limit to freight values, which are still the key of the situation, and give buyers a great deal of anxiety when arranging for their open water supplies.

From the St. Lawrence there was imported during February:—

Pine Deals, 2,000 pieces against nil pieces in 1915; Spruce Deals, 3,000 pieces against nil pieces in 1915.

And from New Brunswick, etc.—Pine Deals, 1,000 pieces against nil pieces in 1915; Spruce Deals, 70,000 pieces against 415,000 pieces in 1915; Birch Planks, 17,000 pieces against 1,000 pieces in 1915.

The market for Pine deals has been stronger again, especially in

J. & D. A. Harquail

Company, Limited

Manufacturers of Lumber

Extensive New Brunswick and Quebec timber limits, abundant with Virgin Spruce, Pine and Hardwoods.

Twenty years' experience in Milling and Manufacturing, together with a practical knowledge of Building and Architecture, is why our Customers tell us that the Dressing, Grading, and Manufacture of our Stock is just a little better than they expected.

Large stocks of 1 in. Spruce Lumber always on hand.

Try a car of our Air-dried Dressed Spruce.

We also make a Specialty of Kiln Dried Stock.

Our personal attention given to every detail.

Write, wire or phone us for quotations.

Established 1894 ***Incorporated 1908***

Campbellton, New Brunswick

the lower qualities, but the prices for 1sts and 2nds have not been influenced to any great extent, having attained their present levels more by reason of their scarcity than on account of any improved demand for them. The importation of Spruce from the lower ports on a very greatly reduced scale. barely one-sixth of the quantities having come to hand so far this year as compared with the 1915 figures. The result is a constantly increasing market value all over the country, which is in no way fictitious, but is again a consequence of the scarcity and dearness of tonnage.

There has been some demand for Birch planks and quotations have risen sharply when the prices at which stock could be replaced were realised.

Liverpool and Manchester Stocks

The following report upon Liverpool and Manchester stocks for the month ending February 29th, 1916, is furnished by H. W. Lightburne & Company, Liverpool, and their St. John, N.B., representatives John E. Moore & Company, Limited.

Spruce and Birch

Month Ending, 29th February, 1916

Liverpool

	Import			Consumption			Stock		
	1914.	1915.	1916.	1914.	1915.	1916.	1914	1915.	1916.
N.B. & N.S. Spruce & Pine, Stds. ..	1,540	2,980	360	2,550	2,330	3,880	5,730	3,580	7,180
Birch Logs, Loads	20	0	60	40	40	200	120	20	640
Birch Planks, Stds.	97	109	6	188	261	236	521	303	479
Manchester									
Spruce, Stds	1,030	290	620	2,910	2,865	2,950	12,430	3,480	11,090
Birch Logs, Loads	20	0	0	80	120	200	240	380	780
Birch Planks, Stds.	55	30	0	97	158	127	436	364	503

Stocks in Manchester and Liverpool Combined

Spruce						
Manchester	8,240	7,550	12,430	3,480	11,090	
Liverpool	3,810	3,010	5,730	3,580	7,180	
	12,050	10,560	18,160	7,060	18,270	Stds.
Birch Logs						
Manchester..	60	340	240	380	780	
Liverpool	200	800	120	20	640	
	260	1,140	360	400	1,420	Loads
Birch Planks						
Manchester	12	479	436	364	503	
Liverpool	412	674	521	303	479	
	424	1,153	957	667	982	Stds.

Barbados Market Report

S. P. Musson, Son & Co., Barbados, report under date of 2nd March, as follows:—Lumberstuffs—White Pine—The position is unchanged since last advised. No receipts are to hand. Supplies are wanted and first arrivals should sell well. We should say that $35.50 and $36 for merchantable, and $27 and $28 for second quality, would be obtainable for first receipts. Spruce—Market is lightly supplied but shipments are said to be on the way. Shingles—Selected Long Gaspe are wanted, and we could recommend shipments, but cedar laying are in heavy stock, with no demand. Shooks—The Schooner "Ellen Little" from Portland has arrived with a cargo of 15,080 bdls. which is going into store; also 672 bdls. barrel shooks. The S.S. "Cratheus" from Mobile has also brought 946 bbls. of these latter. Wood hoops—We note the arrival of 500 bundles by London steamers for dealers account.

Furniture and Piano Trades Improving

Montreal, March 24, (Special to The Canada Lumberman):—Mr. George Kersley, wholesale lumber and veneer merchant, Montreal, recently returned from a month's successful visit to the principal piano and furniture centres in Ontario. He reports that business, particularly in the former branch of industry has revived in a marked degree. Some furniture manufacturers are also in a much better position, so far as orders are concerned, than they were a few months ago.

News Print and Sulphite Pulp in India

Mr. H. R. MacMillan, Special Trade Commissioner, writes the Department of Trade & Commerce, Ottawa, to the effect that a demand exists in India for newsprint paper and bleached or unbleached sulphite pulp. The newsprint paper now used in India is all imported from Europe. Although the demand is small because of the limited circulation of the newspapers, prices rose in January to $116 per ton c.i.f. Calcutta.

Sulphite pulp is imported from Scandinavia to be used in mixture with the locally made grass and bamboo pulps for the manufacture of the finer grades of printing paper. About 20,000 tons a year are imported. The price ordinarily is £9 to £10 per ton c.i.f. Calcutta, but prices have now mounted to £17 10s. for unbleached pulp. The cost of bleaching pulp in India is about 30s. per ton. If bleached pulp could be delivered in India by July at £18 to £19 per ton or unbleached at £17, sales could be made for lots of 1,000 to 2,000 tons. It is possible that pulp could be shipped via Hong Kong from Vancouver.

The names and addresses of the principal Indian importers of newsprint and sulphite pulp may be obtained from the Department of Trade and Commerce (refer File No. A-1499).

Advertising—Preparing the Copy

By R. P. Roedell

Advertising has been called an art. Today it is a buisness. It has sprung up out of the needs of the present day methods of transacting business in all lines, and brainy men of the country have recognized in it a profession in which they might well justify close application to details, careful thought and study regarding plans and methods, and the propriety of scientifically reaching the buying public through the medium of the newspaper, the magazine, the street car and the billboards, as well as a direct letter or card.

An advertisement is merely an open letter to the public, and is either direct or indirect; in the first instance, appealing directly and specially to certain of those whose patronage you have or may desire, the latter a campaign of publicity, generalizing your efforts and seeking to expand by virtue of all legitimate means. In the stress of the daily business life, of necessity the first thing which should require one's attention is system. Without system, one is carried along by the swirling waters of uncertainty and doubt. of hesitation and mistake, and finally lands in the depths of failure. You who have charge of a business must realize that, in the great scheme of successfully conducting that business, there must be various departments. The surest and safest way to departmentalize your business properly is to classify your desk work, and assign to one department the task of carefully and scientifically advertising your business. You may no longer sit down at your desk, dash off a few lines or a few figures, send them to the newspapers for publication, and expect results. This department requires special care, and it demands of you special thought; it asks of you reasonable attention.

Preparation for Writing an "Ad."

Before we reach the details of writing an "ad," so called, it is proper to ascertain the best way to make preparation therefor. You can not correctly write such a letter as we have indicated without first having at your command all of the essential data relating to your particular business. One of the first things which a business man should do is to prepare a budget of his expense. This he can estimate from his past experiences. A certain volume of business will require a certain amount of expense. If you can increase the volume of business without likewise increasing your expense, you are well along toward results which will be pleasing to you and will demonstrate the real value of an orderly method of transacting those things which come to you day by day. Necessarily it follows that there should be a proper distribution of this expense, and an allotment of a certain amount to the subject of advertising. These figures you should watch not year by year, but month by month, week by week, by comparison, by analysis of conditions, and you will be surprised not only at the results which you will obtain, but at the real efficiency which you are acquiring in this same process.

One of the first steps taken by him who is keen in the matter of analysis. is the gauging of the market in which he expects to dispose of his merchandise.

What territory do you cover? What is the buying power of this territory? What are the possibilities for expansion? These are questions which present themselves in the building of a foundation of thought which will find expression in an advertisement best designed to bring in what it was sent for.

Then, again, there is the matter of organization within your place of business. You may write "ads" to your heart's content, but if you have a lack of organization, there will be a clashing of good effort and poor, which will result only in disaster. Those who surround you in your business must co-operate with you, and you must win their co-operation by careful methods, by just means above all else, by arousing enthusiasm in your business, by displaying your own willingness to be a part of the organization referred to, so that you may occasion within the minds of those about you the exercise of good judgment, the desire to sell more goods, the wish to be of benefit to you.

Try Your Hardest to Profit from Mistakes

This takes you a little farther along in the building of this foundation, and brings you to the thought of preventing mistakes. Mistakes will happen; they can be minimized; they should be overcome; but to a greater or less extent they will in some manner recur, and it is by virtue of our mistakes of the past that we build safely for the future. It enables you to more easily and powerfully control your organization, so that its members, in turn, will realize the necessity of learning

Bread that Builds

Bread made of the finest Manitoba hard wheat flour, full flavored with the matchless wholsomeness begotten of the Western prairies, that's the kind made from

Cream of the West Flour

Introduce it into your camp and let every member appreciate its goodness. It will form a bond of good will between you and them that will result in the production of more and better work.

Order a trial quantity. No order is too small to receive prompt and careful attention

THE CAMPBELL FLOUR MILLS CO., LIMITED

TORONTO PETERBORO

Paul F. Gauvreau
84 St. Peter St., QUEBEC, Que.

W. J. McAuley & Co.
B-24 Board of Trade Bldg., MONTREAL, Que.

C. E. Choat & Co., HALIFAX, N.S.

Fir "Twopan"

Canadian Western Lumber Co., Ltd.

Fraser Mills, B.C.

Canada's Largest Lumber Manufacturing Plant

Mixed Car Shipments
containing
Doors, Mouldings, 3 Ply Panels and guaranteed quality X X X B.C. Red Cedar Shingles

PROMPT SHIPMENTS

Fir Timbers
and
Dimension Flooring, Ceiling, Finish, Casing, Base and Interior Trimmings

GUARANTEED QUALITIES

The 1916 model is a ***FIR*** Door made with 3 Ply Rotary Cut beautifully Grained Veneer Panels and Edge Grain Stiles and Rails.

Eastern Sales Offices

Toronto—H. A. Rose, L. D. Barclay Montreal—R. H. Underhill

by errors that have been made in the past, and not merely dismiss them with but a passing thought.

Writing "ads" will be of little avail to you unless you are prepared to back them with service. The good will of your business is such that your part of the transaction is not closed merely by selling. This is an age in which we hear much of service, but how little many of us understand the meaning of this term. Real service to your patrons means the carrying out of your contract with them to the fullest extent, not ending with the mere buying and selling, but with the encouragement of your customer, and, finally, the pleasing of your customer, and making of him one who is thoroughly satisfied with the manner in which you have endeavored to deal with him.

But even here, you may not stop in a consideration of what is necessary to be considered in connection with writing this open letter to all whom you expect to take advantage of what is offered in it. Your foundation is not secure unless you have been able to, by various processes, determine the right selling prices, to know those things which to you are the most profitable, and the most desired by your patrons, to follow daily your profits as well as your expenses, to know when to lower prices and when to boost them.

The Method of Selling

Then, again, there is another important element entering into a consideration of this entire matter, and that is, the method of selling. Sometimes special sales are conducted, and these must be properly prepared for so that you may not only move the goods specially advertised, but that they may go out into the channels which will eventually be the most satisfactory to you as well as to the purchaser. Occasionally, yes often, dead stocks accumulate and it many times requires considerable ingenuity to determine upon the method of selling them. There are times in the year when seasons are dull, when expense is mounting up and sales are running down, and this condition must be met wisely, so that the general average of results will not only remain as good as theretofore, but will be increased as you reach out for business. You should have in mind. also, trade which has been lost to you for one reason or another, sometimes within your understanding and sometimes not, and this must be one consideration in connection with the building of the foundation to which we have referred.

We have now indicated a few thoughts in the preparation of, and things to be done for, your advice to the public as to what you have for sale, and what your desires are. Let us, therefore, for a few moments consider the writing of the letter itself, whether it be direct or indirect. First of all,there must enter into it the element of your personality. It is your business which is being advertised; it is your patrons you hope to reach, and this personal element should be apparent throughout the preparation of the "ad" and its final completion. What is an advertisement but a personal appeal. Ordinarily it is not some stranger who asks the patronage of the one who reads, but it is the prospective patron of yourself to whom the invitation is directed, and, consequently, your ideas, your thoughts, your business should be prominent in this open letter to your friends and patrons; but you must say something which will get your reader's attention. What you say should be based upon a study of those you expect to read your "ad." It must be done in such a way, whether it be something intended for magazine or newspaper, bill-board or street car. which will draw attention, whether it be in language or in objects, whether it be in colors or in ingenuity; even then you may fail, unless beforehand you marshal all your facts so that you may use the best argument in this appeal. You would not think of making a speech to a jury unless you had done this very thing, and were endeavoring to convince the listening jurors of the righteousness of your position and the infallibility of your requirements.

I have referred to the personal element. There is another element which I might call the "I-mean-you" element. I have seen advertisements, to illustrate, with the finger of a man pointing apparently at myself. Let your ideas, let your language, let your thought be such that it will be a direct appeal to him who reads, and thus reach this element which brings results. It is this which creates a desire to buy; it is this which works up to the climax of the reader's wish; it is this which makes him say to himself that you have proven your case; it is this which makes of him a patron and a friend.

The advertisement must not only radiate the elements above referred to, but above all, it must be true. It may be argumentative, convincing, forceful, powerful, snappy, searching, witty, entertaining, appealing, picturesque, but, above all, honest as you would want your employe to be and not deceptive like the Judas protestations of false friends; clear as sunlight, which makes the day beautiful, and not dark like the gloomy hours when murky shadows fall; bright as the shining armor of the Christian pilgrim as he overcomes the Adversary; open as the Book of Life, and not mysterious like the hieroglyphics of an unknown ancient tongue. When you have this element of truth, backed by a real personality, in what you write you have a fitting structure to rear upon the firm foundation to which we have adverted. We read that "murder will out;" so will falsehood. Chicanery never succeeds. Loyalty is one of the choice characteristics of real manhood. It should be applied in your business to those who come and go as the steady stream of cup-bearers bringing to your office daily your portion of the nectar of advancement and profit.

"Let the Purchaser Beware"

One of the legal doctrines which has gained much of a foothold in legal thought and principles, is that known as caveat emptor, "Let the purchaser before." Surely we are rapidly setting aside this rule as applied to advertising for business, and the courts have found out that while, of course, the prospective or proposed purchaser should not be negligent, and should be fully awake in all of his transactions, yet undue advantage should not be taken of him, and the public should be entitled to protection, particularly inasmuch as they are not always in a position to know just where to ascertain what their attitude should be in relation to this ancient rule.

It is today a source of pleasure to realize that proper contemplation of the rights of all is leading us into channels of thought and action whereby society may protect itself against those who seek to make profit out of our innocent trust, when we read the glowing accounts in advertisements which, even if not untrue, are at least grossly exaggerated. We are learning to beware of "The world's greatest aggregation of soul-stirring acts," menageries which contain "Wild beasts from the darkest jungles of darkest Africa," "stupendous, marvelous, unequaled, greatest in the world" hippodromes; also when we read of the nostrum which not only cures every disease ever known to mankind, but if it does not do so, your money will be refunded. We are at once suspicious of the source of this remarkable invitation. Until recently there has been no great attempt to reach this evil. One does not appreciate the height, and breadth, and length of this monstrous wrong until he realizes to what a great extent advertising influences the buying public.

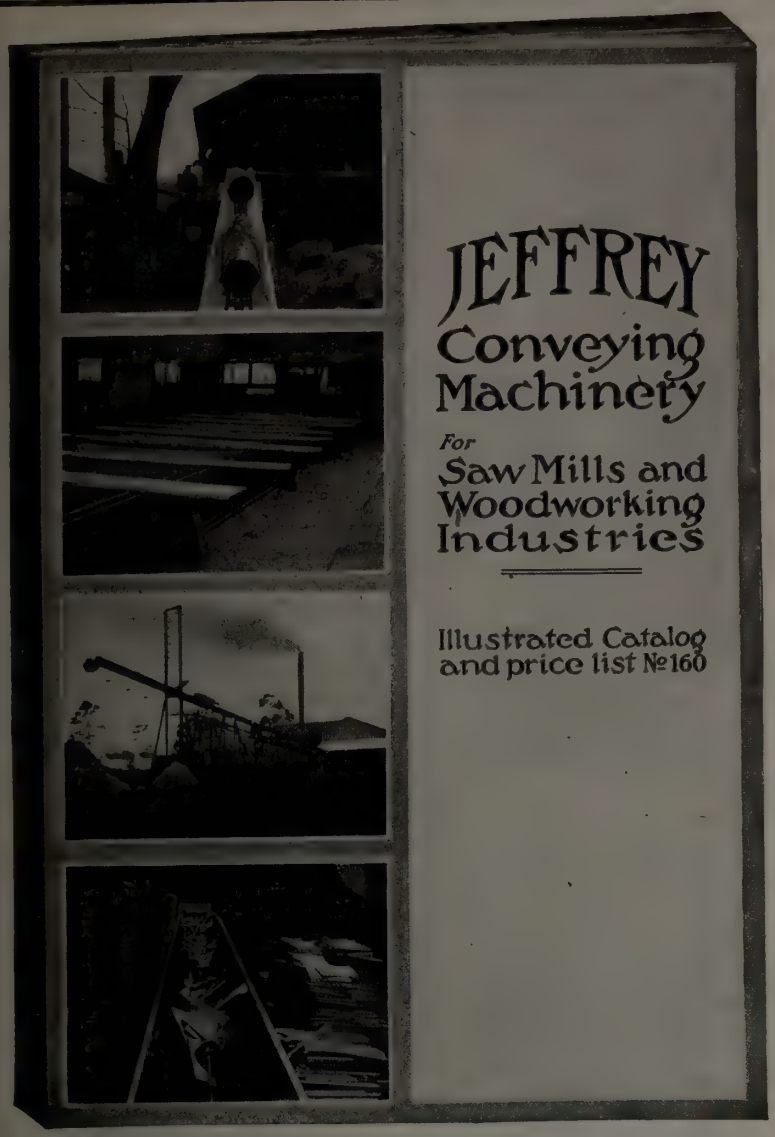
Competition, we hear, is the life of trade. Also, it is largely responsible for the efforts of the seller, scrambling over his neighbor as he often does, to reach the coveted goal first, or to reach out the container into which the shekels of the gullible may fall. So various States have enacted laws upon the subject of misleading advertising. Statutes have been enacted making it unlawful to advertise statements regarding quantity, quality, cost, reason for the price, etc., which have the appearance of deception to the proposed or prospective purchaser. This is a great step in the right direction. Other laws have been enacted seeking to reach untruthful advertising regarding fire sales, bankrupt sales, and the like. These have been prolific sources for unscrupulous people to evolve schemes whereby they might reach into the pockets of a not unwilling, ready-to-be-humbugged public, and have provided the reason for legislation which has been upheld by the courts as not in contravention of the rights and liberties guaranteed to us under the constitution. Laws have been enacted to prohibit certain kinds of advertising regarding liquors, the cure of certain diseases, the procurement of divorces, and the like. This is a free country, but freedom does not imply the right to grind one's fellowman under the heel of lying and unfathomable deception; consequently we are awakening to the need of arising to a courageous stand, justified by past experience and hope for the future. Law cannot make a saint out of a criminal, but it can protect the worthy from the unworthy; it cannot create right, but it can resrain wrong. When morality co-operates with justice, the grabbing crook will find but a small field for his endeavor, and he will gradually eliminate himself from the scheme of all things.

Making Progress Toward High Ideals

This thought brings us, then, to the question of what progress we are making in the particular field suggested by my topic. I believe we are progressing, reaching a higher plane, encouraging a greater degree of honor in the advertiser. Sociology has a place in this discussion. "Individualism" is an element in "Commercialism," as well as "Nationalism." "Made in America" is a national slogan; "Made right" should be the individual announcement; "Made honestly." the advertiser's inspiration from his handiwork.

What is progress? Is it spectacular like the rushing mountain brook, or is it steady like the broad stream? Is it cold like the winter frost, or does it radiate warmth like the zephyrs of a June day? Is it like a peal of thunder, or the steady rumble of increasing energy? Surely it is Truth, ever exemplifying the proper things of life, ever pointing to those things which bring to life the blessings of real accomplishment.

We sometimes wonder how so many of our big men are able to perform apparent impossibilities, and proceed to credit them with some mysterious power, and thereupon wipe out any egotism which may have existed concerning our own capabilities. We then make ourselves believe we have our limitations and are content with mediocre results. But look again and learn the secret—System, Method, Truth—these are the underlying agencies of personality and Power. The whole evolves success.



All Saw Mill Men Agree—

That to be compelled to shut down a part or all of the Mill or Plant and to have long waits for Repair Parts—is very annoying and expensive.

That is why you will appreciate the Service we can render you in supplying your wants quickly from our Montreal Branch, where a complete line of Standard Conveying Chains, Bearings, Hangers, Take-up Boxes, Spiral Conveyer, Malleable and Steel Elevator Buckets, Sprockets and Gears, Transmission Machinery, etc., is carried in stock ready for immediate shipment.

OUR CATALOG AND PRICE-LIST No. 160 has been published solely in order to enable you to know the quality of Jeffrey Equipment and Service, and to quickly select the part needed for your mill. Simply Telegraph, Phone or Write our Montreal Office and you will get it on short notice.

This 144-Page Book, in addition to describing fully the Service Application of our many products for Saw Mills and Woodworking Industries, pictures many interesting installations, and contains valuable engineering data.

RETURN THE COUPON FOR YOUR COPY

The Jeffrey Mfg Co., Power Bldg., Montreal, Canada

Please send copy of your Catalog and Price List No. 160.

Name of Firm.....

A dress.....

.....

Canada Lumberman 4-1-16

Jenckes Boilers

We make a Specialty of

Horizontal Tubular Boilers

for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

Sherbrooke Montreal Cobalt So. Porcupine St. Catharines Toronto Vancouver Nelson

The Shoe Peg Business

Shoe pegs are bought and sold by the pint, peck, and bushel, while the narrow ribbons of woods of which the pegs are made are bartered in rolls. It is therefore apparent that the pegs with which soles are fastened on shoes appear on the market in two forms. In one, the pegs are in separate pieces. each shaped and pointed ready for driving. The other form is a ribbon of wood as wide as the peg is long, and thick enough to form the body of the peg. The first form is intended for the use of cobblers and shoe makers who work with hand tools. They punch holes in the shoe with a pegging awl, and drive in the pegs, one at a time, by light taps with a hammer. That was the old style method of making shoes, and it is still followed by the worker in the small shop.

The large factory follows another method. It makes shoes by machinery. Instead of buying pegs each individually complete, as the country cobbler does, it purchases them only partly manufactured in the form of the peg ribbons above described. These ribbons are in rolls and are fed to the machine as thread comes from a spool. The machine points the pegs, slices them off one by one very rapidly, and drives them in the sole, all without human assistance except to keep the machine in working order and well supplied with peg rolls.

The pegs are nearly all of paper birch. That wood possesses properties which cause it to be given preference over all other woods. This is the wood of which most thread spools are made. It is a white color, is hard, strong, and tools are not dulled rapidly in cutting it. The peg material is first cut from the log as rotary veneer in proper thickness for the peg that is to be made. The veneer is then further manufactured, either into ribbons or finished pegs.

Pegs are several sizes, ranging in length from those about one-third of an inch to nearly an inch. The short pegs are for light, thin soles, the long ones for heels and the heaviest soles. Pegs are not used in the manufacture of all kinds of shoes. Fine ones may have none, the soles being sewed on. The largest use is in heavy shoes and boots. The pegged sole makes the shoe stiff and rigid and it is apt to be less comfortable than the sewed sole, on the wearer's foot.

It is not possible to determine exactly how much wood is required annually to furnish the country with shoe pegs. Available statistics include pegs, shanks, and wooden heels all under one head, and these articles call for 7,483,000 feet of paper birch; but it cannot be stated how much of this goes into pegs. In New Hampshire the yearly consumption of wood for pegs totals 2,512,000 feet, of which a little more than one-third is yellow birch, the remainder paper birch.

In some factories shoepegs are split from blocks instead of being cut from veener. The disks are cut the length of the peg, grooves are cut across the end in both directions forming squares the size of the peg, and at the same process each peg is pointed.

Dunlop Originality Recognized

Word has just come from New York, which would indicate that a remarkable compliment has been paid to the Dunlop Tire & Rubber Goods Co., Limited.

A large agency, who keep a portfolio of the world's best advertising matter gathered together from every part of the map—include in that portfolia the Dunlop "Famous Picture" series which appeared in Canadian newspapers last September.

The "Famous Pictures" were the first ads. of the type ever run in America, or any other part of the world so far as can be traced, and that is probably the reason why the agency in question selected the series for their portfolio, as their big endeavor is to get new treatment on any subject or, in other words, originality all along the line.

The British Columbia Government announces that it will raise $2,000,000 to assist a shipbuilding industry which will be established in Victoria, and perhaps in other places. It is thought that the scheme will materialize, since great interest is being taken in the matter on all sides. It is fully realized that unless locally owned ships are available British Columbia will not be able to take advantage of the big trade in lumber which is already beginning to show up in volume. It is probable that the Canadian Puget Sound Lumber Company, Victoria, will take advantage of the offer of a provincial guaranty and start building ships. This concern went into liquidation in May, 1914, but it has been reorganized and is about to resume operations.

A meeting of lumbermen was held at Cranbrook, B. C., recently. Those present were all optimistic about the trade situation and most of them expected that the saw mills of that district would be running by April 1st or sooner. Planing mills in connection with the various plants are all busy.

Mainland Lumber & Shingle Co.

Head Office: Dominion Building, Vancouver, B.C.

Notify the Retail Trade that they have begun operating their new mill at

Westholme, British Columbia

Fir Cedar Spruce Hemlock
Red Cedar Shingles

WE PARTICULARLY SOLICIT ONTARIO TRADE

Cant & Kemp

52 St. Enoch Square
GLASGOW

Timber Brokers

Cable Address, "Tectona," Glasgow
A1 and A B C Codes used

HARDINGE
Watchman's Clocks
Write for details
SIGNAL SYSTEMS CO.
205 Stevenson Bldg., TORONTO

FARNWORTH & JARDINE

Cable Address: Farnworth, Liverpool
WOOD BROKERS and MEASURERS

2 Dale Street, Liverpool, and Seaforth Road, Seaforth, Liverpool, England

Books For Sale
Special Prices

The Preservation of Structural Timber, by Howard F. Weiss. Published in 1915 by McGraw-Hill Book Company. 312 pages, illustrated. Price $3.00.

Scribner's Lumber & Log Book, 1915 Edition, Price 35c.

Baughman's Buyer & Seller, 75c.

Canada Lumberman
347 Adelaide St. West
Toronto, Ont.

Try an advertisement in the "Wanted and For Sale Department" of this paper.

We are Buyers of
Hardwood Lumber
Pine and Spruce
Veneers (3 or more ply) Handles (all descriptions)
Staves Hoops
Headings
James Webster & Bro., Ltd.
Bootle, Liverpool, England
London Office
Dashwood House 9 Broad St. E.C.

HAEBERLE LUMBER CO.
LUMBER AND TIMBER
White Pine, Norway, Yellow Pine, Hemlock
Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties,
Yellow Pine Timber a Specialty,
Interior Trim Mill Work.
NIAGARA FALLS, N.Y.

Lumbermen's and Railroader's Supplies

"Canada's Largest Tent and Flag Manufacturers." Write for Our Catalogue

We make "Everything in Canvas." Owing to our wonderful facilities — manufacturing direct from the raw cotton to the finished article — patrons will find our prices most moderate and when quality is considered, well worth taking advantage of the difference.

BULLDOG — BRAND

TARPAULINS

Woods Special Waterproof Tarpaulins will not rot, mildew or crack. Send for quotations.

Smart-Woods LIMITED

Ottawa Toronto Winnipeg Montreal

THE FIELD LUMBER CO.
LIMITED

Manufacturers of

White Pine Lumber, Spruce, Lath and Shingles
Cedar Poles and Ties

Field, Ont, January 24th, 1916

Canada Lumberman & Wood Worker
Toronto, Ont.

Dear Sirs:

We have your favor of the 21st inst, re advertisement in "Canada Lumberman"—In reply, we beg to state that we have been able to close a deal for our 1916 cut of White Pine, and we are pleased to add that the advertisement in your paper has helped us materially in disposing of our lumber.

We are enclosing herewith Post Office Money Order to cover cost of two insertions of our ad in the Canada Lumberman as per the enclosed account.

Yours truly,

THE FIELD LUMBER CO., LTD.
J. U. Lamarree, Sec.-Treas.

A Small "Ad." Did the Trick

Here is another example of what a small want "ad." will do when inserted in our "Wanted and For Sale" Department. You may wish to buy lumber or dispose of some second-hand machinery, or perhaps you wish a new employee. Whatever you want, may be a small "ad." will put you in touch with the man you want.

We shall be glad to hear from you in time for our next issue.

What can we Advertise for YOU?

Canada Lumberman & Woodworker
347 Adelaide St. W., TORONTO

The EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS DIEU RIEN
MONTREAL - Canada
Head Office at Montreal.

SPRUCE rough or dressed

1" No. 2 and Better Birch, 1914 cut
also Basswood, Hemlock and Pine

Saw Mills at MONT LAURIER.
Dressing Mills at ST. JEROME

Herman H. Hettler Lumber Co.
Midland, Ont.

Manufacturers of

WHITE PINE and RED PINE
LUMBER and LATH

EXCELLENT PLANING MILL FACILITIES

Special Attention Given to Prompt Delivery

Everything in Spruce

Dressed and in the Rough

Campbell, MacLaurin Lumber Co.
Limited

Board of Trade Building, MONTREAL

Low Prices will be named on the following
WHITE PINE
FOR IMMEDIATE SHIPMENT

45,000 feet 1 x 5, 10/16 ft. Mill Run Box out.
15,000 feet 1 x 9, 12/16 ft. Mill Run Box out.
26,000 feet 1 x 10, 12/16 ft. Mill Run.
30,000 feet 1 x 10, 12/16 ft. Mill Run Box out.
45,000 feet 1¼ x 4 and up, 6/11 ft. Mill Run Box out.
55,000 feet 1 x 4-7, 12/16 ft. Box.
60,000 feet 1 x 4-6, 10/16 ft. Mill Cull.
} DRY STOCK

1,500,000 Mill Run Spruce lath, 4 ft.
75,000 No. 1 Pine lath, 4 ft.
300,000 No. 2 Pine lath, 4 ft.
180,000 No. 3 Pine lath, 4 ft.

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
Eastern Townships Bank Building, MONTREAL, Quebec

EDGINGS

Ontario

Wm. Travis, Wyoming, Ont., is contemplating the erection of a planing mill to cost $4,000.

Alderic Charpentier, 141 Main Street, Ottawa, Ont., is erecting a planing mill. The building will be of frame construction.

Nathan Calder, Listowel, Ont., is contemplating the purchase of planing mill equipment which will be operated by Hydro power.

R. A. Y. Stinchcombe, Wharncliffe Road, West London, Ont., is contemplating the purchase of woodworking machinery.

The Riordon Pulp and Paper Company have made arrangements for installing a bleaching plant at their mill at Merritton, Ont. It is expected that it will be in operation about the first of July. The company will then bleach the whole of the sulphite pulp used at this mill.

Berth No. 82 on the White Fish River in Northern Ontario has been bought by Geo. Jackson, of Little Current, from Wm. Charlton. This limit adjoins berth No. 90, in which Mr. Jackson is operating at present. The logs will be brought down to the mill at Little Current, Ont.

The Canadian Hardwoods Limited has been incorporated with head office at Ottawa, Ont., and capital stock of $150,000, to carry on business as timber, lumber and wood merchants, sawmill and planing mill operators and manufacturers of timber and lumber of all kinds. The provisional directors of the company are C. Magee, J. I. MacCraken, E. McMahon, H. E McMahon and L. F. McMurtry, all of Ottawa.

Eastern Canada

J. L. Rainville and Cie, manufacturers of sash and doors, Montreal, P. Q., have been registered.

Savoie & Cie, Manseau, Nicolet County, P. Q., are contemplating the erection of a sawmill this coming season to cost $4,000.

M. Proulx, Durham South, Drummond County, P. Q., is contemplating the erection of a sash and door factory this spring, to cost $2,000.

The sawmill and sash and door factory of Pauze and Gohier, Cote des Neiges Road, Montreal, has been partly destroyed by fire. The damage is $21,000.

E. M. Nicholson & Company, Limited, lumber exporters, Montreal, P.Q., have been registered. Those interested are E. M. Nicholson, J. W. Harding, A. Boulet and J. G. Cowan.

J. A. Theberge Ltd., have been incorporated with capital stock of $20,000 and head office at Quebec, P. Q., to carry on a general lumber business. The incorporators include E. Theberge, R. Chenevert, P. Caumartin, P. Gregory, and A. Tracy.

J. & A. Culligan have purchased the property of the Prescott Lumber Company at Benjamin River, N. B. The transfer includes the mill, timber limits, store, buildings, lumber, etc. Mr. Barbour who has been with the Prescott Lumber Company will be the new manager.

The Auger-Rancourt Lumber Company has been incorporated with head office at Quebec, P. Q., and capital stock of $49,900, to carry on business as manufacturers and wholesale lumber dealers. Those interested are O. Auger, H. Lacoursiere, J. Rancourt, J. Bureau, C. Rodrigue, and G. Pomerleau.

It is reported that the Laurentide Company, Grand'Mere, P.Q., will double its news plant capacity. The present capacity of the company's plant is 400,000 pounds of news print per day and 90,000 pounds of board. The pulp capacity is 460,000 pounds of dry mechanical pulp and 220,000 pounds of sulphite fibre.

The Belgo-Canadian Pulp and Paper Company, Limited, Shawinigan Falls, P. Q., are making a number of additions to their sawmill and planing mill. They do not expect to have the alterations completed until some time late in the season. They are also making a number of additions to the pulp and paper mill, which will not be completed before 1917.

The Acme Steel Goods Company of Canada, Limited, has been incorporated to take over the Canadian business of the Acme Steel Goods Company, Chicago, manufacturers of box strapping and fasteners. Mr. J. E. Beauchamp, who previously represented the Chicago company, is the manager of the Canadian company, with offices at 20 St. Nicholas Street, Montreal.

Western Canada

The Apex Lumber Company, Limited, Vancouver, B. C., has been incorporated with capital stock of $50,000.

Messrs. Seeds and King are taking in machinery for the erection of a sawmill on the west side of the Capilano River, B. C., just north of the Canyon View Hotel.

H. Butterfield, Squamish, B. C., is contemplating the erection of a shingle

mill this spring at an estimated cost of $10,000. Owner will purchase dry kiln equipmnet.

The Retail Lumbermen's Mutual Fire Insurance Company, Limited, has been incorporated in the province of Saskatchewan. The company's head office is at Winnipeg.

L. E. Ross care of Capiland Cedar Company, North Vancouver, B. C., is contemplating the erection of a shingle mill at that place. Plans and details have not yet been completed.

J. B. Sutton, who recently built a shingle mill at Arrowhead, B. C., and subsequently sold it, is purchasing machinery for a new and larger mill which he is erecting at the head of the Trout Lakes.

J. A. Maguire, Calgary, Alta., representing the Asquith Timber Interests, states that a sawmill will be erected immediately, at the head of Hospital Creek, about four miles from Golden, B. C. At the outset Mr. Maguire expects to employ about 35 men.

The Warren Timber Company has been incorporated with head office at Vancouver, B.C., and capital stock of $125,000, to carry on business as manufacturers of and dealers in lumber and shingles, sawmill owners, loggers and lumber and shingle merchants.

The Hudson Bay Zinc Company, Limited, has been incorporated with head office at Salmo, B. C., and capital stock of $5,000,000, to carry on business, among other things, as timber merchants, sawmill, shingle mill and pulp mill owners, loggers, lumbermen, and to manufacture and deal in timber, lumber, shingles, laths, sash, doors, etc.

H. A. Dent and A. W. Milroi, Seattle lumbermen, have purchased the Canadian Pacific lumber mill and 25,000,000 feet of fir and cedar timber at Port Alberni, on Vancouver Island, B. C. The mill, which has been idle for eighteen months, will be operating with 200 men about April 1st. The plant will cut from 100,000 to 150,000 feet of lumber per day and will be kept running to its full capacity.

The D. J. O'Brien Logging Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $25,000, to carry on business as timber and lumber merchants, loggers, sawmill proprietors, etc., and to take over as a going concern and manage, operate, or otherwise deal with or dispose of the general logging and lumber business now carried on by D. J. O'Brien of Vancouver.

At a recent meeting of the Montreal Chambre de Commerce, it was pointed out that the Forests Products Laboratories were anxious to help lumbermen in the matter of information as to the uses of particular woods. If, therefore, any member of the Chambre received inquiries from abroad, it was a wrong policy to reply that a certain kind of wood was not obtainable in Canada. A member should inquire the purpose for which the wood was required, and with the assistance of the laboratories would be able to show what Canadian wood would meet the requirements of the parties making inquiries.

J. C. Manzer, commercial representative in Cuba for the province of New Brunswick, in a personal letter to a friend in Vancouver, expresses the opinion that the Government of British Columbia should do all it can toward establishing a line of ships between British Columbia and Cuba. He says there should be a good opening in Cuba for Douglas fir and spruce, which, according to dealers, would serve the best purpose and command the same price as southern yellow pine. At present high freight rates militate against successful trade.

The Julius Seidel Lumber Company, St. Louis, Mo., have sent out an attractive calendar for 1916, to their friends in the trade. Each month is given a separate sheet on the calendar and each sheet contains in addition to the calendar for the month a splendid half-tone reproduction showing scenes in the yard and plant of the company. An attractive colored background is used in connection with each of the calendar sheets, some showing scenes in the forest and others showing samples of finished woods.

At a meeting of the Mountain Lumber Manufacturers' Association in Calgary recently, a resolution was adopted that all members of the Association contribute fifty per cent. of their net profits to the Federal Government for patriotic purposes. Another resolution recommended to the members that every lumber manufacturer collect one dollar per head each month from each unmarried employee for patriotic purposes, unmarried employes not consenting to this arrangement to be dismissed.

At the 6th annual meeting of the Edgewood Lumber Co. Ltd., Nelson, B. C., the following officers were elected:—Wm. Waldie, president and managing director, John E. Taylor, secretary-treasurer, P. H. Dubar, auditor. Mr. Waldie reported plenty of orders on hand and excellent prospects for a busy season.

Blair & Rolland, Limited

Lumber & Pulpwood

20 St. Nicholas Street, Montreal, Que.

Dressed as Required, Spruce and Pine

MILL RUN 1 in. x 4 x 10 ft. up
" 1 in. x 5 x 10 ft. up
" 1 in. x 6 x 10 ft. up
" 1 in. x 7 x 10 ft. up
" 1 in. x 8 x 10 ft. up
MILL RUN 2 in. x 4 x 10 ft. up
" 2 in. x 5/7 x 10 ft. up
" 2 in. x 8 x 10 ft. up
" 2 in. x 9 x 10 ft. up
" 2 in. x 10 x 10 ft. up
MILL RUN 3 in. x 4/5 x 10 ft. up
" 3 in. x 6 x 10 ft. up
" 3 in. x 7 x 10 ft. up
" 3 in. x 8 x 10 ft. up
" 3 in. x 9 x 10 ft. up

P 1 or 2 Sides V joint, Beaded or Novelty Siding Prompt and Good Work. We Ship Mixed Car Loads as Required.

Roofing, P 2 S and Matched

1 x 4 up x 8 up—about 60 per cent. 12 and 13 ft.

Mill Cull Spruce

2 in. x 4 up x 10/13 and 3 x 9 x 10/13
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1,700,000 pcs. **MILL RUN SPRUCE LATH** 4 x 1⅜ x ⅜
500,000 pcs. **MILL RUN WHITE PINE LATH** 4 x 1⅜ x ⅜
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Dominion Express Bldg., 145 St. James St., Montreal

Wholesale Lumber and Timber

SHELL BOX STOCK

White and Red Pine, Spruce

Hemlock, Birch, Maple

Railway Ties, Fence Posts, Etc.

Prompt shipment. Satisfactory stock. Good service Write for Price

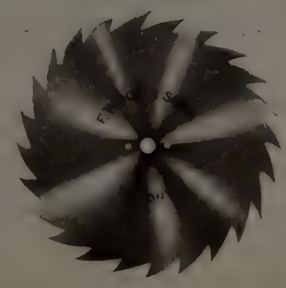
A. F. B. AUSTIN, Manager

FRED WOOD & SON

135 Richmond St. W., TORONTO

Manufacturers and Dealers in HIGH-GRADE CIRCULAR SAWS

Circular Cross Cuts
Trimmers
Edgers
Bolters
Concave, Etc.



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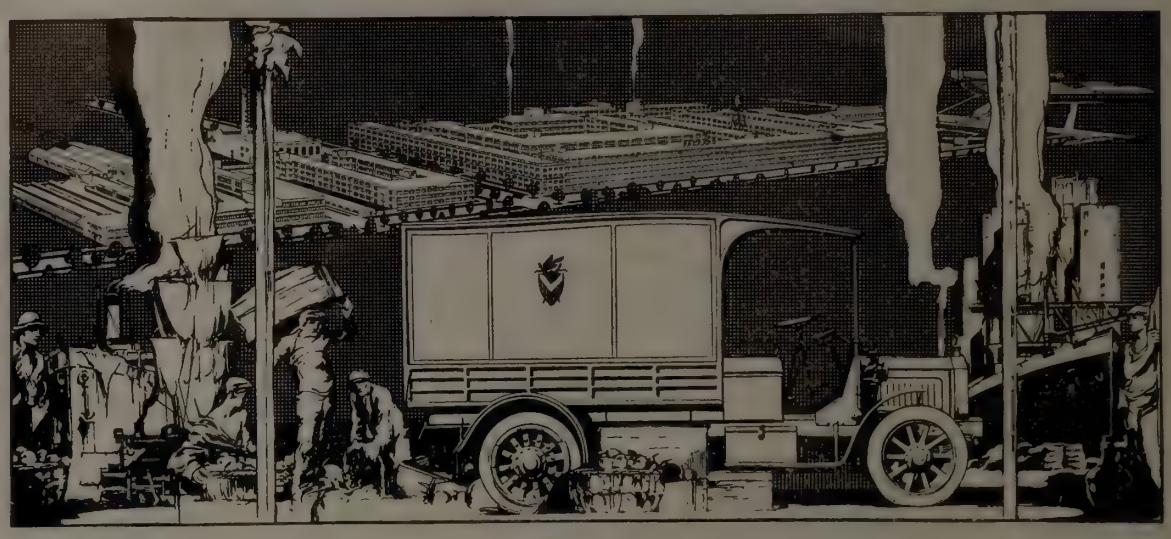
We make a Specialty of Repairs and can give your orders prompt attention

35 years' practical experience in making saws in Canada

Ask the man who owns one



YOUR HAULING RADIUS
is the MEASURE *of Your* SALES

PACKARD Chainless Motor Trucks increase your business because they extend the limits of the area you can serve. They enable you to make deliveries to the suburbs and the neighboring towns which are now beyond your reach.

Their speed, stamina and low up-keep cost will modernize your transportation. Seven sizes: 1—1¼ to 6—6½ tons' capacity. A wide range of roller, demountable and nest bodies for rapid loading and unloading. *Write for catalog.*

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18 Bloor St., East, Toronto 41 Queen St., Ottawa

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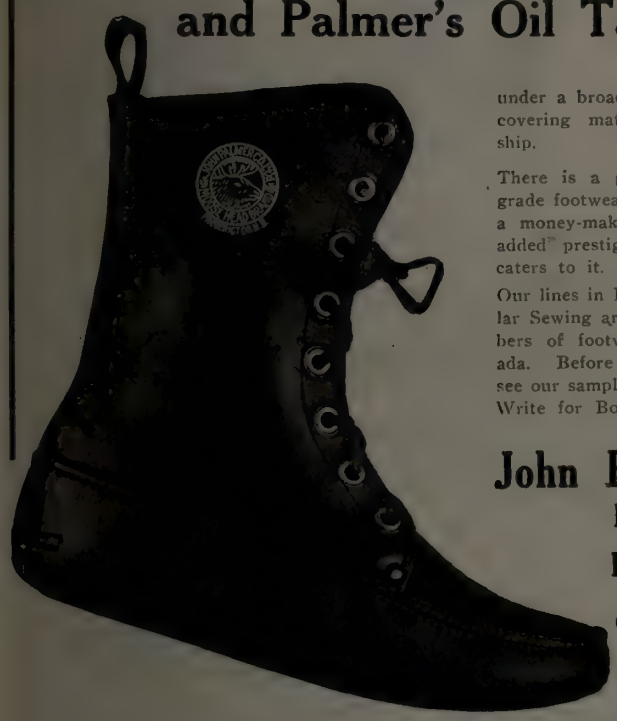
DEALERS: These Lines
Make Money and Build Prestige

Our high-grade line of oil-tanned, waterproof shoepacks, mocassins, larrigans, sporting boots, etc., etc., is making money for many dealers, and has built up a big demand all over Canada and the United States.

Nearly forty years we have been supplying the famous

"Moose Head Brand" and Palmer's Oil Tans



under a broad guarantee of quality covering materials and workmanship.

There is a good market for this grade footwear all the year round—a money-making trade that brings added prestige to the store that caters to it.

Our lines in Draw Strings or Regular Sewing are sold by leading jobbers of footwear throughout Canada. Before placing your orders, see our samples and prices for 1916. Write for Booklet L. free.

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Limited
Fredericton, N.B.

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READ BACKWARD

Klim is pure—cheaper than fresh liquid milk. One-third the cost of condensed milk. No freights on useless water—keeps in any temperature—no waste. Packed for camp use especially in 10 pound tins $2.00 each, the pound makes one gallon. Case lots, special price.

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Our 16-ft. Canvas Covered Model.

Whether you want it for work or for pleasure The "PETERBOROUGH" is the best value obtainable.

We Build Boats for Every Purpose

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The Peterborough Canoe Co., Ltd.
Peterborough, Ont.

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Grooves Cut with Huther Bros. Dado Heads

Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

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1103 University Ave.
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Do You Want a Salesman?

¶ Every live lumber salesman in Canada reads the Canada Lumberman and Woodworker.

¶ You can get the man you want through a small advertisement in the "Wanted and For Sale" department of this paper.

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New **RAILS** Relaying
12 to 80 pounds per yard.

LOGGING CARS

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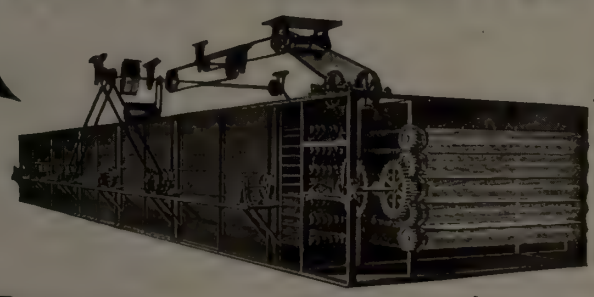

Dries enormous amount of veneer perfectly flat and pliable at minimum cost, without checks or splits

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HOE

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The Choice of Lumbermen in two Hemispheres

More than 80,000 of these saws are now in use in all parts of the world. Hoe Chisel Tooth Saws are backed by 86 years' experience in the manufacture of saws. They are made from the finest steel, evenly tempered throughout. Special Flanged Shanks and Superior Bits are supplied for sawing hardwood.

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TURN YOUR REFUSE INTO FUEL

The disposal of waste in a saw, planing or pulp mill used to be an item of expense. By the installation of Jones Underfeed Stokers this waste can be used as fuel. The use of the Stoker equipment consumes as illustrated, the refuse and by the mixture of a small amount of coal a steady steam pressure is maintained. If you should run out of refuse or the mill conveyers break down, the change to coal fuel can be made instantaneously without any fluctuation of the steam gauge. One large pulp and paper mill reduced its coal bill 99 o/o with Jones Underfeed Stokers and the utilization of its mill refuse. Every mill cannot make such a colossal saving as this but substantial economy can always be effected with Jones Stokers.

What are the conditions in your mill? Let us talk to you.

Arrangement of Jones Underfeed Stokers in Dutch Oven for burning paper mill refuse in conjunction with coal.

JONES UNDERFEED STOKER CO., LIMITED

National Trust Building, TORONTO

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa, Deputy Minister.
December 20th, 1912.

LINK-BELT
SAW MILL CHAINS

Superior in Design, Workmanship, Quality
High Carbon Steel Pins.
Patterns Full Weight—Full Strength

We are prepared to make prompt shipments of standard sizes from our own factory and warehouse in Toronto. Let us figure on your requirements.

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Portland, Ore., Link-Belt & Dodge Products Co., 14th and Lovejoy Sts.
A. R. Williams Machinery Company, Limited, Vancouver, B. C.
Waterous Engine Works Company, Limited, Brantford, Ont.

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Sample of Egyptian Liniment

We know that when you have once used our Egyptian Liniment on your horses you will always keep it on hand; that is why we offer free samples to lumbermen. Just write and ask for your sample. Its greatest use is to stop bleeding immediately. It is also excellent in cases of toothache, sore throat, neuralgia, rheumatism, etc., it effects immediate relief. In the stable its use is invaluable for thrush, cuts, spavins, calluses, etc.

Send at once for your free sample.

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Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

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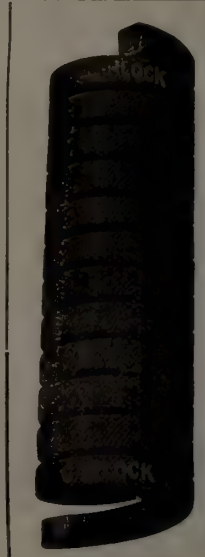
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Hamilton, Ontario

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Are your horses of use to you?

This seems an absurd question—and the answer is always **"Of course they are"**—In which case provide your stables with:

Johnson's Reliable Veterinary Remedies

Johnson's Horse Liniment, No. 1 (Alcoholic)
1 gal. jugs (Imperial) $4.50 gal.
1 lb. bottles 8.00 doz.
2 lb. bottles 15.00 doz.

Johnson's Horse Liniment, No. 2 (an oil liniment)
1 gal. jugs (Imperial) 3.00 gal.
1 lb. bottles 6.00 doz.
2 lb. bottles 11.00 doz.

Johnson's Horse Colic Remedy
A sure and speedy cure for all kinds of Colic
1 gal. jugs (Imperial) 40 doses 5.00 gal.
1 lb. bottles 4 doses 8.00 doz.
2 lb. bottles 8 doses 15.00 doz,

Johnson's Veterinary Healing Ointment (Gall Cure)
2 lb. tins 2.00 per tin
4 oz. tins 3.50 doz.

Johnson's Condition Powders (Concentrated)
1 lb. Packages 3.60 per doz.

Johnson's Camp and Household Remedies, such as Cough Syrup, Healing Ointment, Headache Powders, Big 4 Liniment, Stomach Bitters, Cathartic Pills, etc., etc., have stood the test of twenty-five years and are in use all over Canada, from the Atlantic to the Pacific. Prices are lower than those of all other manufacturers. Letter orders receive prompt attention.

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THE efficiency of your selling organization can be substantially increased by a closer knowledge of constructional work proposed, or in progress.

The "Contracts Department" of the Contract Record & Engineering Review gives you this information every week in concrete form, while the "Tender" ads published in this paper frequently call for bids on lumber, timber and interior finish. The news and editorial columns report progress on all building and engineering work. Descriptions of all important work are accompanied by illustrations.

Manufacturers of structural timbers, lumber, shingles, doors, flooring and interior finish desiring to interest architects or engineers, or to sell direct to contractors, should reach them through the advertising columns of the Contract Record & Engineering Review.

Subscription price $2.00 a year.

Write for specinen copy.

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a Specialty—Not a Side Line BAND RESAWS

NEW Standard
54-IN. Band Resaw

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Gentlemen—

We installed one of your NEW Standard 54-IN. Band Resaws in our new mill over a year ago. It has been continuously in operation, giving entire satisfaction. We highly recommend to anyone who has use for a band saw, to take on this machine.

Yours truly,
PORT HURON LUMBER CO.

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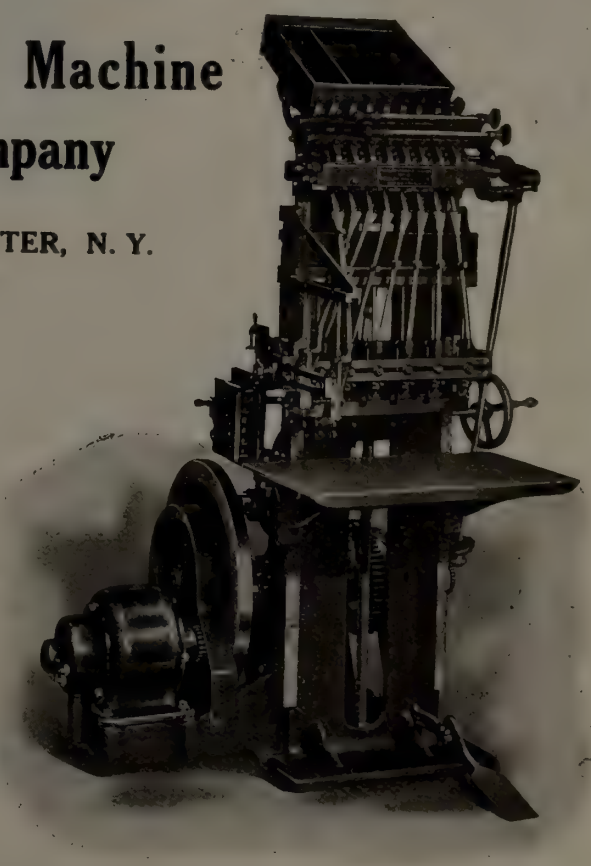

Manufacturers of—

Nailing Machines,

Lock Corner Box Machinery,

Box Board Matchers,

Box Board Printing Machines.

Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the **Morgan Machine Company** for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N. Y.

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TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing ...	27 00	29 00
1 x 8 common and dressing ...	27 00	29 00
1 x 10 common and dressing ..	31 00	32 00
1 x 12 common and dressing ..	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ...		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2. 6-ft. to 16-ft. ...		16 00
2 x 4 to 12, 10 and 16 ft. ..		20 00
2 x 4 to 12-in., 12 and 14 ft. ...		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain..		31 50
Fir flooring, 1 x 4, edge grain..		35 00
Fir flooring, 1 x 4, flat grain ..		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 25
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	40 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1st and 2nds, 4/4	42 00
Birch, No. 1 com. and bet., 4/4	35 00
Birch, 1st and 2nds, 6/4 and 8/4	45 00
Birch, 1st and 2nds, 10/4 and 12/4..	52 00
Birch, 1st and 2nds, 16/4	55 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4..	34 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet...	28 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	32 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1st and 2nds, 4/4	40 00
Hard Maple, common and better, 4/4	30 00
Hard maple, 12/4 & 16/4, 1sts and 2nds.	46 00
Red oak, plain 1st and 2nds, 4/4....	66 00
Red oak, plain, No. 1 com., 4/4.....	40 00
Red oak, plain No. 2 com. 4/4.....	32 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain 1sts and 2nds. 4/4.	68 00
White oak, plain, No. 1 com., 4/4....	40 00
White oak, plain, No. 2 com., 4/4....	32 00
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	66 00
Red and White oak, plain, No. 1 com. 5/4 and 6/4	43 00
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00
Red and White oak, plain, 1sts and 2nds, 8/4	72 00
Red and White oak, plain, No. 1 com. 8/4	48 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00
White oak, ¼ cut No. 1 common	57 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up $52 00		54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ...	29 00	30 00
Pine, No. 1 dressing shorts ...	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ...	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips ...	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips ...	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips ...	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	25 00	26 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x 10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11' ...	17 50	18 00
1"x 3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12 ..	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	15 00	17 00
Red pine, log run:		
mill culls out, 1-in.	18 00	20 00
mill culls out, 1¼-in.	19 00	21 00
mill culls out, 1½-in.	19 00	21 00
mill culls out, 2-in.	22 00	24 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	18 00	20 00
1"x 9"-10" and up, 12'-16' ...	22 00	24 00
1½"x 7" 8-9" and up, 12'-16'	22 00	24 00
1½"x 10" and up, 12'-16' ...	22 00	24 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles:		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	70	75
According to average and quality, 30 to 35 feet	50	60

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00

Birch Planks

1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00

Cuts and Better

4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00

No. 1 Cuts

1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00

No. 2 Cuts

1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in.	25 00
1-in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00

No. 1 Barn

1 inch	31 00	45 00
1¼, 1½ and 2-in.	36 00	45 00
2½ and 3-in.		45 00
4 inch		50 00

No. 2 Barn

1 inch	28 00	36 00
1¼, 1½ and 2-in.	30 00	36 00
2½ and 3-in.		38 00

No. 3 Barn

1 inch	21 00	28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00	25 00

Box

No. 1, 1, 1¼, 1½, 2-in.	22 00	25 00
No. 2, 1¼, 1½, 2-in.	19 00	23 00

Mill Culls

Mill run culls, 1-in.		19 00
1, 1¼, 1½ and 2-in.		20 00
No. 2	17 00	18 00

Lath

No. 1, 32-in. pine	1 80
No. 2, 48-in. pine	4 35
No. 1, 48-in. pine	4 85
No. 3, 48-in. pine	3 85
Hemlock Lath 48 in.	3 80

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension S. 1 S. and 1 E.

	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8..	14 00	17 00	20 50	18 50
2 x 10	18 00	18 50	21 50	19 00
2 x 12	18 00	19 00	23 50	20 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	18 50
2 x 4-10-18-20	20 50
2 x 6, 8 to 16	18 50
2 x 8, 8 to 16	18 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	26 50
2 x 10 and 2 x 12; 8-16 ft.	23 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	25 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	27 50

No. 1 Common Boards

4 inch	19 00
6 inch	21 50
8, 10, 12 inch	23 50
Mixed widths	22 50

Flooring

4 or 6 inch No. 1	33 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00

Shiplap—Finished

6 inch	20 00
8, 10 and 12 inch	21 00

Siding

6 inch No. 1	33 00
6 inch No. 2	31 00
6 inch No. 3	21 50

Lath

No. 1 Cedar, pine, spruce (not mixed)	4 00
No. 1 Cedar, pine, spruce (mixed) ..	3 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	25 10
3 x 8 in.; 8 to 16 ft.	22 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	25 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	27 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	17 50
2 x 4 in.; 12 and 14 ft.	18 50
2 x 4 in.; 10 and 16 ft.	19 50
2 x 4 in.; 18 and 24 ft.	20 50
2 x 4 in.; 22 and 24 ft.	21 50
2 x 4 in.; 26 to 32 ft.	23 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	20 00
2 x 10 and 2 x 12 in.; 18 and 20 ft. ..	22 00
2 x 10 and 2 x 12 in.; 22 and 24 ft. ..	23 00
2 x 10 and 2 x 12 in.; 26 to 32 ft. ...	25 00
2 x 14 in.; 10 to 16 ft.	25 00
2 x 14 in.; 18 and 20 ft.	27 00
2 x 14 in.; 22 and 24 ft.	28 00
2 x 14 in.; 26 to 32 ft.	30 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	21 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	22 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	23 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	24 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	26 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft. ...	24 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	24 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	25 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	25 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	32 00
Nos. 1 and 2, 1 x 4 in., E. G.	31 00
Nos. 1 and 2, 1 x 6 in., E. G.	29 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	23 00
No. 3, 1 x 4 in. or 6 in.	20 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	19 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ..	20 00
No. 2 Shiplap, 6 in.	19 00
No. 2 Shiplap, 8, 10 and 12 in.	20 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	19 00
Common Boards, 8 to 12 in.	20 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 75

LATH

Fir lath, 3/8 x 1 3/8 in. x 4 ft., bundled in 50's	4 00
Cedar lath 3/8 x 1 3/8 in. x 4 ft.	4 50

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$94 00
Uppers 5/4 to 8/4	92 00
Uppers 10/4 to 12/4	97 00
Selects 4/4	84 00
Selects 5/4 to 8/4	82 00
Selects 10/4 to 12/4	92 00
Fine common 4/4	61 00
Fine common 5/4	65 00
Fine common 6/4	65 00
Fine common 8/4	67 00
No. 1 Cuts 4/4	51 00
No. 1 Cuts 5/4	57 00
No. 1 Cuts 6/4	59 00
No. 1 Cuts 8/4	61 00
No. 2 Cuts 4/4	32 00
No. 2 Cuts 5/4	43 00
No. 2 Cuts 6/4	45 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	33 00
No. 3 Cuts 6/4	34 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	46 00
Dressing 5/4 x 10	51 00
Dressing 5/4 x 12	52 00
No. 1 Moulding 5/4	58 00
No. 1 Moulding 6/4	58 00

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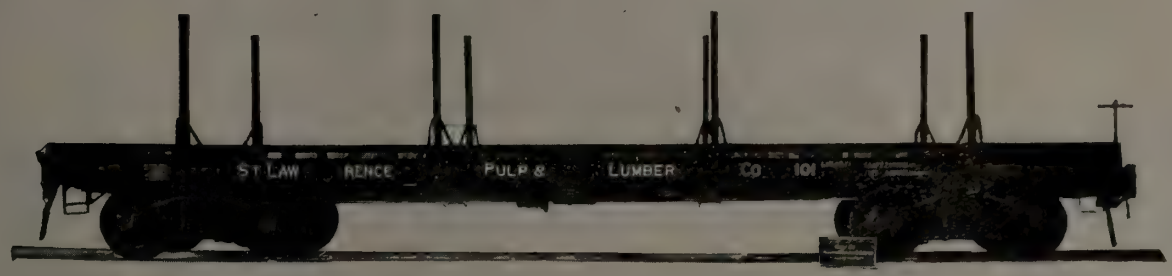

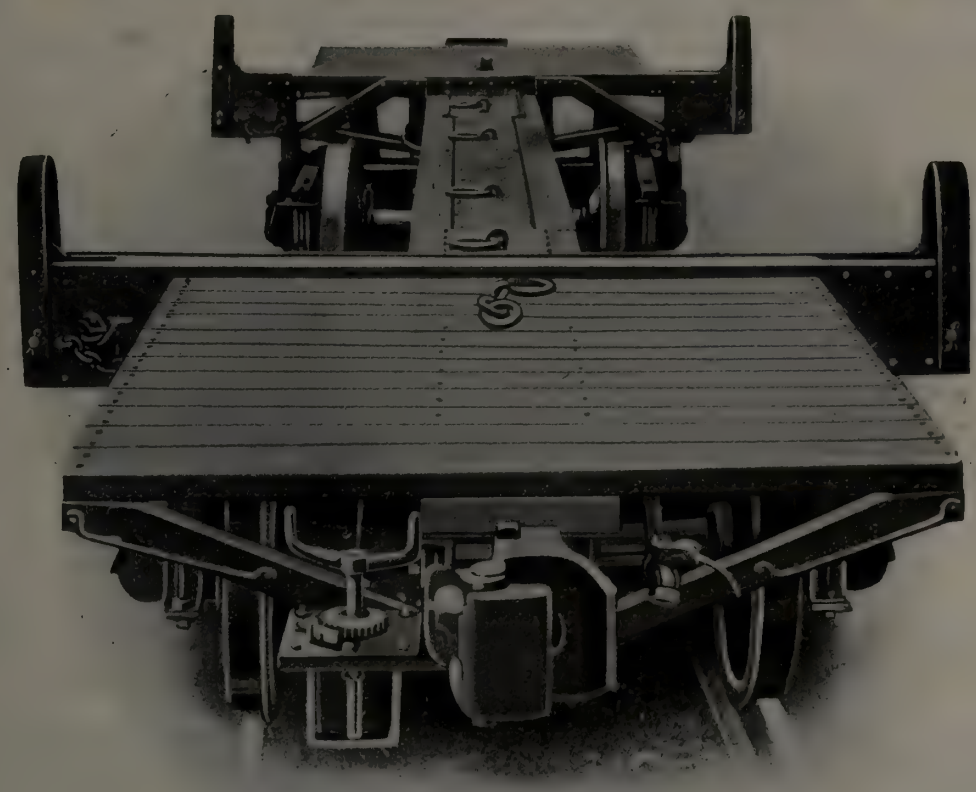

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"Wilson Bros." Flooring and Trim

"Wilson Bros." stamped on every piece of this flooring stands for Quality. Look for the name. Hardwood and Pine. **Interior Finish of All Kinds.** Also Hardwood Veneer Doors to detail. We are equipped to fill large or small orders on short notice. Write us for prices.

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No. 1 Moulding 8/4	58 00
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No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	32 - 33	21 - 23	13 - 15
5/4 to 8/4	34 - 36	23 - 25	13 - 14
10/4 to 16/4	39 - 41	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	35 - 37	22 - 24	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	34 - 36	23 - 25	14 - 16
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	32 - 34	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	44 - 46	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	60 - 62	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in.	92 00	98 00
Selects, 1 to 2 inch	80 00	88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	70 00	72 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	36 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 00	34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	28 00	29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		23 50
Spruce, 8 in. and under dimen.		26 00
10 and 12 in. random lengths, 10 ft. and up	25 00	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	23 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	23 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	20 00	21 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	21 00	22 00
1½-in. spruce laths	4 15	4 25
1½-in. spruce laths	3 85	4 00

New Brunswick Cedar Shingles

Extras	3 30	3 40
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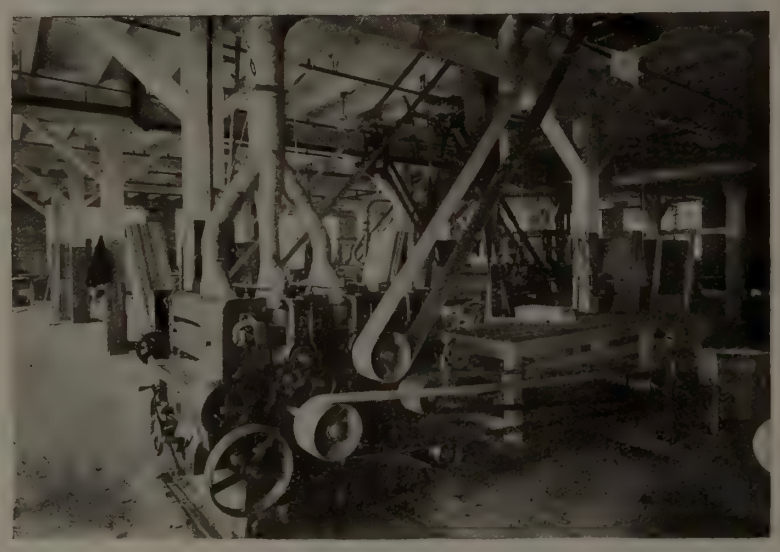
Clear whites	2 25	2 30
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.	3 60	3 70
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear	3 50	3 60



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(Continued on page 70

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Quebec & St. Maurice Industrial Co.
Rideau Lumber Company
Spencer, C. A.
Terry & Gordon.

STEEL CHAIN
Canadian Link-Belt Company
Columbus Chain Company
Jeffrey Mfg. Company
McKinnon Chain Company
Waterous Engine Works Co.

STEAM PLANT ACCESSORIES
Waterous Engine Works Company

STEAM APPLIANCES
Darling Bros.

STEEL BARRELS
Smart-Turner Machine Co.

STEEL DRUMS
Smart-Turner Machine Co.

STOKERS
Jones Underfeed Stoker Company

TAPS and DIES
Pratt & Whitney Company
Waterous Engine Works Company

TIES
Fesserton Timber Company
Harris Tie & Timber Company
Spears & Lauder
Terry & Gordon.

TIMBER BROKERS
Cant & Kemp
Farnworth & Jardine
Hillas & Company, W. N.
Smith & Tyrer Limited

TIMBER ESTIMATORS
Sewall, James W.
McInnis, A. D.

TIMBER CRUISERS
Campbell Lumber Company. L. E.

TIMBER LANDS
Lacey Co., Jas. D.

TRANSMISSION MACHINERY
Canadian Link-Belt Company
Jeffrey Manufacturing Company
Waterous Engine Works Company

TUGS
West & Peachey

TURBINES
Hamilton Company, William
Smith Company, S. Morgan.

VENEERS
Canadian Western Lumber Company
Hoffman Brothers Company
Webster & Bro., James

VENEER MACHINERY
Perrin, William R.
Philadelphia Textile Machinery Co.

VETERINARY REMEDIES
Douglas & Company
Fleming Bros.

WATCHMEN'S CLOCKS
Signal Systems Co.

WATER WHEELS
Boving Hydraulic & Engineering Co.
Hamilton Company, William
Smith Company, S. Morgan

WIRE CLOTH
Canada Wire & Iron Goods Co.

WOODWORKING MACHINERY
Canadian Blower & Forge Company
Jeffrey Manufacturing Company.
Long Manufacturing Company, E.
Waterous Engine Works Company
Yates Machine Co., P. B.

WOOD PULP
Becker & Co.
New Ontario Colonization Co.
River Ouelle Pulp & Lumber Co.

YELLOW PINE
Chicago Lumber & Coal Co.

ATKINS

There is a distinct advantage in using **Atkins Segment Ground Cross Cut Saws.**

You will realize this fact when you try them.

By actual test we are cutting 25 per cent. more timber with least cost for refitting. Let us send you our book "C.L." Write for it to-day. ATKINS PERFECTION No. 5 and No. 69 EUREKA FALLING SAWS are the most popular Saws in Canada to-day. Send us your name for further information. Let us tell you what these Saws are doing. Then you can use your own good judgment later on.

Atkins No. 69 Eureka Falling

E. C. ATKINS & COMPANY

Makers of Sterling Saws

Factory—
HAMILTON, ONT.

Branch House:
109 Powell St.
Vancouver B. C.

A Test In Your Workshop

will convince you of this fact:

That it is cheaper to use two files where you now use only one.

Take a certain piece of work and give one man a new file, and another a half worn file on a similar piece of work.

The man with the new file is doing what you are paying him for. The other man is filing away your time.

The man with the new file takes a pride in his work.

The man with the old file starts with a grouch, and the work suffers.

When the inefficient point in the files is reached it is good policy for you to have your men discard them.

And they should be replaced with the five famous brands:

KEARNEY & FOOT
GREAT WESTERN
AMERICAN
ARCADE
GLOBE
(Made In Canada)

Made in Canada by a plant controlling 90% of the file business.

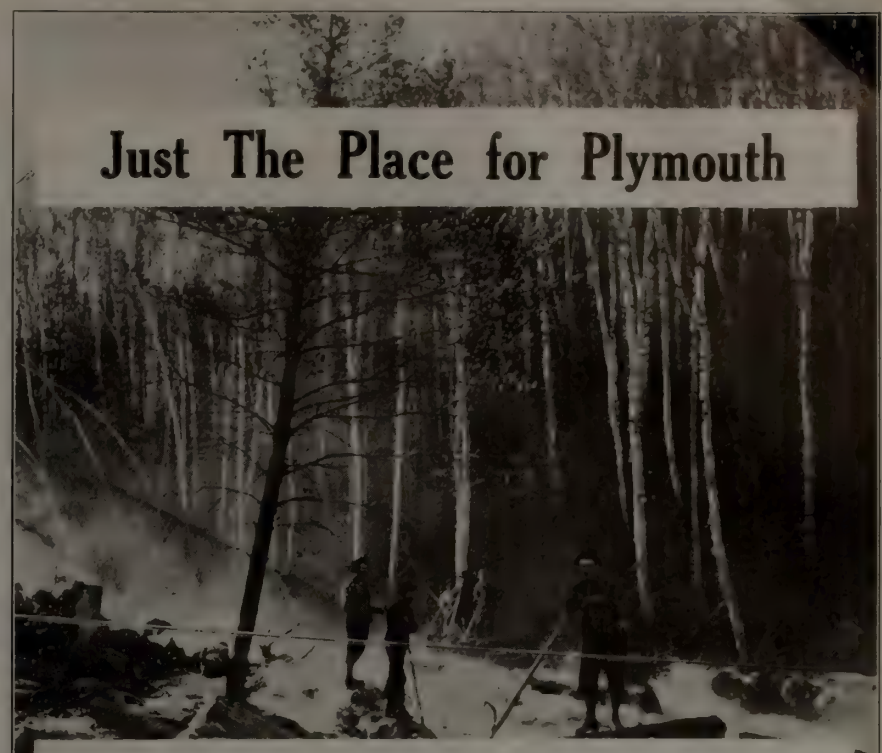
Backed by 50 years' experience in the making of efficient files.

Send for your FREE copy of "File Filosophy" NOW.

Nicholson File Co.
Port Hope, Ontario

DEALERS EVERYWHERE.

Just The Place for Plymouth



When you're freeing your logs from a jam, snubbing them downhill, rafting them downstream or holding them in the booms—do it with Plymouth Manila Rope.

Any place where you want a rope job done surely, safely and cheaply is **just the place for Plymouth.** It's stronger and lasts longer.

PLYMOUTH CORDAGE COMPANY
NORTH PLYMOUTH, Mass. WELLAND, Ont.

INDEPENDENT CORDAGE CO, LTD.
TORONTO, ONT.—CANADIAN SALES AGENTS

FIRE BRICK

Differs in Quality and Variety

For instance, a certain quality or kind of brick that gives satisfaction when used in a Refuse Burner, may show up poorly if used in a Dutch Oven.

It all depends on getting the right kind and the right quality for your particular needs.

Just tell us what you want it for, and we'll send a fire-brick that was made for that very purpose.

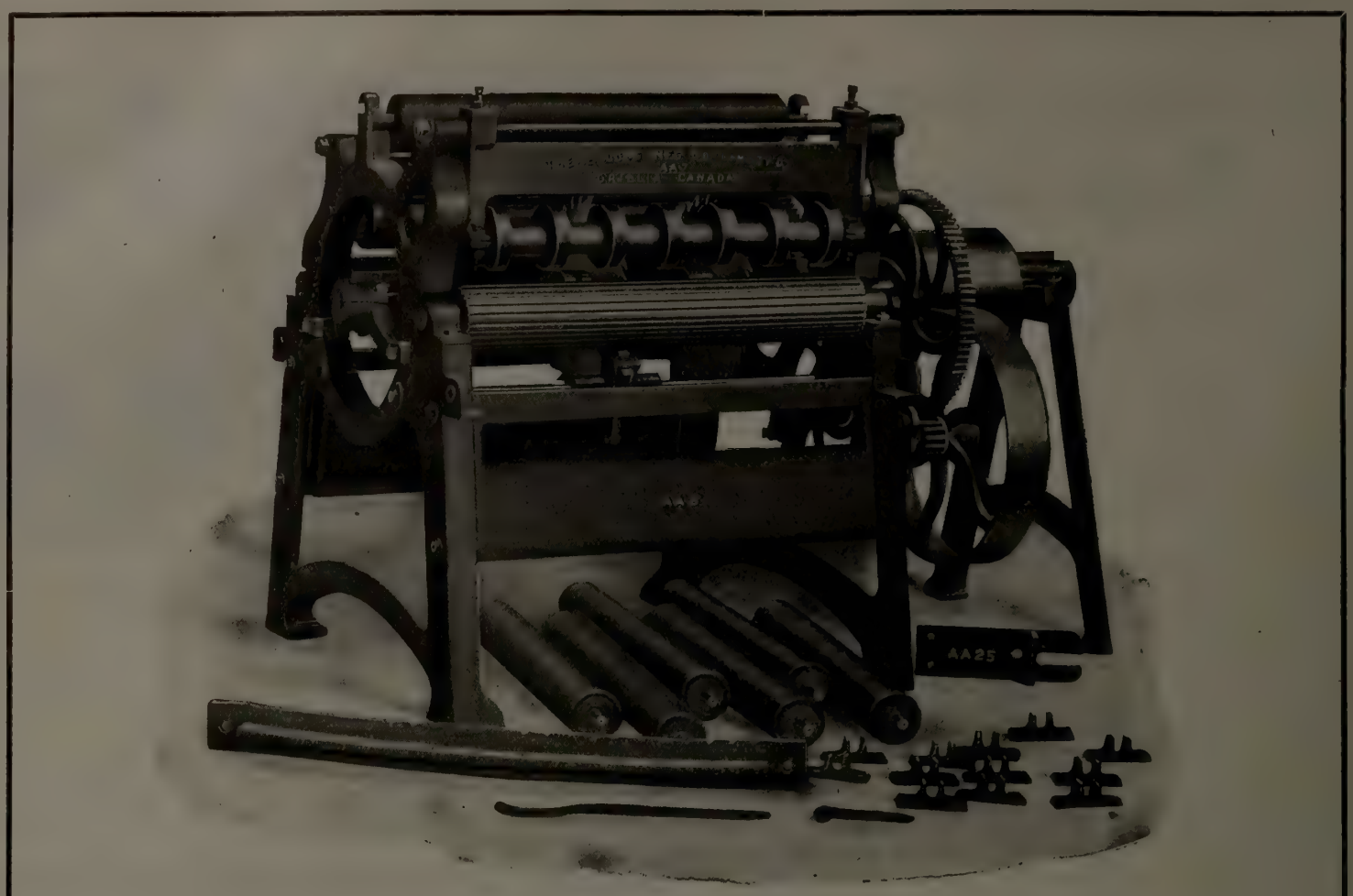
We Manufacture the Following Well Known Brands

"Elko," "Elk Steel," "St Marys," "Keystone" and "Rotex"

Write for a copy of our Catalog.

"Refractory Efficiency Engineering"

Elk Fire Brick Co. of Canada, Limited
HIGH GRADE FIRE BRICK and CLAY
Federal Life Bldg., Hamilton, Canada



32-Inch Edger

Among the details of this sturdy high capacity edger we may mention:—

The two main frames supporting the bearings are built so as to be stiff and rigid, and are well braced with cast iron tie-plates. It is designed for portable or small stationary saw mills. By a slight change this machine can be made right or left hand to suit mill.

The arbor is 2½ inches in diameter, and made of the best machine steel. The drive pulley is 10 inches in diameter and 8½ inches face.

The arbor runs in three bearings, 6 inches long, all of which are lined with the best babbitt, and fitted with covered oil-cups of ample capacity.

There is one fluted feed roll 5 inches in diameter on either side of saws. These are power driven by means of belt and gears. There is a roll on top, in centre of machine, over which lumber can be passed back.

Saws used are 16 inches in diameter and will cut stock 5 inches thick. Machine is fitted with collars for two saws, one stationary and one movable.

The saw shifter casting has a long bearing on the sliding rod, which makes it shift easy. There is a lever jaw casting supplied to connect to saw shifter.

When overhauling your mill ask us about repair parts or new equipment.

THE E. LONG MANUFACTURING CO. SAW MILL MACHINERY ORILLIA, CANADA

The E. Long Manufacturing Company, Limited

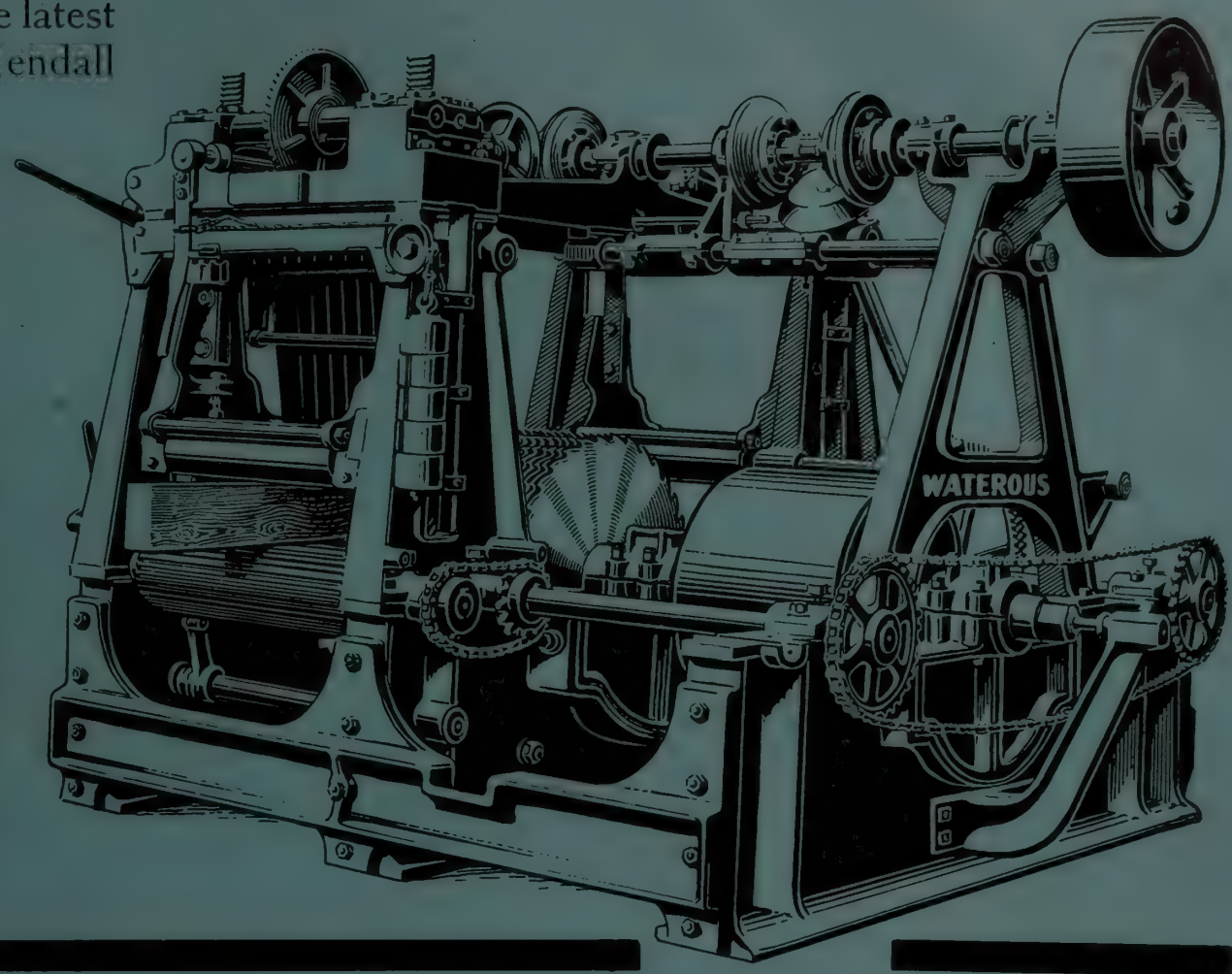
Orillia - Ontario

A New Machine That IS New

This illustration shows the latest development of the Kendall Circular Gang.

It was completed in our shops on October 1st, 1915, and is the last word in Circular Gang design.

It takes cants from 4" to 12" thickness and at the rate of from 2500 to 3000 a day, will turn them into lumber, perfect in finish and cut evenly from end to end. Big capacity on small stuff and lumber cut better than is possible on Band Saw, Circular Saw or Vertical Gang distinguish this machine.



The 1916 Model Kendall Circular Gang

The Kendall Circular Gang has come to stay. It meets the demand for a machine that will turn small logs into merchantable lumber economically. Those already in use though of old design have proven its worth.

These earlier models are still being built and sold. They are good machines—***but there is a better.***

The 1916 Model Kendall Gang built under the supervision of Mr. I. N. Kendall, from new drawings, and new patterns, incorporates ***absolutely original features*** found in none of the older design machines now being manufactured elsewhere.

While all the good points of previous models are retained, such weaknesses that use has made apparent have been eliminated. The new features and better construction of this 1916 Kendall Gang mean an appreciable increase in capacity, in nice cutting ability, and in safety, convenience and sturdiness.

This ***latest*** development of the Kendall Gang patents is built in a shop that has specialized in high class machinery construction — that has built machinery for Canadian sawmills for more than 50 years. Our reputation is a guarantee that this New Model Kendall Gang is built as it should be.

When you investigate the Circular Gang question see that you get facts and figures of the "WATEROUS BUILT" Kendall Gang—the new machine that IS new.

The Waterous Engine Works Co., Limited

H. B. Gilmour, Vancouver, B.C. BRANTFORD, CANADA Winnipeg, Man.

$5,000,000.00
worth of mixed metal sold annually.

"FROST KING" METAL

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. **Price 30c per lb.**, Fort William and East; West of Fort William **35c per lb.**, delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

The Low Head Plant
with
SMITH HYDRAULIC TURBINES

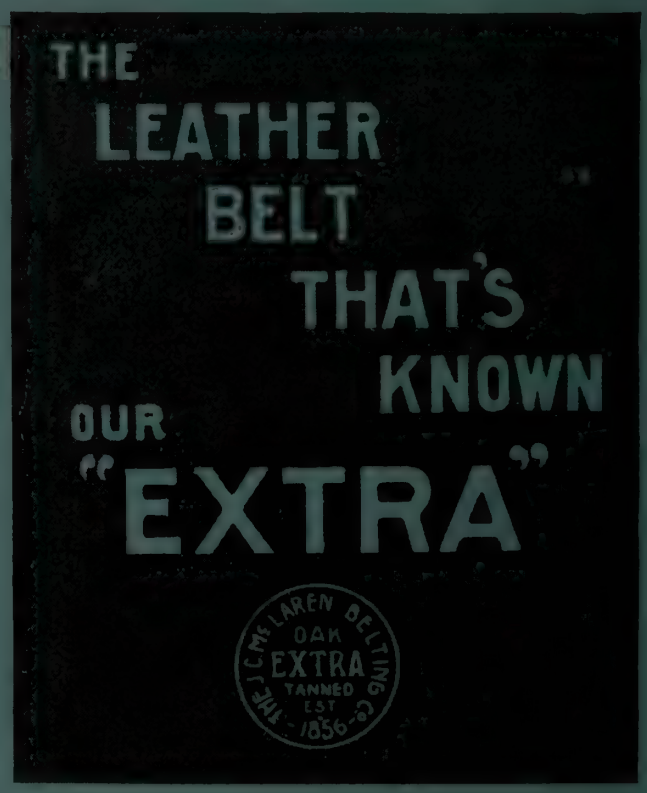
has established a reputation for real service that is second to none in the field of water power utilization. It is the result of all-round efficiency, hydraulic as well as mechanical, and has been attained by the careful consideration of every feature entering into the design of turbine equipment.

Our thorough investigation of the conditions peculiar to any proposition assures a practical and economical solution of the problem.

Write for Bulletin F

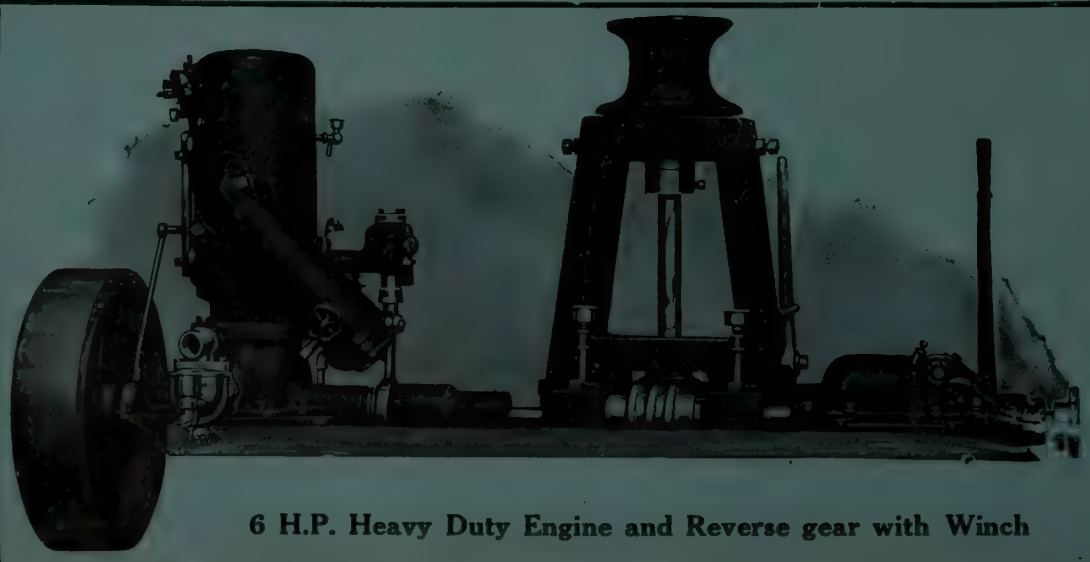
S. Morgan Smith Co., York, Pa.

H. B. VanEvery—CANADIAN REPRESENTATIVE
405 Power Bldg. - - - Montreal, Can.



Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.
Limited
General Mill Supplies MONTREAL



6 H.P. Heavy Duty Engine and Reverse gear with Winch

River Driving Costs

will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

Adams Launch & Engine Co.
Penetang, Ont.

Canada Lumberman & Wood Worker

WATER WHEELS GOVERNORS, PUMPS

Highest quality

Boving Hydraulic & Engineering Co.
LINDSAY, ONT. Limited

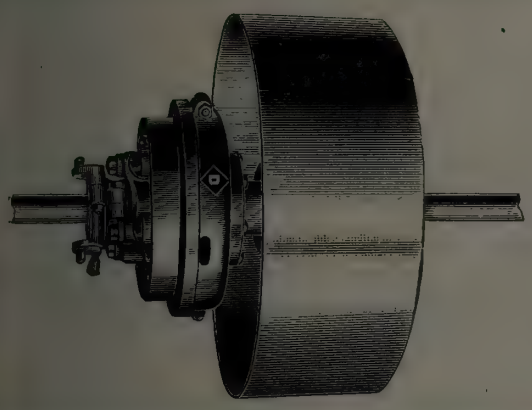
Made in all styles

Electric-Welded Boom Chain

We also specialize
Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.



DODGE FRICTION CLUTCH PULLEYS

For Saw Mills and Planing Mills

A simple, positive, durable clutch! Every Friction Clutch Pulley we sell is guaranteed suitable and satisfactory for the work or money refunded. All sizes split or solid for quick shipment.

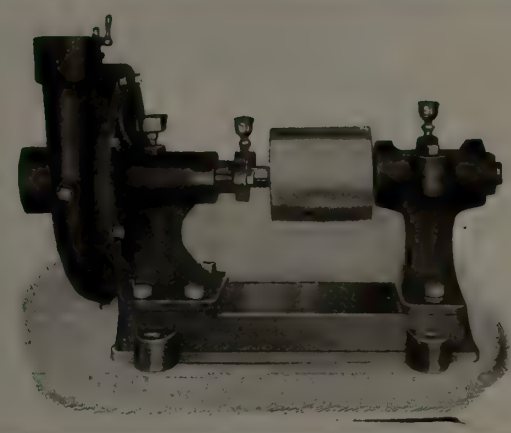
Dodge Manufacturing Company, Limited
TORONTO -:- MONTREAL

"TOWER" HAIR BELTING

Woven from Camel's Hair Yarn

Manufactured and guaranteed by

Turner Brothers Canada, Limited
MONTREAL



When next in the market for

PUMPS

let us figure on your needs.

The Smart-Turner Machine Co., Ltd.
Hamilton, Canada

J. M. T. VALVES
Globe Angle Check Safety

All parts proportionately accurate. Materials and workmanship of the highest grade. Guaranteed to give excellent service under conditions for which they are recommended.

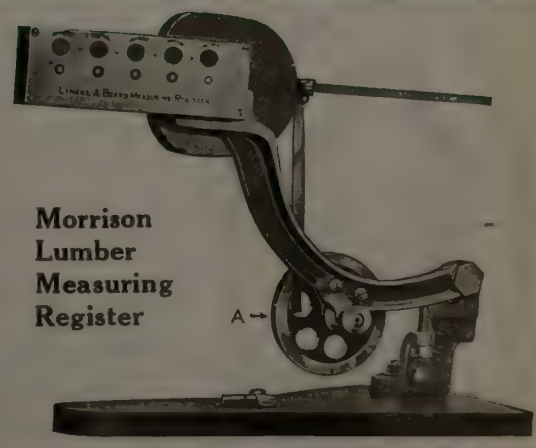
Price Lists on Request

Measure Every Order

The Morrison Lumber Register, as illustrated, is bolted to your planer, molder, etc. It records each stick as it is fed under the wheel of the register. It is absolutely accurate and dependable.

Write for explanatory literature.

The James Morrison Brass Mfg. Co., Ltd.
93-97 Adelaide St., West, TORONTO



Morrison Lumber Measuring Register

Alphabetical Index of Advertisers, Page 58 Classified Directory to Advertisements, Page 64

COSTS LESS PER DAY

AMPHIBIA BELTING

COSTS LESS PER DAY

Put Good Belting

on your

Good Machines

Your machines are expensive, and naturally you expect them to turn out the quality and quantity of work commensurate with their cost.

Then why harness them with belting which cannot begin to do them justice?

Use

"AMPHIBIA"

Planer Belting

and get the most work from your machines, in the quickest time, at the lowest cost per day of service.

Try a sample run of "AMPHIBIA" Planer and prove its merits.

"Leather like gold has no substitute."

Sadler & Haworth

Established 1876

Tanners and Manufacturers

For 40 Years Tanners and Manufacturers of the Best Leather Belts

MONTREAL, 511 William Street

TORONTO	ST. JOHN	WINNIPEG	VANCOUVER
38 Wellington St. E.	149 Prince William St.	Galt Building	107-111 Water St.

"AMPHIBIA"

The FLEXIBLE WATERPROOF BELT

"AMPHIBIA"

Geo. Gordon & Co., Limited

Cache Bay, Ontario

RED and WHITE PINE

Cross Arms, Shaped, Bored and Painted

3¼ x 4¼ x 3′ 6″	2000 pcs.
3¼ x 4¼ x 4′	1600 "
3¼ x 4¼ x 6′	2300 "

Cross Arm Material D 4 S

3¼ x 4¼ x 4	12000 pcs.
3¼ x 4¼ x 6′	9000 "

All Selected Norway.

Dressing done on short notice. ***Send us your inquiries.***

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited,

26 Ernest Ave. Toronto, Can.

QUALITY LUMBER

We feature especially at this time

Shell Box Lumber

We have a large and varied stock of Pine and Spruce in grades suitable for this work.

We are also long on

1″ and 2″ No. 2 Hemlock. Good dry stock.

SEND US ALL YOUR ENQUIRIES.
WE WILL MAKE IT WORTH YOUR WHILE TO TRADE WITH US.

Branch Office
852 Cambie Street
Vancouver

Terry & Gordon
Wholesale Lumber Merchants

Head Office
704 Confederation Life Bldg.
Toronto

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

SPRUCE

50,000	-	2 x 4—10/16	-	No. 1 Spruce
45,000	-	2 x 8—12/16	-	"
25,000	-	2 x 10—12/16	-	"
13,000	-	2 x 12—12/16	-	"

HEMLOCK

100,000	-	1 x 4 and up 6/16	-	No. 2 Hemlock
150,000	-	2 x 6 " "	-	"
50,000	-	2 x 4 "	-	"
20,000	-	1 x 4 and up 10/16	-	No. 1 Hemlock
20,000	-	2 x 6 " 10/16	-	"
50,000	-	2 x 8 14	-	"

PINE

1 Car	-	1 x 4 12/16	-	Mill Run White Pine
1 "	-	1 x 5 "	-	" "
1 "	-	1 x 6 "	-	" "

The Long Lumber Company

HAMILTON, ONT.

"Moving Day"

Every day is "Moving Day" when you sell real good up-to-the-grade lumber like

Hocken's Hemlock

We invite you to write us for prices and particulars about our lumber.

Hocken Lumber Co., Limited

Otter Lake Station, Ont.

HIGH GRADE

B. C. DOUGLAS FIR, CEDAR, SPRUCE and WHITE PINE

in

FLOORING - V MATCH - BEADED - CEILING - SIDING - TRIM - MOULDINGS
SILO STOCK - BOAT LUMBER - LADDER and TANK STOCK
SASH and DOOR STOCK - PATTERN LUMBER

Douglas Fir, Hemlock and Yellow Pine Timbers

RITE - GRADE - B - C - RED CEDAR SHINGLES

ONTARIO WHITE PINE - NORWAY PINE - SPRUCE - HEMLOCK
HARDWOODS - LATH - SHINGLES - POSTS - TIES

Let us quote on your requirements

Branch Office—
Central Building,
VICTORIA, B. C.

MUIR, KIRKPATRICK & SHARPE
WHOLESALE LUMBER MERCHANTS

Head Office
1123-4 Traders Bank
Bldg., TORONTO, Can.

LUMBER

THE FIELD LUMBER CO.
LIMITED

Manufacturers of
White Pine Lumber, Spruce, Lath and Shingles
Cedar Poles and Ties

Field, Ont, January 24th, 1916

Canada Lumberman & Wood Worker
Toronto, Ont.

Dear Sirs:

We have your favor of the 21st inst, re advertisement in "Canada Lumberman"—In reply, we beg to state that we have been able to close a deal for our 1916 cut of White Pine, and we are pleased to add that the advertisement in your paper has helped us materially in disposing of our lumber.

We are enclosing herewith Post Office Money Order to cover cost of two insertions of our ad in the Canada Lumberman as per the enclosed account.

Yours truly,

THE FIELD LUMBER CO., LTD.
J. U. Lamarree, Sec.-Treas.

A Small "Ad." Did the Trick

Here is another example of what a small want "ad." will do when inserted in our "Wanted and For Sale" Department. You may wish to buy lumber or dispose of some second-hand machinery, or perhaps you wish a new employee. Whatever you want, may be a small "ad." will put you in touch with the man you want.

We shall be glad to hear from you in time for our next issue.

What can we Advertise for YOU?

Canada Lumberman & Woodworker
347 Adelaide St. W., TORONTO

Bartram Brothers

Cable Address, "Bartram"
Code, ABC 5th edition.

Ottawa, Canada

Limited

Red Pine

Spruce

"SPECIAL"
Mill Run Spruce, Bone Dry

1 x 3 x 8/16	-	-	*85,000*
1 x 4 x "	-	-	*200.000*
1 x 5 x "	-	-	*255,000*
1 x 6 x "	-	-	*390,000*

White Pine

Shingles——————Lath

EXPORTERS OF DEALS TO U. K. AND EUROPE

Watson & Todd Limited
OTTAWA
DRY 1½" NORWAY

1915 CUT 1½" SPRUCE
In Good Shipping Condition
Send us your enquiries

The
Harris Tie & Timber Co.
Ottawa - Canada
Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

Fraser Limited
Fredericton, N. B.
SELLING AGENTS FOR
Donald Fraser & Sons, Limited
Cabano, P. Q.
Fraser Lumber Co., Limited
Plaster Rock, N. B.
F & M Lumber Co., Limited
Whitworth, P. Q.
MANUFACTURERS OF
Spruce Lumber
Rough and Finished
Shingles, Lath, Piano
Sounding Board Stock, etc.

Fraser Bryson Lumber Co., Ltd.
Office, Castle Building 53 Queen St. Ottawa, Can.
Wholesale Lumber Dealers
and Selling Agents for
Fraser & Co.
Mills at
DESCHENES - - - QUEBEC
White Pine
Red Pine
Spruce
Lumber and Lath

River Ouelle Pulp & Lumber Co.
Manufacturers of
SPRUCE
Lumber Lath Pulpwood
Head Office and Mills at:
St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of
Quebec City
Also Mills at:
Crown Lake, Powerville, Riv. Manie
On Nat. Transcontinental Ry.

White Cedar Shingles

We offer for Immediate and Spring Shipment
dry stock 1915 cut in all grades.

Our production is the largest in Canada.

Our Shingles are uniform in quality, being well manufactured and graded.

White Cedar Shingles are Good Shingles

Prices and Terms alike to all buyers

The Canadian White Cedar Shingle Association

F. G. WHEATON, Amherst, N.S.

Canadian Sales Agent

Western Representative:—

ALF. H. GILHAM, 78 Pearson Avenue, TORONTO

JOHN McKERGOW, President — W. K. GRAFFTEY, Managing-Director

The Montreal Lumber Co. Limited

Wholesale Lumber

Ottawa Office: 46 Elgin St. — Montreal Office: 759 Notre Dame St., W

James P. Grant — John K. Campbell

Grant & Campbell

Manufacturers of

SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

New Glasgow, N. S.

FOR SALE
HARDWOOD LUMBER

Dimension Stock, Mattress Frames, Hard and Soft wood slabs cut to lengths required. Hemlock, Cedar, Posts.
Orders receive prompt attention.
PHONE 37 — RESIDENCE 15
JOHN P. NEWMAN Wiarton, Ont.

PATENTS SECURED OR OUR FEES RETURNED

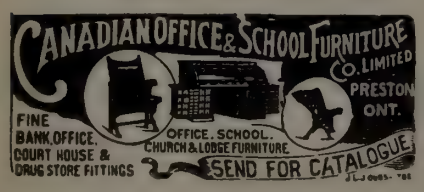
Being next door to the Patent Office, we have personal interviews with Examiners, thus earlier allowance of your Patents. We have access to all Records and solicit the business of Manufacturers, Engineers, and others who realize the advisability of having their Patent business transacted by Experts. Send for our Booklet, etc.

HAROLD C. SHIPMAN & CO.
Reg. Patent Attorneys — Ottawa, Canada

LATH TWINE

Tie your lath with Laidlaw wire. It saves you money. It means satisfaction to the dealer and contractor.
Write for Quotations.

LAIDLAW BALE-TIE CO., Ltd.
HAMILTON, ONT.


CANADIAN OFFICE & SCHOOL FURNITURE CO. LIMITED
PRESTON ONT.
FINE BANK, OFFICE, COURT HOUSE & DRUG STORE FITTINGS
OFFICE, SCHOOL, CHURCH & LODGE FURNITURE
SEND FOR CATALOGUE

Spark Arresters

Wire Cloth for Refuse Burners

Our spark arrester is substantially built and will last for years. Don't wait until a fire has visited your property, equip your mill at once.

Prices on application

Canada Wire & Iron Goods Co. Limited
HAMILTON, ONT.

Lumber

Good Grades — Right Prices — Prompt Shipments

Canadian Hardwood. National Grading Rules

Birch
Basswood
Maple
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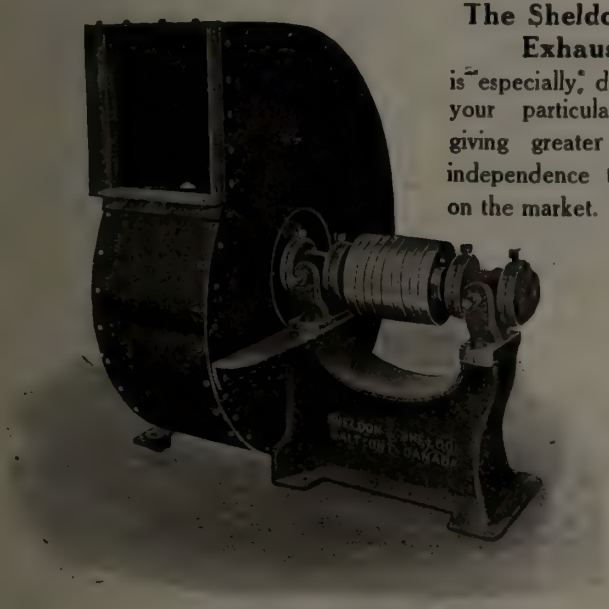

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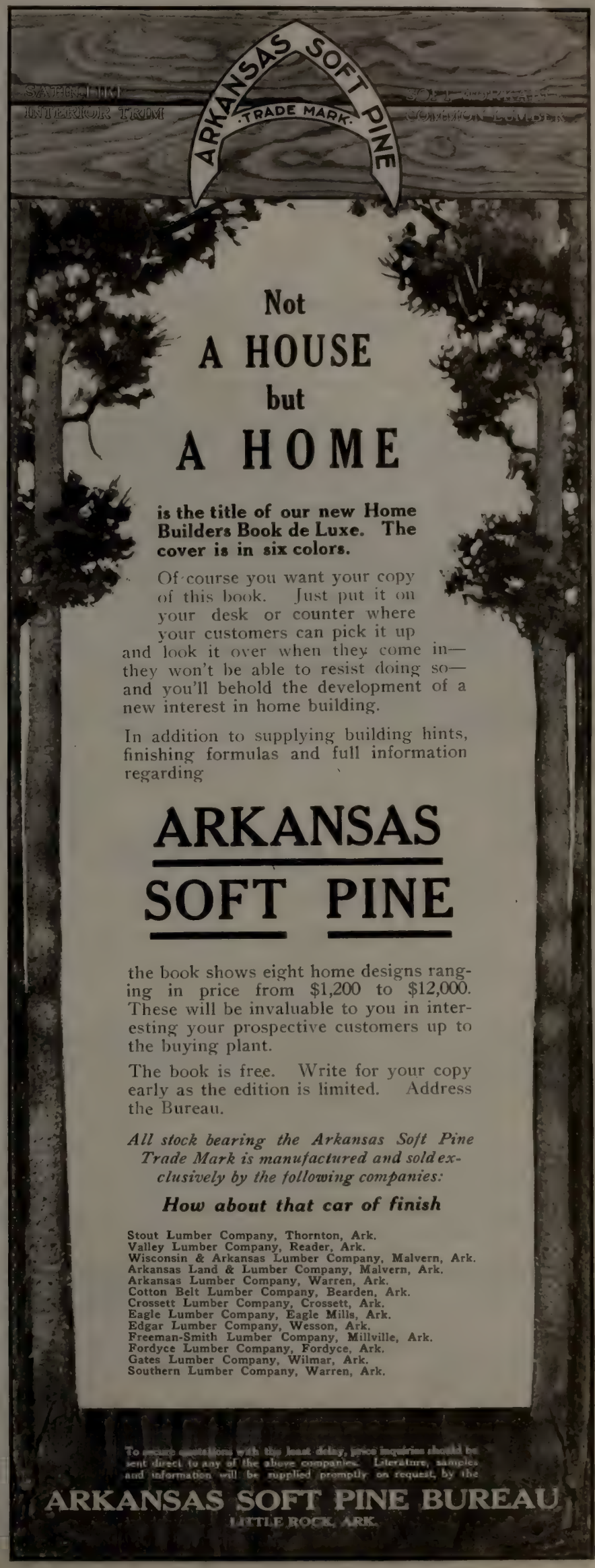

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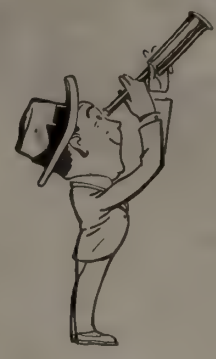

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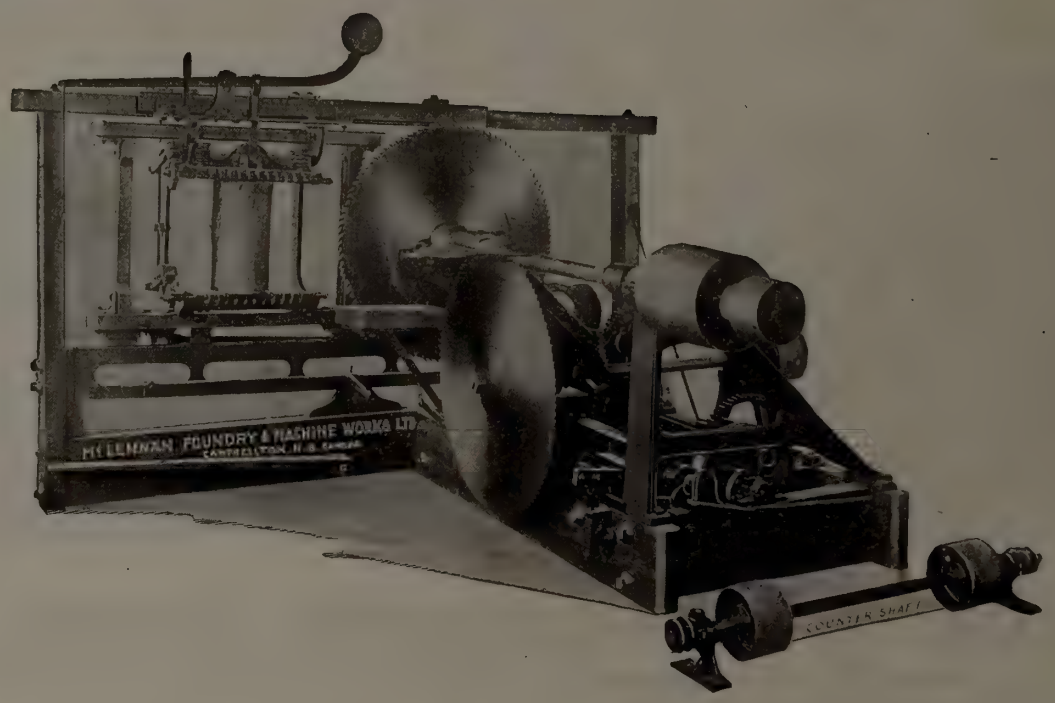

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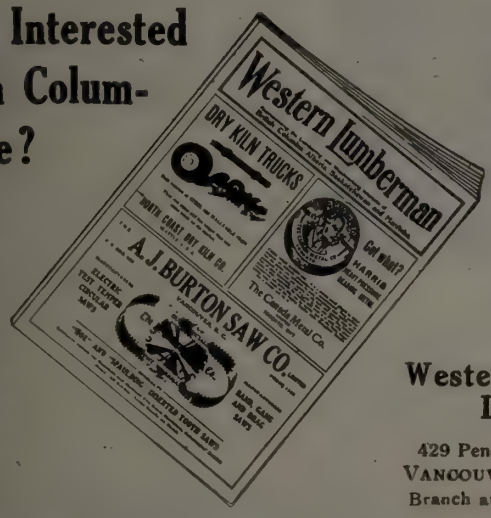

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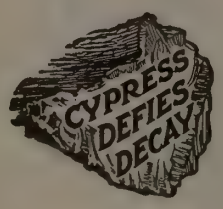

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The Dunlop Company is a truly Canadian institution, controlled by Canadians, and financed entirely by Canadian capital. For approximately one-quarter of a century this Company has successfully carried on the business of rubber goods manufacturing.

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* * *

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* * *

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* * *

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Dunlop Rubber Belts

A judicious selection of Main Drive Belts will cut your belt bills in half, as well as minimize mishaps from belts going wrong.

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We, also, make rubber-faced belts in any grade for main drive purposes. Two of these brands—**"Peerless"** and **"Record"** are well-known for their superior qualities.

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TORONTO **MONTREAL** **WINNIPEG**

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New Brunswick Estimates Timber

According to an announcement made in the New Brunswick Legislature recently, the province has received in revenue from Crown Lands, during the seven years from 1909 to 1915 inclusive, the sum of $3,583,434, while the quantity of lumber cut from these lands during the same period amounted to 1,190,000,000 superficial feet. The importance of the lumbering industry to the province is clearly shown by this statement. Since the beginning of the war, although the lumber industry has been beset by many difficulties, it has gone steadily ahead and the report of the Department of Crown Land which has just been presented for the year ending October 31st, 1915, shows that the revenue for the year was the largest ever recorded. The single item of stumpage accounts for the large increase, leaving no doubt that the activity of the industry last year was greater than it has ever been in the past. The net revenue of the department showed an increase of $37,544 over that of the preceeding year and the increase in the stumpage receipts amounted to $34,284.

It is interesting to note the record of the quantity cut on Crown Land during recent years. In 1905 the total was 107,705,676 superficial feet. This increased gradually until it reached 149,510,471 feet in 1907. During 1909 it jumped to 205,761,583 feet, and in 1910 made a still greater gain, reaching 281,716,402 feet. During the following year, 1911, the high level was reached for the ten year period from 1905 to 1915, viz. 309,883,428 feet. During 1912-13-14 the amount declined, reaching 270,221,155 feet in 1913. Then in 1915, on account of the demand arising out of the war, it increased again and reached 290,120,823 feet. The interesting feature of this period is the increase to a little over 300,000,000 feet, which is a little over the estimated annual growth on the Crown Land of the Province.

Under these conditions it becomes imperative for the province to undertake a definite survey of its timber resources, so that its cutting policy may be directed along safe lines. Because the quantity cut may be the same as the quantity shown to be the annual growth, does not mean that the forests are being cut in a safe manner. The important thing is to make sure that the proper trees are being cut, those which are mature and those which, being cut, will give others a better opportunity to reach maturity. The indiscriminate cutting of small logs is a mistake, so far as the welfare of the forests is concerned, and the government of New Brunswick must pay special attention, under the conditions which exist today, to the proper regulation of cutting, so as to get the best results out of the forests and at the same time give reasonable encouragement to the lumber industry.

The Government have taken steps recently, we undrstand, to deal with this situation by appointing an experienced forester with instructions to make a survey of the forests of the Province and secure all the information essential for the proper regulation of lumbering operations. The survey, when complete, will show the areas of merchantable timber of all kinds, the amounts of each species, the approximate rate of annual growth of each, as well as the areas of good agricultural value and land suitable only for the production of timber.

Mr. P. Z. Caverhill late of the British Columbia Forestry Department is in charge of this work and it is expected that three or four field parties will be at work this year, comprising thirty or forty men, who should cover from 75 to 100 square miles per month. The number of field parties will gradually be increased to eight or ten. The whole work is expected to require four or five years.

Mr. H. R. MacMillan in India

The action of the Canadian Government in sending a Special Lumber Trade Commissioner on a trip round the world to enquire into export markets for Canadian forest products, is commented upon favorably by the daily press of India. During his presence in Calcutta, one of the newspapers referred to Mr. H. R. MacMillan's visit as follows:—

"In the past five or six years we have heard of very nearly all our colonies sending abroad all over the world Special Trade Commissioners. I have not seen it suggested that the Government of India have ever considered the question of appointing such Trade Commissioners to travel around and consider trade questions affecting this country. With all the talk we hear of India getting some larger share of the world's business after the war is over, it rather strikes one that the present would be an excellent time for a representative of Government in the Commerce and Industry Department to make a tour round and see a few things from a practical point of view in relation to Indian trade requirements and the capabilities in the way of supplying products. The Canadian Government saw the possibilties of the position months ago and we have in Calcutta now the Chief Forester of British Columbia who has been sent round the world by his Government as a Special Lumber Trade Commissioner; one of the ideas of Mr. MacMillan's commission seems to be an investigation as to the possibility some day in the near future of trade reciprocity between Canada and India. Hitherto, as is well known, such Indian commodities as there is a demand for in Canada have gone into the Dominion Colonies via America with the assistance of American finance and through American merchants. But as the purchasing power of Canada increases, it stands to reason, Canadian merchants should be able to, and should be encouraged to deal direct with this country. The ports in British Columbia should offer as good entrepots for merchandise from India as any on the American Pacific coast. The establishment of a direct steamship line between India and Canadian Pacific coast ports is only a matter of time. It is understood that the policy of the Canadian Government is not to subsidise impractical dead heads, but to assist its active industries by introducing them to the notice of the world's markets; and at the same time assuring consumers abroad that Canada is capable of supplying what her Government Department, after investigation, are satisfied that she can supply. It is a simple proposition after all, and it is real business, and about as far as a government ought to go. There is probably less commerce subsidising by foreign governments than many of us believe. Subsidies are not always the best incentive to forcefulness and independence and self reliance."

Important U. S. Railroad Rate Hearing

The most important railroad rate hearing in the history of the Interstate Commerce Commission, of the United States, at which the whole problem of rates and classification of lumber will come up, has been announced for this summer in Chicago. After years of special hearings by various examiners and commissioners, the chairman of the commission will himself take charge of the investigation.

The problem will be taken up at the Chicago hearing soon after July 1, and will be discussed until the whole problem has been gone through to the very bottom, from every angle. When this hearing is completed it will have been the most thorough ever held of rate problems, and will form the basis for the adjustment of railroad rates on lumber in all parts of the United States. It will settle problems of classification, carload shipments of mixed products, and a thousand and one special problems.

As a phase of the hearing, the National Lumber Manufacturers' Association has begun the compiling of detailed records of 50,000 carload shipments in three months of the past year. These tabulations will provide the most exhaustive record of freight shipments ever computed. Manufacturers are being asked to provide the National Association, on special blanks, records of all their shipments for the months of January, May and September, 1915, and the exhaustive nature of the inquiry is shown by the following list of questions to be answered relating to every one of these 50,000 carloads: Date of shipment, car number, weight, rate, total freight charges, invoiced value of carload, f.o.b. mill, destination, routed kind of timber, thousand feet in each car of dressed, also of undressed lumber, quantity of other products and their nature, and the amount of loss and damage claims filed. The form gives in addition the name of the firm, its shipping point, and the railroad over which shipped.

The attitude of the lumber manufacturers is shown by the following resolution adopted at the special transportation committee meeting, representing lumber manufacturing, wholesaling, and retailing and allied interests:

"Be it resolved that this body is strongly of the opinion that there should be no change in the classification of lumber and lumber products which would or might result in different rates on the ordinary and customary products of the lumber manufacturing plants, whether shipped in straight or mixed carload lots.

"That this body is convinced that lumber has borne more than its proportion of the expense of transportation, and any re-classification will only result in a higher basis of rates."

The purpose of the lumber manufacturers is to secure a rate agreement for the future which will prevent all discriminations between various sections, and most of all to secure a general broad ruling which will prevent the necessity for constant local rate contests, before state commissions, and involving constant conflict between the railroads and the lumbermen. With one general agreement reached, present high costs for these constant rate hearings will be ended, and future differences very largely minimized.

Ontario's Forest Revenue for 1915

The annual report of the Woods and Forest branch of the Department of Lands, Forests and Mines for the Province of Ontario for the year ending October 21st, 1915, reflects fairly definitely the situation which existed in the lumbering industry during the year. The lumber business in Ontario suffered greatly last year on account of the falling off in the local demand for lumber and on account of the difficulty experienced by exporting firms in making shipments of their product. The revenue accrued to the Province from woods and forests on Crown Lands amounted only to $1,629,640, which is a decrease of $379,481, as compared with the preceding year. As compared with 1913, the last complete year during which the influence of the war was not felt, the decrease is still greater. During 1913 the revenue amounted to $2,127,222, which is $497,572 greater than the revenue of 1915. The revenue receipts from 1911 to 1915 inclusive were as follows:—1911, $2,151,258; 1912, $2,068,060; 1913, $2,127,222; 1914, $2,009,131; 1915, $1,629,640, showing an almost continual annual decrease since 1911.

Most of the decrease during 1915 can be accounted for by the decrease in the quantity of railway ties taken out, the total being only 729,164 ties as against 5,439,845 during 1914. The railway companies did practically nothing last year in the way of purchasing ties, whereas during the two or three years preceding they had bought heavily. During 1913 they took 6,555,828 ties, during 1912, 5,704,459 and during 1911, 4,270,832.

Another important decrease during 1913 was in timber dues which amounted to $928,351, a decrease of $184,129. During the previous four years the revenue from timber dues was as follows: 1914, $1,112,480; 1913, $1,277,490; 1912, $1,339,957; 1911, $1,173,283.

The itemized report of production during 1915 includes:—383,918,834 feet B. M. of pine saw logs; 54,668,902 feet B. M. of other saw logs; 20,922,922 feet B. M. of pine boom and dimension timber; 3,413,160 feet B. M. of other boom and dimension timber; 266,949 cubic feet of square pine timber; 4,790 cords of tan bark; 301,061 cords of pulp wood and 729,164 railway ties.

Revival in Lumbering

In an article dealing generally with the industrial position in Canada published recently by the Globe, the following reference is made to the situation in connection with the lumbering industry, under the heading "Revival in Lumbering":—

"Another important industry which will emerge from the war upon a more substantial basis than ever before is that of lumbering. The decision of various Dominion Government departments having to do with the construction of public buildings, etc., to use nothing but Canadian timber in the future has been followed by some large corporations. As is pointed out by "Conservation," Southern pine, even in 1915, when Canada was at war, and when there was a great decrease in the consumption of lumber, was imported to the extent of 95,000,000 feet, having a value of over $3,000.000.

"The Dominion Government has in past years used many million feet of Southern pine in various public works, but henceforth Canadian timber will be used. Douglas fir will replace Southern pine in such works as Quebec and Montreal harbor improvements and Hudson Bay terminals. Douglas fir has been used entirely in the Toronto harbor works, as a clause was inserted in that contract calling for Canadian material. The action of Baron Shaughnessy in ruling that Canadian timber only shall be used in works of the Canadian Pacific Railway shows that large private users are also finding it consistent with present conditions to use Canadian products. Architectural and engineering professions also are replacing Southern pine by Douglas fir, and the imported woods by the homegrown product.

"Lumbering interests, both in British Columbia and New Brunswick, state that the slump in lumber is over, and that improved conditions in the lumber trade are looked for during this coming summer. Returns throughout the Province of New Brunswick show that the cut this winter will be much larger than was anticipated at the opening of the season, nearly all the mills taking out more lumber than they originally intended to. It is stated that the sawmills will be operated throughout the entire coming season in order to clear up the unusual amount of timber taken out. The deep snow interfered to some extent with the British Columbia production."

Editorial Short Lengths for Busy Readers

Hon. Lorne Campbell, in a speech in the B. C. Legislature, referring to the lumbering industry recently, said:—"The striking methods adopted by the Provincial Government in alliance with the agricultural authorities of the prairie provinces have received a great deal of attention. The main idea underlying this work has been to increase the consumption of the lumber by making it easy and profitable for the prairie consumer to use lumber. In connection with this work a quarter of a million pamphlets, giving up-to-date building plans and agricultural information are being supplied to prairie farmers, and the marketing of British Columbia lumber is being closely studied through the establishment of a branch office of the department at Regina. The value of forest products for the calendar year 1915 is estimated at $29,150,000, a slight advance over the figures for 1914. Owing to the severe depression the total for the year is several million dollars lower than during 1912, but the province is to be congratulated on the fact that the depression of the lumber business is now a thing of the past and that both the market for lumber and the ruling prices are extremely satisfactory. The effect of the revival in the lumber industry will soon be felt throughout the province, for no other industry has circulated money faster or better. One of the pleasing features of the industrial situation, so far as forest products are concerned, is the prosperity of the pulp and paper mills. In addition to two working full time, the Ocean Falls plant is making ready to begin operations."

Canada's imports of pitch pine, lumber and timber, planks and boards, rough, sawn or split during the ten months ending January, 1916, amounted to 38,935,000 feet B. M., valued at $633,170. There has been a continued falling off in the quantity of imports under this head during the period of the war. For the fiscal year ending March 31, 1915, the imports were 95,182,000 feet B. M., valued at $1,608,788. For the fiscal year ended March 31, 1914, the imports amounted to 135,348,000 feet B. M., valued at $2,912,363.

The imports of oak from the United States also shows a heavy decrease. For the ten months ending January, 1916, the total was 19,854,000 feet, valued at $749,081. During the two previous fiscal years the totals were as follows:—1915, 34,454,000 feet, valued at $1,437,924; 1914, 62,848,000 feet, valued at $2,660,839. During the fiscal year ending March 31, 1913, the imports of oak were even greater, amounting in value to $3,227,113.

The imports of planks, boards, etc., dressed on one side only from the United States during the ten months ending January, 1916, amounted to 54.098,000 feet, valued at $855,475. During the fiscal year ending March 31, 1915, the imports under this head amounted to 135,375,000 feet, valued at $2,322,368. During the fiscal year ending March 31, 1914, the imports under this head amounted to 238,688,000 feet, valued at $4,428,341.

In the B. C. Legislature on April 3rd, Hon. W. R. Ross explained the proposed vote of $50,000 to aid the lumber industry of the province. He stated that agencies had been opened at Regina, Toronto and London, England, which were maintained under this vote and were stimulating the demand for British Columbia lumber. In reply to an enquiry regarding orders from the British Admiralty which were being placed with Oregon and Washington mills, Hon. Mr. Ross said that this had been a matter of much anxiety to the Government for a time, but that, when these purchases were made all purchases on this continent had been going through the agency of the J. P. Morgan Company. Now, however, the B. C. Government had got into direct contact with the Admiralty and hereafter business of this sort would be handled direct between British Columbia and the allied countries.

Plans are under way for the formation of a company to build ten large lumber schooners at Tacoma, Wash. The vessels are to cost from $70,000 to $80,000 each. They will be about 225 feet long, constructed of wood, four-masted and equipped with Diesel engines. They will have a capacity for carrying 1,500,000 feet of lumber each. The vessels will be built one at a time.

Canadian exports of forest products during February were valued as follows:—1916, $2,595,420; 1915, $2,342,590; 1914, $1,961,206. For the twelve months ending February the exports of forest products were valued as follows:—1916, $51,464,650; 1915, $41,904,728; 1914, $42,456,502.

New York a Gilded Tragedy

(Sydney Brooks in North American Review)

To come from England to Manhattan Island, from a country strung up as never before in its annals to the heroic pitch, full of the spirit of sacrifice and endurance and in daily touch with the grimmest facts of life and death—to come from such a country and to land in New York is to make a change indeed. For New York, always a feverish and pleasure-loving city, is today simply drunk with money. Even during the height of the steel boom of twelve or thirteen years ago, when every train from the west seemed to bring fresh carloads of brand new millionaires, the metropolis was not so openly reeling with dollars as it is at this moment, when the gayest "season" of its history is drawing to a close.

It almost appals an Englishman to find there in full swing the old rotten life that we in England have put completely behind us. And it appals him still more to reflect that a bare two years ago he was leading, if one allows for the extra intensity that New York throws into all its activities, very much the same life himself. One despairs of ever being able to convey to one's American friends how completely the war and its conditions and consequences has become not merely a part of, or a side issue to, but literally the whole British existence. They are so dominant, have so utterly swallowed up everything else, that no other form of life, least of all the trivial carelessness of peace, seems normal or even credible.

I catch myself in New York, if I enter a lighted room, instinctively reaching out to draw down the blinds lest a Zeppelin raider should note the glare; and of all the sights that crowd in upon me, that of multitudes of young men who are not in kahki strikes me as the strangest and the most repellent. It may be one more proof of our demented state, but it is the bare fact that not for anything would we in England change places with you in America or part with the waste and misery of the war to receive in return the "blessings" of such a peace as yours. Stay-at-home Americans simply cannot enter into or even conceive the atmosphere of the belligerent nations in this struggle; and conversely, so long as it lasts, a visitor from any one of the countries at war will continue to be shocked by the atmosphere of America as something unnatural to the point of being grotesque.

In New York the fact and the vastness of this chasm of sentiment assail the visitor with the sharp finality of a bayonet thrust. Louvain and Rheims are among the stricken victims of the war, but New York is its supreme and gilded tragedy, and has, I fear, neither the sense nor the soul to know it. Americans must by now have heard of the English charwoman whose husband was at the front and who was drawing her weekly allowance. She was asked what she thought of the war.

"What!" she replied. "A pound a week and no 'usband! Why, it's 'eaven! It's too good to last!"

There is something in New York's attitude towards the war which reminds one of this simple soul.

Architect Urges Use of Canadian Woods

A. R. Denison Sounds Praises of B. C. Douglas Fir—Gives Retailers a Pointer About Getting Their Money

At a recent weekly meeting of the Lumbermen's Section of the Toronto Board of Trade an address was delivered by Mr. A. R. Denison, of the firm of Denison & Stephenson, well known Toronto architects. Mr. Denison spoke on two subjects, one being the importance of using Canadian timber whenever possible and the other being a suggested plan for co-operation between lumbermen, architects, and owners of buildings under construction, with a view to making more satisfactory arrangements for the settlement of lumbermen's accounts for material supplied.

In opening his remarks Mr. Denison stated that he had made a hobby of the erection of mill-constructed buildings. He believed that they were a better class of building for commercial purposes than steel and concrete construction. He had put up a great many mill-constructed buildings in Toronto and elsewhere and had thus come into pretty close contact with lumbermen, as a large percentage of the cost of these buildings was in timber and lumber. In a recent case, when putting up a building of this class, he had taken special precautions to secure the lumberman—to see that the latter got his money. He had made a verbal arrangement with the contractor, the owner and the lumberman, to the effect that he should state in his progress certificates the proportion of money that was to be paid to the lumberman when the contractor presented his certificate to the owner. Unfortunately there had been a missing link in this chain. On the first certificate he assumed that the lumberman had got his money. On the second certificate he made the same assumption. When he issued the third certificate, however, he got a hint that the lumberman had not been getting his share, so he called him up and asked him about it. The lumberman and the contractor were friends and the lumberman said that the contractor was all right and that he was sure he would get his money. It turned out that the contractor had been paying the lumberman some of his money and giving him notes for the balance and that he had then over $5,000 of money in his possession that should have gone to the lumberman. After that, Mr. Denison had made a new arrangement and the money was paid by the owner straight to the lumberman, while the architect still held back the 20 per cent. allowed by the law. This lumberman had accepted a note for 60 days. The architect could only hold the 20 per cent. for 30 days. He was really powerless to help the lumberman unless the latter would co-operate with him fully.

Separate Cheques For Lumber Bills

Mr. Denison went into this situation more in detail and finally asked why something should not be done to put the whole situation beyond any peradventure. It seemed to him this would be quite easy if the interested parties would get together. His idea was that an arrangement should be made in writing between the proprietor and the contractor at the time of signing the contract, requiring the contractor to submit to the proprietor a summary of the lumber to be used in the building; and further, that a statement should be rendered to the proprietor from time to time during the continuance of the work, and that the proprietor should be required to draw separate cheques in favor of the lumber merchant as each certificate became due; the lumber merchant to be subject to a drawback clause of 80 per cent. in the contract and also to have a claim upon the 20 per cent. retained by the architect; a duplicate statement to be rendered to the architect if required. He believed that a plan of this sort, in which the owner, the architect and the contractor co-operated would remove a great deal of trouble. If the lumbermen would take it up and pass a definite resolution in regard to it, asking the architects to co-operate, he would put the matter before the architects, and felt pretty sure that they would fall in line.

Canadian Timbers the Best

Mr. Denison is a strong advocate of using Canadian timbers wherever possible, and, in discussing this subject, referred to the fact that the original Toronto city by-law made Georgia pine the basis for timber construction purposes. He had asked the city architect to use B. C. fir for such purposes and had simply been told that it was not allowed by the by-law and could not be done. This was a mistaken view of the city architects's business. He should have been interested solely in the strength of the timbers used, not the variety of timber. Alhough he expressed this opinion to the city architect at that time, the reply he received was simply that Douglas fir was not allowed by the by-law and he was not going to permit it to be used. Mr. Denison stated that he had told the architect he was going to put up two buildings near one another. One of them would be of Douglas fir and one of Georgia pine and the city architect could try to stop him if he liked. He went ahead. The timber was delivered on the job and he was told to stop. He did not stop and was hailed before a judge who upheld him, saying that he was quite within his rights so long as the timber used was of the required strength. In order to satisfy themselves regarding the strength, Mr. Denison told them to select timber from the piles that had been delivered for the jobs. This was done, a sample being taken from each job. He stated that if the result did not show that Douglas fir was better than Georgia pine he would be willing to pay the cost. The Georgia pine selected was 8¼ in. x 19¾ in. x 18 ft. long. The Douglas fir stick was 8 in. x 19¾ in. x 18 ft. long. The tests were made at the School of Practical Science, Toronto. The Georgia pine stick broke off at 43,550 lbs., and the Douglas fir stick split lengthwise but did not break at 55,320 lbs. From that day on they had been allowed to use Douglas fir.

Douglas fir was unquestionably the best wood they could get for construction purposes. It was also the strongest wood and it was one of our own native woods. He urged that lumbermen, architects and contractors should put forth every effort to use Canadian materials on Canadian buildings. Mr. Denison referred to instances of failure that he had come across in using Georgia pine. He had been obliged to take out at least six sticks of long leaf pine within five years from the time they were put in, because of dry rot. There seemed to be a failure in a certain percentage of Georgia pine stock. It really required an expert to know Georgia pine. In fact, he had known of men who called themselves experts, who differed with one another in deciding whether certain southern timbers were long leaf pine or not. He had always found that Georgia pine checked to a greater extent than Douglas fir. It was also much more combustible, as it was full of gum and was easy to set on fire.

The speaker urged the lumbermen to commence at once upon an effort to encourage the use of Canadian woods. The Dominion Government had taken a step in this direction by passing an order that nothing but Douglas fir was to be used in the construction of public works. If an effort were made along this line and followed up vigorously it would make a great difference to Canadian lumber manufacturers. He understood that during the last year over four million dollars worth of Georgia pine had been imported into Canada. In normal times he understood that the amount was far greater.

Where The Architect Suffers

At the bottom of all this question there was a very sore point. Frequently they would see a company with a name that would lead one to suppose that it was a Canadian company, who in the construction of large buildings employed American architects. The American architects would naturally specify American brick, American wood, etc. Every lock, every fitting, the plumbing, everything throughout the building would be brought in from the United States because the architect would be getting his percentage on every one of these items. Canadian architects would not be allowed to put up buildings in the United States. Canadian dentists, veterinary surgeons, lawyers, doctors, all classes of professional men, except the architects were protected against this sort of thing. Moreover the brick-layer and the carpenter were also protected in Canada to a certain extent by the alien labor law. In this way the Americans were cutting both the lumbermen and the architect out of their own business. In order to carry out this kind of work the contractor who wanted to make use of a United States architect had no trouble at all. He simply obtained blue prints and had them put through the customs at their cost, paying in duty a nominal sum of a few dollars. Under present conditions there was no escaping from this situation, but he believed that the architects, in a short time, would make an effort to have the law enforced more fairly in connection with the importation of plans.

In conclusion Mr. Denison repeated his hope that the lumbermen would do something definite in regard to his suggestion about co-operation between owners, contractors and lumbermen, regarding the issuing of separate cheques during the progress of the work. An interesting discussion followed Mr. Denison's remarks and the chairman, Mr. J. B. Reid, stated that he and Mr. W. J. Hetherington would act as a committee to draw up a resolution upon Mr. Denison's proposal. This resolution would be submitted to the section at a later meeting and he expected that, in the very near future, something definite would be forthcoming to lay before the architects. Mr. Denison repeated his assurance that if this were done the architects would be ready to co-operate.

Death of Donald Fraser Sr., Fredericton, N. B.

The Late Donald Fraser, Sr., Fredericton, N.B.

Mr. Donald Fraser, Sr., of Fredericton, N. B., one of the most extensive lumber dealers in Eastern Canada, died on April 4th at his home in Fredericton, after an illness of less than one week.

The late Donald Fraser was born at Drumoak in Aberdeenshire, Scotland, on February 5th, 1842 and began his business career in Aberdeen where he formed a partnership with his brother Alexander under the firm name of A. & D. Fraser, Timber Merchants. This business was continued until 1873 when Donald Fraser, Sr., moved to New Brunswick. There he settled on a farm at Kincardine, Victoria County. Four years after his arrival in New Brunswick he went once more into the lumber business, locating at River De Chute, Carleton County, N. B. During the next seventeen years he laid the foundation of the business with which his name has since been associated.

In 1894 Mr. Fraser built the "Aberdeen Mill" at Fredericton, which was subsequently destroyed by fire. In 1899, together with his sons Donald and Archibald whom he had taken into partnership, he acquired a lumber business in Temiscouata County, Quebec, and built the town of Cabano. In 1902 he purchased the business of the Tobique Manufacturing Company in Victoria County, N. B., re-organizing it under the name of the Fraser Lumber Company, Limited. In 1906 the business of the St. Francis Lumber Company at Whitworth in Temiscouata County was purchased and organized under the name of F. & M. Lumber Company, Limited. In 1911 Mr. Fraser bought from James Murchie & Sons Company the Murchie Siegniory in Temiscouata County and the milling business at Edmunston, N. B. organizing them under the name of Fraser Limited, which now controls all the Fraser business in New Brunswick aside from that on the Tobique River.

In 1913 the Scott Lumber Company and the Oromocto Lumber Companies' properties were acquired and consolidated by Fraser Limited. In 1914 the Fraser interests acquired the Assametquaghan Limits in Bonaventure and Matane counties and the Chabot Limits in Kamouraska County, Quebec. In 1915 Fraser Limited took over the Timothy Lynch Company's business on the Miramichi and began the construction of the new sawmill at Nelson, N. B., while the F. & M. Lumber Company, Limited, began the construction of a new mill at St. Eleuthere, in Kamouraska County, Quebec.

The late Mr. Fraser was President of all the Companies bearing his name and took an active interest in their affairs up to the time of his death.

Mr. Fraser was a devout member of the Presbyterian Church, a man of strong faith, and widely recognized as not only a successful business man but a man of wide human sympathies. His loss will be a great one both to the lumbering industry and to the people of New Brunswick.

David MacLaren of Ottawa Passes Away

David Maclaren, one of the best known lumbermen of the Ottawa Valley, died at his home in Ottawa on April 7th, after a lingering illness. The late Mr. Maclaren was born in Masham Township, Quebec, on October 5, 1845. His father, James Maclaren, was one of the foremost lumber merchants of Canada. David Maclaren was quite a young man when he entered the business with his father in 1871. In 1874 he took over the management of the Gatineau and Ottawa Rivers Branch of the business, with headquarters at Wakefield, P. Q. He took a great interest in municipal and financial affairs and also contributed liberally to many charities. He was a director of the North Pacific Lumber Company, Limited, the Jas. Maclaren Company, and a number of others, besides being a former president of the Bank of Ottawa.

Mr. J. J. McNeil, Toronto, died on April 8th at the age of 65. The late Mr. McNeil was for many years prominent in the lumber business in the Muskoka district. He moved to Toronto in 1897 and from that time had been associated with the Metagama Lumber Company, W. J. Sheppard & Company and the Spanish River Pulp and Paper Company. Since 1907 he had been operating in the Temiskaming district.

Forestry Battalion Ready to Embark

The 224th (Forestry) Battalion, under the command of Lt.-Col. Alex. McDougall, which has been raised to cut timber in Great Britain and France, has been completed to a strength of 1,525 men and has now been mobilized at Quebec. It will proceed to Great Britain as soon as transports are available. A new record in recruiting and mobilization has been established by the battalion. The men were mobilized within three weeks from the day when recruiting started. By next month the battalion will be actively at work cutting forests in England and Scotland and providing timber and material required at the front. Subsequently they will proceed to France and will engage in similar work there.

In connection with the 224th (Forestry) Battalion, the Patriotic Fund, headquarters at Ottawa, have come to a decision that the Battalion cannot be regarded as in the same class as combatant units and that the families of men serving in this battalion should not be entitled to assistance from the fund. However, if a man whose family is already being assisted by the fund, having enlisted in a combatant battalion, is transferred at the will of the militia authorities and not at his own request, into the Forestry Battalion, his family is entitled to special consideration, and may be assisted at the usual rates. Also, if a member of the Forestry Battalion is transferred to a combatant battalion his family may be given special consideration.

B. C. Manufacturers Want Export Duty on Logs

Representatives of lumber and shingle manufacturers interviewed the Executive Council at Victoria, B. C., on April 4th, to press their request for an export duty upon logs. They claimed that they were now able to take care of all the logs furnished by the logging companies in British Columbia, but, owing to the fact that the export duty had been waived by the Government a large quantity of logs were being exported to the United States, where higher prices were offered.

Representatives of the loggers were also present and stated that they were quite willing to sell to B. C. mills, but that the B. C. mill men could not afford to buy. They argued that they should be given the privilege of an unrestricted market.

This matter has been before the Government for some time. The Premier will give a decision as early as possible.

Western Timber Beginning to Move

The Prince Rupert Timber and Lumber Company, Vancouver, B. C., have sold ten timber claims, comprising over 125 million feet of timber, largely Douglas fir, to the Seymour Lumber Company, of Minneapolis, Minn. The claims are in one block on Sechelt Inlet, within 65 miles of Vancouver. The Seymour Company intend to take the timber off as soon as possible and is said to have already completed contracts for logging. The price paid was $125,000, or $1 per thousand on the stump.

The Prince Rupert Timber & Lumber Company have also sold to the Finger Lumber Company, four timber berths, near Prince Albert, Sask., comprising about sixty million feet of timber, the price being $60,000 cash.

Mr. E. H. Moore, president of the company, in a recent interview, said that the present outlook for timber was encouraging. There was more enquiry of a really serious nature than there had been for the past ten years. Only the scarcity of money had prevented the closing of a number of good offers they had received lately for tracts of timber on the coast. The demand for small tracts of good timber, running well to cedar, has been very active.

Cost of Making Shell Boxes

It has been popularly supposed that the manufacture of ammunition boxes was very simple and that it was a most lucrative form of business requiring little experience. Those who were engaged in the box business prior to the war, however, know that the margin between cost and selling price has been very small, and that the balance will be on the wrong side unless the items of expense are watched very closely. Contracts for shell boxes have been accepted at what seem to be unprofitable prices, and in the April issue of the "Canadian Woodworker and Furniture Manufacturer," Toronto, an authority on the subject has written a lengthy article showing in detail what it costs to manufacture the 18-pounder 6-round shell box, which has been produced in large quantities. The figures he gives are instructive and should be studied by all who are interested in knowing their costs. They are equally applicable to the other styles of shell boxes.

The Brooklyn Lumber Company, Hants County, N. S., will have a cut of about 8,000,000 feet this summer; Ira C. Crowe will cut 4,000,000 feet; Mr. Bullivant, 4,000,000 feet; Geo. Cole, 2,000,000 feet; Watson Burgess, 1,000,000 feet, and John McClair 1,000,000 feet.

Annual Report of B. C. Forest Branch

Statistics of Output—Market Extension Campaign Results—Forest Fires Well Controlled

The annual report of the Forest Branch of the Department of Lands of British Columbia, for the year ending December 31st, 1915, has just been published. The report opens with an outline of the market extension work carried on by the Branch, referring chiefly to the work of Mr. H. R. MacMillan, Chief Forrester of the Province, who is now on a trip around the world investigating the export markets for Canadian timber and lumber. Referring to Mr. MacMillan's work in Great Britain, the report states that a number of orders were received through his activities there, and gives the following list of cargoes handled through the Forest Branch:—

	Approximate Value F.A.S. Vancouver.
S.S. "Llandudno," 3,000,000 feet, clears, timbers, merchantable, and ties	$ 32,000
S.S. "Orange River," 4,000,000 feet timbers, merchantable, ties, and common	38,000
S.S. "Llangorse," 3,000,000 feet, merchantable, ties, and common	27,000
S.S. "Otto Tretchmann," 3,000,000 feet, clears, merchantable, and ties	40,000
S.S. "Karma," 1,250,000 feet, merchantable, and common	12,000
S.S. "Harewood," ties	2,000
Via St. John, 320,000 boxes worth	40,000

Referring to these shipments the report states that a notable feature of the business was the proportion of lower grades taken. In addition, 956,000 feet, worth $15,000, was lifted by the prize vessel "Grahamland," which was lent to the Provincial Government for this purpose, making a total of $206.000 in addition to other cargoes placed in the Province as a result of representations made by the Provincial Government. This promising line of business with the British authorities was nipped in the bud by the disastrous slide in the Panama Canal. Although an attempt has since been made to do business by combined rail-haul and Atlantic shipment via St. John, orders have not yet been secured, in spite of a considerable reduction in freight rates offered by the railways. The only exception in this has been the securing of an order for 320,000 boxes which the Forest Branch is handling for the War Office during the present month.

The most notable feature of this work was the excellent way in which the export mills of the Province came together to share orders. The need for co-operative action was indeed one of the matters emphasized in every report received from Mr. MacMillan. His recent investigation into the South African market, for instance, shows that while co-operation among British Columbia mills is a first essential for success, a stable market for Douglas fir there can never be secured until some international agreement is reached that will bring the present suicidal cutting of Pacific Coast export prices to an end.

Referring to domestic markets the report says:—While British Columbia, by reason of location and export facilities, must make every effort to secure its full share of the export lumber trade, the main markets for its products are on this continent. In proportion to population Canada uses more lumber than any other country, and despite the fact that, with the exception of the Prairie region, the Dominion is essentially a forest country, the timbered areas of Eastern Canada are already unable to supply the local demand. Both Eastern Canada and the Prairie Provinces have in the past imported hundreds of millions of feet of rough lumber from the United States.

The largest market for British Columbia lumber will always be in neighboring Prairie Provinces, which consume at least 60 per cent. of the total B. C. production. It was the shrinkage in the Prairie demand, combined with the heavy fall in lumber prices and the decrease in consumption in British Columbia itself, which brought about depression in the industry of this Province. With town and city building operations in the West at a standstill for the time being, and with the existing programme of railroad construction more or less completed, the difficult problem of how to increase the consumption of lumber in the Province has been pressing for solution.

British Columbia Commissioner in Eastern Canada

In the aggregate the departments of the Dominion and Provincial Governments and the larger cities are purchasers of lumber on a very large scale. Railway-construction, harbor improvements, and other public works consume considerable quantities of heavy timber. Then there are immense quantities of lumber used in general building-work.

Besides this large market in Eastern Canada for dimension lumber, there is a very extensive demand for moderate-priced wood for interior finish. From the earliest times the Eastern lumber market has been supplied by Ontario white or Norway pine, and in recent years to a large extent by imported southern pine.

British Columbia possesses dimension and rough lumber of a quality equal or superior to imported stock and wood for inside finish which for beauty of grain is unsurpassed except by hardwoods. Eastern Canada constitutes a natural field for expansion of British Columbia's lumber market, particularly since the completion of the Panama Canal has rendered direct water shipment possible.

In taking up market extension work it early became very evident that the educational methods adopted by private organizations to create a market for their product would have to be adopted if effective results were to be obtained quickly. This involved placing before dealers, consumers, and possible purchasers the facts concerning the qualities, merits, and uses of woods and wooden products. Information covering these subjects was collected and printed in the form of pamphlets. These were distributed either direct to the classes who would be specially interested or in response to inquiries received through publicity work.

The production of lumber in British Columbia during 1914, compiled from returns supplied to the Forest Branch by the lumber industry was as follows:

	Board-feet.
Saw-timber	833,437,000
Shingles, 972,935 M.	97,293,000
Hewn ties, 2,403,197 ties	75,100,000
Piling, 9,722,171 lineal feet	48,611,000
Poles, 4,339,234 lineal feet	21,696,000
Fence-posts, 38,430 cords	14,215,000
Mining-props, 23,102 cords	11,551,000
Total	1,151,903,000

Comparing this with the returns for the other provinces as supplied by the Dominion Forestry Branch, we find that British Columbia led in production, though only to a slight degree over Quebec.

British Columbia	1,151,903
Quebec	1,118,298
Ontario	1,044,131
New Brunswick	414,808
Nova Scotia	279,044

Estimate of Value of Production, 1915

The products of the forest are numerous, but they may be roughly divided into classes indicated below; the value of each product includes any transportation charge in the Province.

Lumber	$ 15,500,000
Pulp	3,200,000
Shingles	3,500,000
Boxes	750,000
Piles and poles	1,200,000
Mining-props and posts	400,000
Miscellaneous (cut by railroads, mines, settlers, hewn ties, cord-wood)	900,000
Additional value contributed by wood-using industries, planing mills, sash and door factories, cooperage, wood pipes, slab fuel	1,750,000
Product of Dominion lands	1,800,000
Lath	150,000
Total	$ 29,150,000

This large amount is well distributed, as there are practically no districts or communities that are not directly influenced by the harvesting of the timber resources of the Province.

British Columbia, from its position relative to markets, has no large wood-working industries. This is shown by the fact that out of all the timber sawn in 1914 only 20,000,000 was used as a raw material for further manufactured articles. Of this 18,000,000 was manufactured into boxes, 1,000,000 in sash and doors and interior fixtures, 200,000 in cooperage, and the balance in a number of smaller uses, such as caskets, cars, boats, etc. This remanufacture is an important asset to the Province and should be encouraged in every possible way. The more valuable the finished product that is sold the more money that is left in the Province in labor, supplies, equipment, etc.

The wood-using industry of Ontario, for instance, is worth $19,000,000 a year according to statistics gathered by the Dominion Forestry Branch. This is made possible by the large market of Eastern Canada, which uses large quantities of wood in the manufacture of sash and doors, boxes, furniture, vehicles, implements, slack cooperage, etc.

British Columbia has not got a large market close at hand which demands these products. Moreover, in any new country the first step is to manufacture lumber which can be sold for a multitude of uses, instead of specializing on special articles of higher manufacture with a more uncertain market. It is true, however, that the very fact that British Columbia lumber product has to stand a relatively high transportation cost makes it all the more imperative that the products transported should have as high a value at the shipping-point as possible. Why, for instance, should British Columbia sell lumber to Ontario, there to be manufactured into doors? Instead of

this, British Columbia should sell the doors and save freight on sawdust and shavings.

There are many articles which can be manufactured completely in British Columbia; some, like doors, in the complete condition; others, like silos, tanks, and even houses, "knocked down" for shipping.

Timber Scaled, 1915.

The scale returns are a good index of the activity in the lumber industry throughout the Province. The salient features of the figures for 1916 are the increased cut of logs and cordwood and the decreased cut of piling and ties. The lower figures for the latter items are due to the smaller amount of railway-construction, which consumes immense quantities of these articles.

The increase in cordwood returns is accounted for by the steady market for shingle-bolts.

The increase in the log returns came almost entirely from Vancouver, the cut in the Interior districts being markedly less than in previous years. In the northern districts operations were practically at a standstill.

Nearly 25 per cent. of the timber cut in B. C. comes from the very old Crown grants, over 30 per cent. from timber leases and licenses, 30 per cent. from the Dominion Railway Belt, 16 per cent. from Crown grants issued since 1887, 10 per cent. from timber-sales, and a few million feet from railway permits.

Of the many species of timber cut, the largest quantity, 22 per cent., was supplied by Douglas fir, closely followed by western red cedar, with 35 per cent. of the total.

Hemlock and spruce each supplied between 7 and 8 per cent., western larch nearly 4 per cent., and western soft pine 3 per cent. Jack or lodge-pole pine furnished nearly 7,000,000 feet, or ¾ of 1 per cent. of the total, while western or Idaho white pine gave 5,000,000 feet out of 1 per cent. Balsam fir and cottonwood each supplied 1,000,000 feet, and yellow cedar and alder furnished a few thousand feet.

The species of lumber cut in British Columbia during 1915 were as follows:

Douglas Fir	426,232,000 feet B. M.
Red Cedar	354,702,000 feet B. M.
Spruce	74,676,000 feet B. M.
Hemlock	79,392,000 feet B. M.
Balsam Fir	1,260,000 feet B. M.
Yellow Pine	29,766,000 feet B. M.
White Pine	5,057,000 feet B. M.
Larch	38,597,000 feet B. M.
Yellow Cedar	30,000 feet B. M.
Jack-pine	6,914,000 feet B. M.
Cottonwood	1,045,000 feet B. M.
Alder	12,000 feet B. M.
Grand Total	1,017,683,000 feet B. M.

The average sale prices of standing timber by the Crown according to species during 1915, were as follows:—

Fir	$0.95 per M. feet
Cedar	1.05 per M. feet
Spruce	.71 per M. feet
Hemlock	.46 per M. feet
Balsam	.48 per M. feet
White pine	.77 per M. feet
Tamarack	.50 per M. feet
Other species	.50 per M. feet
Average price	$0.80 per M. feet

The distribution of saw and shingle mills in the province is shown in the report as follows:

West of the Cascades: 48 sawmills with daily capacity of over 40,000 feet; 48 sawmills with daily capacity of 15,000 to 40,000 feet, and 44 sawmills with daily capacity of 15,000 feet or less; 81 shingle mills. Total saw and shingle mills west of the Cascades, 221.

East of the Cascades: 27 sawmills with daily capacity of over 40,000 feet; 43 sawmills with daily capacity of 15,000 to 40,000 feet; 94 sawmills with daily capacity of 15,000 feet or less; 10 shingle mills. Total saw and shingle mills east of the Cascades, 174.

Total sawmills in the Province: 75 with daily capacity of over 40,000 feet; 91 with between 15,000 and 40,000 feet daily capacity, and 138 with a daily capacity of 15,000 feet or less; also 91 shingle mills.

Total Saw and Shingle Mills in the Province, 395.

The total number of logging operations in the Province amounted to 937, eleven more than in 1914. In all districts east of the Cascades, logging operations were greatly restricted throughout the year, and the increase is accounted for by the great activity in the Coast districts by small operations.

The Forest revenue for the twelve months up to December 1st, 1915, amounted to $1,992,558, a net decrease as compared with 1914 of $420,121. The decrease is accounted for by the severe depression experienced by the lumber industry, and the financial stringency which made the collection of revenue more difficult than usual.

During 1915 there were 1,031 forest fires reported by the Forest Fire Protection Staff. Of these, only 317 were classified as "cost fires." This is a considerable reduction as compared with the previous season when there were 639 "cost fires." The average cost of each "cost fire" was $61, whereas in 1914 the average cost was $219. About two-thirds of all fires originated on privately owned lands not classed as timber lands. The most prolific source of forest fires was carelessness by campers and travellers which accounted for 305 fires, or 29.6 per cent. of the total. 160 fires, or 15.5 per cent. are classified as of "unknown cause." Brush-burning accounted for 267 fires or 29.9 per cent. Railway operations were responsible for only 82 fires or 7.9 per cent. Lighting started 100 fires or 9.7 per cent. Railway construction was responsible for 17 fires or 1.7 per cent. 28 fires are classified as of incendiary origin being 2.7 per cent. of the total. Forest fires during the year covered an area of 30,310 acres as compared with 42,549 acres during 1914. They destroyed 144,220,000 feet of timber as compared with 102,804,000 feet B. M. during 1914. The damage during 1915 is estimated at $88,043, as compared with $52,852 during 1914.

Logging Costs in Pacific States Operations

The costs that are listed below represent a part of a general study of the lumber industry of the Pacific Northwest that is being made by the Department of Agriculture and Commerce in co-operation with United States lumbermen. The figures do not include the cost of stumpage, interest of any kind, discounts on logs sold, towage to mill, nor taxes on the standing timber. The average haul is 23 miles.

(Based on Figures from 20 Camps)

Output (1913) and Investment		
Percent of total output (approximate)		75
Average output per year per camp		45,000,000 ft. B. M.
Average output per day per camp		200,000 ft. B. M.
Average fixed investment		$140,000.00
Average working capital		35,000.00
Average labor cost per M board feet		3.09
Cost per M feet, Log Scale		
Felling and bucking, labor		$0.683
Woods to car, labor (yarding, loading, running line)		1.259
Railroad (spur) and pole construction, labor		.586
Train crews, labor		.206
Dumping and rafting (includes contract work)		.211
Supplies and maintenance (labor and materials) of R. R. dump and boom		.177
Supplies and maintenance (labor and materials) of equipment, tools, buildings, etc.		.307
Fuel of logging engines, locomotives, shops, etc.		.239
Wire rope		.137
Depreciation, equipment		.240
Depreciation, main line railroad grade, boom and buildings		.066
Scaling		.049
Return of boom sticks		.046
Log freight		.822
General Expense:		
Salaries and commissions	$ .139	
Taxes	.029	
Industrial insurance	.096	
Sundry expenses	.076	.340
Total average cost per M feet log scale		$5.428

Treated Wood Has Long Life

The National Railway Appliance Show held recently at Chicago had, as one of its chief educational features, a demonstration of why wood decays when used for paving, telegraph poles, railroad ties, structural timber or other such technical uses, with a comparison of the results secured from timber treated properly with preservatives and those not so treated. Woods in use for thirty years were shown which had been used under correct conditions, some of the old ties and poles being as sound now as when they were laid. The exhibit, which was arranged for the National Lumber Manufacturers' Association by the Southern Pine Association, was devoted entirely to this educational phase of the problem, showing engineers how wood can be made practically everlasting if it is properly used for construction work. Another part of the lumber exhibit was a model of a building actually erected in Chicago, of mill construction, timber frame, and floors throughout, as a demonstration of the engineering side of such construction. The most amazing phase of the exhibit was the explanation that a factory building of that type could be insured for 7 or 8 cents per $100, and that the cost of construction was only $1.29 per square foot.

In the cypress exhibit the features were the showing of lumber from old southern houses, still sound though erected in 1860. Tie and pole samples were also shown of the "wood everlasting."

In another corner of the coliseum was an exhibit of fir from the west, representing the Washington mills, which specialize in railroad and structural timber for railroads.

A coal and retail lumber dealer's section of the Retail Merchont's Association, of Regina, Sask., was formed at a recent meeting of those interested. The following officers were elected for the first year:—chairman, A. M. Fraser; vice chairman, T. B. Patton; secretary, W. R. McKenzie.

karri on the market. It is reported that the company will carry stocks in South Africa. Untreated karri has not been satisfactory .

The Railroad Department are prepared to buy a trial cargo of Douglas fir sleepers as soon as satisfactory evidence has been given of the service rendered by the timber elsewhere. Sample creosoted fir sleepers have already been placed in the track in South Africa.

Flooring, Ceiling and Dressed Lumber

The principal origins and the values of the dressed lumber imported during 1914 are shown here:—

Country	Value, 1914
Sweden	$103,372
Norway	37,047
Russia	11,380
Canada	7,195
Total	161,.98

The importations of flooring, ceiling and dressed lumber increased rapidly and regularly from $107,630 in 1909 to $289,041 in 1913. During this period the quantity imported from Canada remained negligible. No flooring or ceiling of any kind is produced from native woods in South Africa, and the requirements are certain to continue to be important.

(To be continued)

In the Public Eye

A budget of comment presented in the interest of public welfare, independent of party politics and with malice toward no one.

After eighteen months of silence "Industrial Canada," the mouthpiece of the Canadian Manufacturers' Association, has joined its voice to those of other journals that could not stomach what went on at Ottawa in connection with the letting of contracts for shells and fuses by the late Shell Committee. "Industrial Canada" tells us in its latest issue a few things it knows about fuse contracts and says that eighteen months ago the Canadian Manufacturers' Association went to the Government and tried to make it realize that the "license to loot" ought to be terminated. Their warnings, like those of many of the Government's political supporters were, according to "Industrial Canada" allowed to pass unheeded. So, at this late date, after giving the matter eighteen months of silent thought, the organ of the Canadian Manufacturers' Association, the members of which are both liberal and conservative comes into the lime-light with its statement of some of the things that have come under its notice.

* * *

I will outline the story told by "Industrial Canada" a little later on, after I have said what I feel about the part this mouthpiece of the manufacturers has been taking. While the making public of this story is better late than never, I cannot help wondering how such a journal can square itself with its own conscience for having kept silence all these months. It seems to me that this is just another example of the weakness exhibited by 90 per cent. of the journals of Canada in failing to do their plain duty. What is a public journal for, if it is not to tell the public some of the plain facts about its public men, especially when the good name of the country is being soiled? When the testing time comes, many of these journals lack the backbone, or the nerve to speak out. They act the part of Falstaff whose chief maxim was the comfortable idea that "discretion is the better part of valor" and they just keep mum. They wait until the burglar gets away with the swag, and finally, when so much has been filched from the public purse that no one can shut his eyes to it any longer, some of them join in the chase with a great hue and cry.

Why did not "Industrial Canada," in the interests of manufacturers, make its public protest eighteen months ago, when the trail was hot and there was some prospect of getting hold of the culprits before they cleared off with whole skins and a big swag? It was left to this paper—the Canada Lumberman—to make the first protest in the interests of the manufacturers of Canada, and in the interests of clean government and the good name of the people of Canada; and for some time it was left to us also to continue the protest almost alone. The Canadian Manufacturers' Association, through their organ "Industrial Canada" made their protest silently and without effect eighteen months ago. They should have followed this up at that time with a public statement, instead of waiting for eighteen months and watching the continuation of those evils about which they told the government in a whisper.

I do not relish the idea of saying much about my own doings, but I may be excused for pointing out such short-comings on the part of other journals, and saying, that in spite of my own loneliness all these months, I have felt and still feel that I have been doing the Canadian manufacturer and the Canadian public a real service in laying bare some of these ugly truths; a service which the public had a right to expect, the manufacturers especially, from those other journals, and more especially from their own industrial mouthpiece.

* * *

Here is the story of "Industrial Canada," told as briefly as we can put it:—Eighteen months ago the Canadian Manufacturers' Association approached the Government and told them some of the things they knew about the way in which fuse contracts were being given to Americans and refused to Canadians, and what people were saying about it all. "The reception given these suggestions," says Industrial Canada, "was not of a character calculated to invite further co-operation."

"There are limits," Industrial Canada continues, "to the patience of loyal citizens, even in war time, and much as we may deplore the disgrace that the fuse scandal has brought publicly home to Canada, and warmly as we may resent the effort to make political capital out of it at a time when our national energies ought all to be centred on winning the war, there is no getting away from the fact that the situation was intolerable, and that the license to loot had to be terminated."

After a little more in the way of an introduction, the article continues, saying that Mr. T. A. Russell and Mr. Lloyd Harris, of the Russell Motor Car Company Ltd., heard in April, 1915 that fuse contracts had been "going begging," since November 1914. Their first information about it "was received in New York from Sir Sam Hughes, who, by personal introduction referred them to Col. Allison in the Manhattan Hotel for details. Preferring to do business direct with the Shell Committee, Messrs. Russell and Harris went to Montreal and made overtures to the Committee through Gen. Bertram and Col. Carnegie." The up-shot of this business was that they were again referred to Col. Allison "who was said to have the matter in hand for prospective contractors in the United States." After considerable perseverance and several rebuffs, Messrs. Russell and Harris "were given a promise that one million of the five million fuses required would be held, pending the receipt of a tender from them, providing that tenders were submitted within a reasonable time." A reasonable time in their case "was defined as two weeks, notwithstanding the fact that Allison had presumably been busy on the proposition for five months without being able to offer anything definite."

Within the two weeks Messrs. Russell and Harris notified the Shell Committee that their proposition would be ready on the date specified. "And now for the fact that requires explanation," continues the article in Industrial Canada. "On May 25th, 1915, the Russell tender was turned in, offering to make 1,000,000 fuses at $4.20. On May 19, without waiting for this competitive tender, which was known to be on the way, and regardless of the promise given to hold at least a portion of the business open, the committee awarded contracts for the whole of the 5,000,000 fuses to the companies promoted by Allison and his associates, a small fraction of them at $4.00, but the majority of them at $4.50. The loss in money is a matter of easy calculation from the records of the committee. The loss in time of delivery is also determinable, because whereas the United States contractors have fallen far behind with their obligations, the Russell Motor Car Company, are now delivering ahead of time under a contract they subsequently secured at $3.70. The indirect loss to Canada and to the Empire through the sacrifice of domestic to foreign enterprise is beyond computation."

* * *

It is unnecessary to comment on this story at present. It simply adds a chapter to many that I have already published. Nor is it necessary to say much about the characters of the parties who are referred to as taking part in it. The fact that one of these parties is Mr. Lloyd Harris, stamps the story as deserving of every confidence. Mr. Lloyd Harris is one of the brightest and cleanest men we have in Canada today, and there are a good many others of his type. The thing that I cannot quite understand is why he, or others of his calibre were not employed by the government in this crisis. Can it be that he was too big a man for them? Whatever reply you give to this question, the Dominion Cabinet needs a good cleaning out, if the conservative party is to be saved from defeat.

* * *

Just by way of an example of the above idea, I may mention the case of Hon. A. E. Kemp, the chairman of the Purchasing Commission, who also has been acting Minister of Militia during the absence of Sir Sam Hughes. Is it in the interests of the people that a man who is so interested in companies selling goods to the Government should be occupying an important position on a Purchasing Commission? Is there no law against such things that can be made effective? Is there not even a sufficiently vigorous public opinion in Canada to teach such men that their positions as members of Parliament are positions of trust, to be exercised for the public welfare, not positions of profit to be utilized in their own interests? What do you think of a situation like this? Does it not make your blood boil, and make you question whether the men who get to the top of the tree in our political life are men of the large calibre they should be? In the name of Heaven, are there no big men in this country who could handle our affairs more after the manner in which we have every right to expect they should be handled?—SEARCHLIGHT.

Making Box Boards From Sawmill Waste

Conditions Under Which Residue From Lumber Production May Be Profitably Worked Up Into a Marketable Article

By P. L. Buttrick*

One of the most important subjects before the lumber trade is the disposal of "waste." In the days of low stumpage it did not greatly concern the lumbermen that they threw away about a third of the log in slabs, edgings and trimmings, which they burned to get rid of. As we look at it today, their operations lacked efficiency. Now that logs have become so much scarcer and stumpage so much more valuable, to say nothing of competition having become so much keener, they should take an interest in that mysterious thing called "efficiency." Efficiency means absence of waste. Yet it is impossible to cut round logs into rectangular boards without leaving a residue. This residue is called in sawmill parlance "waste."

It can, however, be used as a raw material for a number of wood products, not strictly classified as lumber. The more important of these are: lath, shingles, staves, box boards, wood pulp, and various chemical products such as turpentine and tannic acid. Nevertheless, with the exception of lath, most of these products are still made directly from logs or cordwood cut for the purpose, and the waste is still largely destroyed. This has not been altogether the fault of the lumberman, since it often cost so much to manufacture from waste that it could not profitably be done. Today increases in value and consumption of these products and the rise in value of the raw material are beginning to make it financially possible for those manufactured from waste to compete with those from logs and cordwood.

Efficiency demands that this be done, and it is an economic gain to the public as well as to the lumbermen that it be done, since the closer we utilize our timber the less we are obliged to cut at a time, and so the longer it will last.

Since the manufacture of box boards from waste is not a very well known scheme of utilization, it is possible that the following account, based on an experience of some months at a factory, which utilizes waste exclusively, may be of interest to lumbermen, foresters and conservationists.

The various products made from sawmill waste often demand quite different size, shape and quality of pieces, so that it is usually impossible, or at least unprofitable to utilize all waste from a given mill for a single product. Nevetheless, a box factory manufacturing a suitable grade of box boards should be able to utilize from 40 to 60 per cent. of the normal waste from the average mill (provided, of course, that it cuts woods suitable for box boards), and to leave a sufficient unsuitable remainder to stock the lath mill.

There are few kinds of wood which cannot be made into box boards, although some, such as cottonwood and White pine, are exceptionally desirable. Among the more common hardwoods which can be used are cottonwood, Yellow poplar, Red gum, tupelo, basswood, buckeye, chestnut, butternut and others. Among the softwoods are White pine, spruce, balsam, Southern and Western Yellow pines, Western hemlock and certain of the cedars.

Box factories generally use fairly high grade lumber, and have not taken kindly to the idea of using sawmill waste. Hence such work as has been done along this line has been by the sawmills themselves, some of which have successfully established box factories of their own.

There are four classes of sawmill waste which can be used in the manufacture of box boards, or "shooks" as they are often called. First, trimmings and edgings from the main sawmill; second, culls from the planing mill; third, odds and ends which accumulate about the plant and yard; fourth, slabs.

Trade customs which make it necessary that practically all lumber be cut into lengths which are multiples of even feet, and the necessity for trimming boards to rid them of wane or other defects insure a constant supply of boards too short for ordinary uses. These make excellent material for boxes. Edging strips are not so valuable, as they are apt to be too narrow, but heavy ones can be used. Every planing mill turns out a certain amount of finished lumber which is imperfectly manufactured. Boards with skips in dressing, or with a tongue or a groove split off, or perhaps with a strip of wane left on are examples of such culls. Many such boards cannot be manufactured profitably, but are suitable for box stock. Every mill has its quota of dead stock, such as boards spoiled in seasoning, odds and ends of special orders, badly sap-stained pieces and the like. A box factory can work up a great deal of such material and thus save it from becoming a total loss. Slabs are a perennial problem at the sawmill. By installing a slab resaw and cutting them into short boards for the box factory the waste from this source can be greatly lessened.

Equipment of the Box Factory

The manufacture of box boards requires extra floor space and special machinery. The shop can best be arranged in connection with the planing mill rather than the sawmill itself. If the plant is large, the box factory can be made a separate unit of management. At smaller plants its management can be incorporated with that of the planing mill. The main machinery in a box factory consists of rip-saws, cut-off saws, planing machines and resaws. Nailing machines, splicers, matchers, equalizers and many other special machines are used for various kinds of work, but are not essential in a factory using mill waste. A twin-band resaw, however, might be useful if trimmings from timbers and dimension stock are abundant. The planers must be specially designed for the work and should be wide gauge short-bed machines capable of running large numbers of short irregular pieces at high speed. Any standard resaw such as intended for planing mill or box factory use should be satisfactory. There are numerous types of cut-off and rip-saws designed for box factory use. Hand-feed rip-saws are probably more satisfactory for box factories using waste than are power-feed machines.

A good arrangement and combination of machines would seem to be the following: 1 band resaw, in front of 3 planers, then 2 more resaws, all followed by 6 cut-off saws arranged in a line at right angles to the resaws and planers, and then 7 rip-saws in a line at right angles to the cut-offs. Special machinery is usually placed beyond the rip-saws. (It is generally well to provide storage room both for waste and for completed shooks.)

Such a factory should be able to turn out from 50,000 to 80,000 feet of shooks a day, and to utilize waste from a mill of from 200,000 to 300,000 feet capacity. For a mill of from 50,000 to 100,000 feet daily capacity, a resaw, a planer, 2 cut-off and 3 rip-saws should be ample. The resaw could, perhaps, be used jointly with the planing mill, since it would generally be less in use in the box factory alone than the planer. Smaller mills can sometimes resaw slabs and planing mill culls and sell them to box factories to be worked into shooks.

Provision must be made for the collection of waste from various parts of the plant and its delivery at the box factory. In the main sawmill, the easiest plan is to pick out suitable pieces from the waste as it passes along the main refuse conveyor on its way to the refuse burner. It may be dropped on to trucks or wagons, or—if there is enough of it—on to a conveyor arranged to carry it to its destination. If the plant also has a lath mill, the box factory should be given first choice in working over the refuse, since box boards are a higher grade product than lath. There need be no fear of there not being enough pieces left too narrow for box boards with which to supply the lath mill.

Box shooks must generally be made of seasoned lumber, else they will warp; consequently it is necessary either to send the waste to a dry kiln or to pile it in the yard to season for several weeks. The dry kiln is better, since the cost of the extra handling of such small pieces increases rapidly. The edging strips are used for moulding stock. Such a car is estimated to contain 6,000 board feet.

Planing mill culls can easily be loaded on trucks and moved directly to the box factory, since they are usually already seasoned. Planing mill trim, if enough exists to make it worth while, can go in on a special conveyor. Occasionally a wagon or a trash car can be sent over the yard and the dead stock and trash which accumulates be loaded ino it and hauled to the factory. If a slab saw is installed in the main mill it is a simple matter to sort out all the short boards cut on it from the slabs and see that they reach the box shop.

Box boards used for tops, bottoms and sides are generally cut 5/16 or 3/8 inches thick. Ends and cleats are usually from 1/2 to 13/16 inches thick. It is generally possible to get 2 pieces for tops, bottoms, or sides from an inch board and 4 from a two-inch one. To obtain the required thicknesses, two-inch pieces are resawed, then planed and finally resawed again, since most shooks require dressing on one surface only. Inch boards are simply surfaced on two sides and then resawed, while pieces less than an inch in thickness are usually worked down entirely on the planers. Pieces of the required thickness for ends and cleats can sometimes be obtained directly from planing mill waste. For many uses it makes little difference if tongues or grooves remain on boards after they have been cut for box

* Consulting Forester, New Haven, Conn.

boards. This is more especially true in the case of rough crates where no attempt is made to remove them. After the boards have been reduced to the desired thickness they are cut to length on the cut-off saws and then ripped to width on the rip saws, imperfections being cut out in both processes. The completed shooks are then bundled in convenient numbers and shipped to their destination, where the boxes are built up from the different pieces. They are seldom assembled at the factory, since their bulk makes shipment in the completed form too expensive. Shooks are seldom cut in advance of orders, since nearly every customer has his own requirements as to dimensions and specifications.

Expensive Boxes Still a Problem

Expensive boxes calling for dovetailing corners, matched boards, sliding tops and the like have not so far been made commercially from sawmill waste. Until more experience and knowledge regarding the possibilities of this form of waste utilization has accumulated it is not likely that they will be. Small and medium sized packing boxes and crates do not require such expert knowledge or special machinery for their manufacture, and it is with them that box factories utilizing waste will specialize.

In manufacturing shooks from waste, great difficulty is experienced in securing enough wide stock. Narrow stock accumulates in abundance. Consequently, orders requiring wide boards such as one-piece sides, tops and bottoms for large and medium sized boxes are avoided. Nor are large boxes of any description considered desirable, since it is (or should be) difficult to obtain large pieces from waste. There is a large and steady demand for medium sized boxes for canned goods, tinned fish and meats, salt and frozen fish, soap, dried fruit, preserves, bottled liquors, cheap glassware, crockery and hundreds of other articles. Such boxes need not be made with special care or of very high grade material. They can easily and satisfactorily be made from sawmill waste.

Crates, which are made of narrow slats, are, however, the most desirable product for a box factory waste. Oftentimes the slats can be made from waste pieces at the same width they were originally cut, or if not, at such widths that there is little loss in ripping them. Sometimes the ends of these crates can be assembled on nailing machines in the factory before shipment. Such crates are used as containers for a variety of articles such as oil cans, syrup cans, empty bottles, pasteboard boxes, smoked meats, fruits, and light machinery.

There are in addition to shooks a number of other products which can easily be made from sawmill waste at a box factory. Stock for chair rungs, table legs and other wood turnery articles of a like nature, and for novelty uses of various kinds can be made of pieces too small or narrow for box boards. By installing a band or circular rip-saw, moulding strips may be sawed out of thick clear edging strips. Lumbermen seem to be agreed that there is no profit in making mouldings from stock boards. The use of edgings should yield a return.

Skilled Employees Scarce

The making of box shooks from sawmill waste is such a new enterprise that few men, either in box factories or sawmills, fully understand it. A box factory superintendent who has never used anything but standard lumber is apt to be out of sympathy with the idea of using waste. For this reason it may be better to place a man from the sawmill in charge, who is without previous prejudices, since in either case a man must be broken into the work. The same is true to a certain extent of rip-sawyers and other skilled workers.

The success of a box factory using waste depends to a large extent upon the run of orders. Orders for shooks of dimensions which cannot readily be obtained from waste may greatly increase the cost of manufacture, or make it necessary to use standard lumber to fill them. Except at very large plants, a box factory will not be of sufficient capacity to keep a special box salesman busy disposing of its output. Since lumber salesmen seldom have much knowledge of boxes or of the patterns which can be made from waste it is desirable that the superintendent have the power to refuse or cancel orders which it is not for the interest of the factory to accept. Mills with waste enough to manufacture only a small quantity of shooks might be able to make arrangements through regular box companies.

There is always the danger that the box factory will come to be regarded too much in the light of a catch-all, and material will be sent to it that could be more profitably utilized in other ways. There is no economy in sending mis-manufactured boards to the box factory if they can be remanufactured or trimmed without a loss of more than a third of their footage. Yet it is generally easier for the planing mill to send such material to the box factory than to deal with it themselves. Likewise, it is easier for the box factory to use such material than to use waste, hence it is not likely to protest. In the sawmill itself, the knowledge that heavy slabs and edgings and long trimmings will all be used in the box factory may encourage carelessness on the part of sawyers and others unless a sharp watch is kept. At the average mill which has no other way of utilizing waste, enough of it must necessarily accumulate to stock the box factory without permitting lax cutting to obtain it.

It should not cost more than from $10 to $12 per thousand feet of shooks to manufacture them from sawmill waste. The average selling price of a grade made from Southern Yellow pine is about $15. However, it will generally prove that shooks cannot be as cheaply manufactured from waste as from standard lumber—or at as great a profit. This need not dismay the lumberman who is cutting woods suitable for box manufacture, for ordinarily his waste is of no value and it is an expense to him to dispose of it, so if, by a small investment in labor and machinery, he can turn it to even a small profit, it is that much added to his income. As before remarked, the use of waste in this way is an advantage to the public, since the close utilization of our timber resources is the practice of conservation, and therefore an economic gain to all.

Logging and Saw Milling Machinery for India

A large proportion of the logging and sawing of timber in the Government forests in India is done by the Government Forest Department, which purchases the necessary machinery and carries on the work. It is felt by many forest officers that sufficient use has not been made of mechanical contrivances, especially in logging, and that greater profit would result from the working of the timber if such machinery were used in skidding and hauling logs as is done in Canada. Accordingly, Mr. H. R. MacMillan, Timber Trade Commissioner, has written the Department that the Forest Economist, India Forest Service, Dehra Dun, India, wishes to secure catalogues, descriptions and price lists from manufacturers in Canada of:—

1. Logging machines or steam skidders.—It is possible that the type of yarder or skidder now in use in Canada will be heavier than is necessary for Indian work. A machine is required for India that will yard 1,000 feet to a tram line in a stand of hardwood timber averaging about 6,000-10,000 feet per acre. Very few logs will weigh over 2,000 pounds, and it will probably be satisfactory to use skidders for the logs under 2,000 pounds and use elephants for the few heavier logs in order to keep the weight of the skidder to a minimum.

An important point to be noted is that as Indian timber is much more valuable than Canadian timber, teak for instance selling in the log at the depot for $60 per thousand board feet on a measurement that makes no allowance for slabs waste or saw-kerf, a larger expenditure is possible in logging than may be admitted in Canada.

2. Portable saw-mills.—A large number of portable saw-mills are used by the Indian Forest Department. The department is prepared to give Canadian portable mills a trial. Portable mills in India are used for manufacturing railway sleepers, small dimensions, lumber and pickets from low-grade logs. The power is supplied by a wood-burning traction engine, which hauls the mill. A very simple type of mill is required.

3. Logging tools and saws.—The Government has recently sanctioned the purchase of a further logging equipment, and Canadian manufacturers interested should take the matter up at once, particularly as, should a suitable type of machine be developed, a very wide market will be opened up both with the Government and with the several large companies now logging teak and other woods with elephants and bullock carts.

A report upon the timber trade of Italy published in a recent issue of the Weekly Bulletin of the Department of Trade and Commerce, shows that Italy's imports of timber, before the war, came chiefly from Austria-Hungary, the United States, Roumania and Russia, and amounted in an average year to three million cubic metres, one cubic metre being equal to 35.31 cubic feet. The national production of timber in Italy amounted to 500,000 cubic metres, bringing the total consumption up to 3,500,000 cubic metres. Canada had little or no share in Italy's timber trade. The report concludes with a statement that H. M. Consul at Milan, Italy, says:—"There is a ready market in Italy for timber, during the war, for Canadian exporters who are in a position to take advantage of the opportunities now offering. Even should Italy, subsequent to the war, resume her imports of timber from Austria, there should still be a market in Italy for North American timber even in times of peace, as is evidenced in the fact that the United States exported 153,800 tons of sawn timber to Italy (about 12½ per cent. of the total imports of sawn timber." H. M. Consul at Milan also states that he would be pleased to attend to any inquiries addressed to him re this subject from Canadian firms. (A list of Italian timber importers and merchants, with their addresses, has also come to hand, which may be had on application to the Department of Trade and Commerce, Ottawa.

B. C. Timber Inspector Geo. D. McKay returned recently from an inspection trip up the coast of British Columbia and reports that all the logging companies are now back at work, and every boat is filled with loggers.

Trade Conditions in New Brunswick

Favorable Logging Season Just Closed—Possibility of Water Shortage for Driving

Editor Canada Lumberman: South Nelson, N.B., April 3rd.

In this remote corner of the Dominion there is not much of general interest so far as the lumber business is concerned to write about.

The Miramichi, although producing a large quantity of lumber each year, is very conservative in its operations and pursues the even tenor of its way year by year without much variation.

The logging season just closed has been a favorable one for the operator. fair weather and just enough snow for hauling favored the cutting and browing of logs, and as a result the quantity produced will be somewhat more than was expected. The spring has burst very suddenly upon us and already the snow outside the forests has almost disappeared. It is very unusual for the snow to go so rapidly. However pleasant and agreeable this may be for the ordinary citizen, it is causing considerable worry to those who are dependent on a good rush of water to bring their logs from the brows to market.

We are now making preparations for spring driving, which usually begins about the last of the present month (but which, judging by the present weather conditions, will begin earlier this year) the outlook for which, owing to the rapid melting of the snow, is not very encouraging.

Conditions surrounding the lumber industry in this section during the present season are in a rather uncertain condition. The great bulk of lumber produced on this river finds its market in Great Britain and the Continent. Owing to the great scarcity of vessels lumber freights have advanced to such an extent as to be almost prohibitive; in fact it is almost impossible to secure vessels. As an illustration of the situation it may be pointed out that while the normal fair rate of freight from this river to British ports is from 40 shillings to 50 shillings, this season 300 shillings has been paid and in one instance at least refused. The lumber is required on the other side. Stocks there are not excessive and buyers are willing to pay good prices if they could move it, but naturally hesitate about entering into obligations which they cannot see their way clear to carry out. What the outcome will be no one can foresee. When the mills begin sawing in a few weeks, manufactured stocks will rapidly accumulate, and as piling ground is rather limited, unless some solution of the transportation difficulty is found, it will be quite a problem to take care of the lumber unless perchance the prognostication of the pessimist comes true and the logs are held up in the stream by low water.

Such is the situation here today, and it illustrates one of the many ways in which the deplorable conditions in Europe are brought home to us.

We are living in hopes that some way may soon be found to relieve the situation so far as transportation is concerned.—Geo. Burchill and Sons.

Nova Scotia Output About Normal

Editor Canada Lumberman:— Halifax, N. S., April 6th.

As far as this district is concerned, we are all kept busy, with Government requirements chiefly. Tonnage is very scarce, and it is going to be almost impossible to get vessels to move the output this coming season. This alone should help the market to keep up. The output in Nova Scotia will be well up to the usual average, as we had excellent weather conditions right up to the last of March, which enabled the operators to get out larger quantities than they figured on. This will offset the fact that a number of the lumbermen did not go in until the first of the year. As both sailing vessels and steamers are so scarce, a large quantity of lumber will not be shipped this season, and this will, of course, mean that considerable financing will have to be done.—Colin C. Tyrer Company, Limited.

The Nicola Valley Pine Lumber Company report that their mills at Canford, B. C., will be exceptionally busy this season, having many orders on hand for large dimension timber. A night shift will be put on almost immediately, and the mill will probably be kept running night and day during the next six months. Arrangements have been made to cut about 20,000.000 feet.

Pacific Coast Exports During 1915

The North Pacific cargo trade in lumber for the year 1915 totals 1,410,637,401 feet. For 1914 it was 1,693,621,192 feet. For 1913 the cargo trade amounted to 1,934,835,725 feet.

The net 1915 loss on this branch of the trade was 282,983,791 feet. As compared with the year before the war, the last normal year in the lumber business, the loss represents 524,198,324 feet.

The figures include the annual shipments from tidewater mills of Washington, Oregon and British Columbia. They were compiled by F. W. Alexander, secretary of the Pacific Lumber Inspection Bureau, Seattle.

Foreign business for the year of 1915 was 337,235,131 feet, as compared with 508,606,327 feet for 1914—a loss of 171,371,196 feet. In 1913 the foreign business from North Pacific mills amounted to 600,142,246 feet.

The comparative figures of foreign distribution for the years 1915 and 1914 follow:

	1915 Lumber, ft.	1914 Lumber, ft.
Australia	107,240,340	192,753,406
New Zealand	5,528,105	12,843,774
West Coast South America	32,685,447	79,445,282
East Coast South America	.....	7.945.010
Mexico	6,466,437	5,324,474
Central America	690,402	104.703
China	46,249,201	124,934,363
Japan	7,451,959	10,936,136
South Sea Islands	4,279,768	11,441,376
United Kingdom and Continent	108,100,364	35,614,850
Africa	9,294,793	12,566,188
India	8,481,881	14,696,765
Cuba	766,434	.....
Total foreign	337,235,131	508,606,327

Loss, 171,371,196 feet.

The summary of shipments by districts for 1915 alone shows the loadings comprising the year's total business to have been as follows:

	1915 Domestic Lumber, ft.	1915 Foreign Lumber, ft.	Total Lumber, ft.
British Columbia	12,710,400	56,700,835	69,411,235
Puget Sound	297,725,552	149,389,327	447,114,879
Grays Harbor	220,763,547	50,221,743	270,985,290
Willapa Harbor	56,751,774	6,987,032	63,738,806
Columbia River	267,897,962	73,879,902	341,777,864
Coos Bay and Oregon Coast	217,553,035	56,292	217,609,327
Total	1,073,402,270	337,235,131	1,410,637,401

Gains and losses by shipping districts contained in the tabulation which follows shows that British Columbia shipped more lumber by 27,932,815 feet than in 1914, but the total of British Columbia water business, notwithstanding this gain, was very small as compared with the water business of the mills of Oregon and Washington. The details are:

	Lumber, ft. 1915	Lumber, ft. 1914	Lumber, ft. Gain or Loss
British Columbia	69,411,235	41,478,420	*27,932,815
Washington	816,182,138	959,289,510	143,107,372
Oregon	525,044,028	692,853,262	167,809,234
Total	1,410,637,401	1,693,621,192	

*Indicates gain.

British Columbia's domestic cargo trade during 1915 was as follows:

	Lumber, ft.	Lath, ft.
Atlantic Coast	6,063,599	397,498
Eastern Canada	4,875,365	.....
California (San Francisco)	1,373,938	.....
Total	12,312,902	397,498

The total domestic cargo trade of British Columbia, Washington and Oregon was as follows:

Lumber	1,047,376,515 ft.
Lath	25,885,347 ft.
Pickets	140,408 ft.
Total	1,073,402,270 ft.
British Columbia	12,710,400 ft.
Washington	607,254,611 ft.
Oregon	453,437,259 ft.
Total	1,073,402,270 ft.

The foreign cargo business from British Columbia was distributed as follows:

	Lumber, ft.	Lath, ft.	Pickets, ft.
Australia	4,696,109	560,085	656,826
New Zealand	542,521	98,056	.....
West Coast South America	301,449	.....	.....
Mexico	.....	.....	.....
China	3,377,453	48,500	.....
Japan	1,583,437	.....	.....
South Sea Islands	1,392,808	.....	2,250
United Kingdom and Continent	37,976,309	135,990	.....
Africa	5,329,042	.....	.....
Total	55,199,128	842,631	659,076

The total foreign cargo business of British Columbia, Washington and Oregon was as follows:

Lumber	331,851,421 ft.
Lath	3,510,550 ft.
Pickets	1,873,160 ft.
Total	337,235,131 ft.
British Columbia	56,700,835 ft.
Washington	208,927,527 ft.
Oregon	71,606,769 ft.
Foreign total	337,235,131 ft.
Total domestic	1,073,402,270 ft.
Total foreign	337,235,131 ft.
Grand total	1,410,637,401 ft.

Self Feed Rip Saw in the Furniture Factory

By W. J. Beattie

Since the general introduction of the self-feed rip-saw into the machine equipment of the factory, the capacity for lumber consumption and the cheapening of that portion of the work has been greatly increased. The style generally in use is the circular saw type, the later idea being to have the saw above the table, supplemented by an endless chain feed. This idea seems to be an improvement on the older style, one decided advantage being that the saw cuts through the material, thus reducing friction to quite an extent.

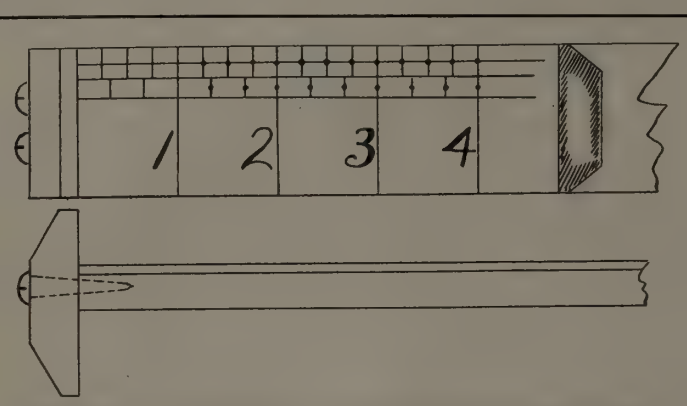
The band rip-saw for larger factories, where the necessary equipment and help to keep the saw in order are available, is doubtless the better tool, as the lesser waste of material, combined with greater speed, are strong points in their favor.

There are still some plants that cling to the old style railroad rip-saw for use in matching up tops or large surfaces, especially on quartered oak goods, in many cases carefully matching up the material, which may consist of six or more pieces, laying the whole lot on the table and shoving them through the saw, cutting off the surplus from the edge.

This is a slow and laborious method, and can just as well be done on a self-feed machine with a great saving of labor.

Assuming that the light is good, and it certainly should be, the matching up can be done on a table behind the rip saw, and the one piece only that requires ripping is passed back and sawn to the necessary width. Of course, it is understood that the stock has already had the necessary edging done to it after leaving the swing saw.

The expert matcher is behind the saw in this case, and not in front of it, and sorts the material for figure as it comes to him, on a table of the required size, which can be made several inches lower than the saw table, and so placed that it is in the handiest position. A rule, such as is illustrated, will be found very handy for this work, made of maple of the necessary length; the inches are divided into quarters and thirds, which will correspond with the allowance required for each joint. For instance, if the tops are 46 inches long and 20 inches wide, finished width, and there are four joints, the width



Rule used to make allowance for joints when ripping stock.

when leaving the matching table will be 27¼ inches, which allows 1 inch for the four joints plus ¼ inch for buzzing the one edge and the final ripping to exact width.

For longer stock the larger divisions of the inch would likely be necessary; it all depends on the accuracy of the rip saw and the minimum allowance for the jointer. At any rate it is possible to have only the same amount of final ripping waste from a top having as many as six or seven joints as one having only three, if the proper allowance is made for each joint. The maple rule referred to is just as feasible for work that is not matched for figure. The material goes through the saw and is laid on the table until it is within a few inches of the desired width. The "tailer" can then tell just what he wants to complete the requirement in inches and it is immediately delivered to him and the material placed on the truck. The same thing goes on until that size and quantity is completed.

Another help in this connection is to have the rule bored at the line intersections, into which are inserted small steel pins which correspond with the number of joints that may be necessary. If the top is to finish 20 inches wide the first pin would be inserted at the 20¼ in. measurement, the next ¼ in. more, etc., the idea being that it is easier to count the pins corresponding to the joints than if they were not used.

It will be found handier to have, say, three rules made of various lengths, to use according to the material requirements of the factory. In making a rule secure a piece of white maple 1½ in. wide, 7/16 in. thick, bevelled on the under corners, having a stop on the left end facing; lay off the inches and divisions with a knife, bore the small holes for the pins, give a coat or two of white shellac, sand, ink on the figures; then give a coat of good tough varnish, and you will have a good bright serviceable article, and one that will be found of great help in the rip saw work. The accompanying illustration will give an idea of the rule referred to. The figures necessarily begin at one inch, though this is not needed, particularly, at least so far as the divisions of the inches are concerned.

Consumption of Wood Flour

More than twenty thousand tons of wood flour, valued at $300,000, are used annually in the United States in two widely different industries, the manufacture of dynamite and the manufacture of inlaid linoleum.

Wood flour is also used in making composition flooring, oatmeal paper, and in several other industries. It forms one of the means by which the huge waste product of our lumber mills is beginning to find some better means of disposal than the burner. Since a total of 36,000,000 cords of such waste is produced each year at sawmills in the United States, of which about one-half goes into the furnace as fuel, while the rest is burned as refuse to get rid of it, there is no lack of raw material for industries which can develop ways of turning this waste to account.

All wood flour-using industries require a white or very light cream-colored flour having good absorptive powers. The wood species that may be used are confined to the light, non-resinous conifers, and the white broadleaved woods like poplar, Spruce, white pine and poplar are the species most used. Mill waste, free from bark, furnishes much of the raw material for making wood flour.

For use in dynamite, the trade demands are said to require a white wood flour, since the freshness of dynamite stock is indicated by a light color. Dynamite flour must also be very absorptive, so there will be no leakage of nitroglycerine from the finished product. Wheat flour mill refuse and infusorial earth have also been used in dynamite making, but wood flour has practically replaced them in this country.

In the manufacture of linoleum, either wood or cork flour is used. The flour is mixed with a cementing material, spread out on burlap and rolled or pressed to a uniform thickness. The cement is the expensive constituent. Cork linoleum is the cheaper because less cement is necessary. The patterns are printed on, leaving a dark base. For inlaid or straight-line linoleum, wood flour is used exclusively. Cork linoleum is always dark, and slightly more elastic than that produced from wood flour. The wearing qualities are about the same.

Two methods of producing wood flour are practiced; one using millstones, the other steel burr rollers to pulverize the wood. The latter requires only one-fourth as much power to operate as the former and was developed on the Pacific Coast to handle sawdust as a raw material. The mills of Norway, which produce much of the European wood flour, are of the stone type.

Wood flour mills are scattered over the United States from Maine to California wherever the proper combination of wood and water power is available, and the domestic wood flour competes with the Norwegian product, which, before the European war, was delivered at Atlantic ports for $12.50 to $15 per ton.

Eastern Trade Conditions

A report from Sackville, N. B., states that 310 shillings per standard has recently been paid for freight charges on a cargo of lumber from Sackville to the west coast of England; almost ten times the rate that existed before the war began. Even at this price very few vessels are obtainable and exporters are experiencing much difficulty in making shipment. Imports at Liverpool during the month of February amounted to only 980 standards, against 3,370 standards during the corresponding month in 1915.

In the American market, while no active business has taken place as yet, there are prospects of marked activity later on. Inquiries from New York indicate that buyers there are willing to pay about $19 to $21 per M. for hemlock and $22 to $24 for spruce delivered New York. With freights at $6 to $6.50 per M. this business is not as attractive as it would be in normal times. However, it is probably still all right from the profit standpoint and if our lumbermen can get the tonnage necessary there will be an active business with New York during the coming summer. The logging conditions in the province of Nova Scotia for the past month have been almost ideal; and if the markets warrant it the cut of lumber this year should be a large one.

The exports to Canada of yellow pine during the past three years as shown in a report compiled by J. S. Barstow, Mobile, Ala., were as follows:—1915, lumber 1 x 3 in. and larger, 930,872 superficial feet; sawn lumber 6 x 6 in. and larger, 1,651,577 superficial feet; 1914, lumber 1 x 3 in. and larger, 4,059,000 superficial feet; sawn lumber 6 x 6 in. and larger 14,375,165 superficial feet; 1913, lumber 1 x 3 in. and larger, 3,339,424 superficial feet, sawn lumber 6 x 6 in. and larger 18,230,277 superficial feet.

Should Estimating Be Charged For?

By J. Crow Taylor

One of the questions being discussed more or less seriously among retailers these days is that of whether or not a charge should be made for furnishing estimates to contractors and others, to cover the actual cost on this work.

The question is undoubtedly inspired by the fact that many an embryo contractor uses the lumberman as a sort of good thing and works out of the lumberman a lot of details of estimating that he should work out himself.

The writer has known of contractors virtually getting their training in the work of estimating by the bringing of rough plans to a local lumberman and getting him to list off the stuff required and make an estimate on it. Time and time again work of this kind is brought to the local retail lumberman and there is perhaps not one in ten that result in actual orders. Moreover the retailer generally knows that his chances are slim to get an order, yet because the contractor is a prospective customer he must treat him well and accommodate him to the extent of listing off plans sometimes and making up estimates that involve quite a lot of detailed work and also put on the shoulders of the lumberman some responsibility that should be carried by the contractor. If an error is made or an item is left out and the lumberman has done the listing off it will be but natural for the contractor to hold the lumberman to it and make him make the error good.

Indeed the writer knows of specific cases of this kind where even some slight changes have been made or an error has developed where the lumber yard, for accommodation, has listed off and done the figuring for a contractor and then the contractor has insisted on the lumberman standing the loss instead of the contractor.

Adds to the Burden of the Work

Another thing that adds to the work of the estimating end is the disposition now to be more thorough, to go into details and furnish the prospective builder, that is the owner, with complete figures of what it will cost to build a house, making the figures cover even work and material that will not be supplied by the lumberman. The idea in all this is that it helps salesmanship, that the progressive lumberman is the one who will take this trouble as a proposition in giving service to the people of the community. The mail order houses do it, so naturally the local man must do something of the kind or be considered a sort of back number in the selling game.

That is not all either. There are some of the larger concerns operating planing mills in connection with their lumber yards who say that for the sake of reducing errors they find it best to reduce all details to plans and blue prints and cover them with specifications that become a part of the bargain or contract. This not only reduces the chance for error in the mill and on the yard, but it also reduces the chance for misunderstanding between the lumberman and the man buying the bill for the house.

All this adds more and more to the burden of detailed work in the estimating department of the lumber yard and there is no getting around the fact that it costs money. It should be paid for and must be paid for, but it will be much easier and more logical to make a specific charge for delivery than it would be to make a charge for estimating. The estimating is regarded as a part of the work of salesmanship even though it does belong in the order of service, consequently it would be more logical to charge for delivery—which is nothing more than a matter of service—than it would to charge for estimating, which is a matter of salesmanship as well as service.

Customer Can't See It

There is no good argument therefore to make a specific charge for furnishing estimates, at least, as far as the owner customer is concerned. It might be practical to have some agreement between the lumber yards and the contractors as to the matter of plans and specifications so that in case a lumber yard goes to considerable detail in making blue prints, specifications and estimates it can be reimbursed for it in case the plans are accepted and used and the order for the lumber material is given to some one else.

Even this, however, leaves room for disputes and for wrangles and dissatisfaction and it is better all around to make the estimating department a live wire service department absolutely free to all customers and then figure the cost of this in the overhead expense of running the business so that there will in the final estimate be some compensation for its service.

One, of course, may use some judgment now and then about rendering too much free service for contractors and others who take an unfair advantage of this service and seldom buy anything, or at least not enough to justify it. Even there, however, it is better to be imposed upon a little than to take the chances of offending or of creating the impression that one is stingy about rendering service.

What the retail yard man needs and should work for is a reputation for giving service and gladly furnishing prices and showing goods so that people can be induced to come to his office when they want anything from a chicken coop to a home. Getting the people to come to one to find out about things is the best first aid to good business one can have. There is no better drawing card to this end either than a reputation for freely furnishing without charge estimates on anything in the way of building lumber from a few pieces to do some patching to an entire list required for building a new home. So let us not have any growling, to the public at least, about this end of the business, but rather give out the impression that it is free and freely given.

How Much to Spend in Advertising

The retail lumber dealers all over the country have come to a realization that there is need for more activity in the way of advertising. Also nearly every enterprising retailer is taking up with the idea of doing some advertising. The main question right now bothering most of the dealers is; how much should be spent in advertising?

There is, of course, the companion question of how to spend and where? There is the question of how much space to buy in the local newspaper and how to use it, how much to spend for circulars, for window displays and things of that kind.

In a few branches of trade they have reduced this advertising appropriation down to a more or less positive basis. The furniture retailers, for example, figure on spending from 3 to 5 per cent. of the gross sales in advertising. Department stores spend about the same amount; sometimes other stores spend more and sometimes less.

It is very natural to argue that some lines call for a larger percentage of advertising appropriation than others. If so, the question might well be asked why, for example, should furniture stores spend more money advertising furniture than the lumberman should spend advertising his product? Indeed it looks like the furniture stores are setting a pretty good example for the lumberman and that the retailer cannot do much better than try the experiment of spending the same percentage of his gross sales in advertising as is spent by enterprising furniture stores.

Why not try the experiment of taking your gross sales for last year as a basis and figure on spending a sum equal to 3 per cent. of that amount during the present year and note the results. If they prove satisfactory, then it might be well to try raising the same to 5 per cent.

Providing for the Fund

With a yard doing comparatively small business, say selling $50,000 worth in a year, figuring on a basis of 3 per cent. of gross sales, would give an advertising fund of $1,500, while, on a basis of 5 per cent. the sum would be $2,500.

The average lumberman will look at this as a big sum of money to simply experiment with in advertising. It is a big sum, too, if it is to be wasted or spent without returns, but the right idea in advertising is to spend the money so that it will bring in more.

During one of the many retail conventions this winter one man in a country town told of spending between $200 and $300 and practically doubling the volume of his business. He said the advertising was not the whole thing but it was an important factor. They did quite a lot of personal hustling and conditions in their community were such as to encourage the development of more business, but just the same he felt that they had obtained excellent returns for their advertising.

Another man told of spending approximately $2,000 a year, mostly newspaper advertising, and he said he felt that this had increased the volume of their business 50 per cent. and had been money well invested.

The question right now, however, is not one of whether or not advertising pays. This has been pretty thoroughly demonstrated. There is not much disposition to argue against the assertion that advertising intelligently handled will bring results.

May Prefer Lumping It

Some may prefer to make it a lump sum of anywhere from $1,000 to $10,000. The amount will depend upon the magnitude of the business, the location, the cost of space in the local papers and the opportunities for effective exploitation by making window displays, using billboards and other means of exploitation.

Whatever amount be spent, every man should keep a careful record of it. Properly everything that assists in exploitation or publicity of business is chargeable to the advertising account, everything from writing letters to buying space in newspapers. Keep careful track of it all so that you may know the total at the end of the year and also may be in a position to compare this total with the total volume of business.

There is undoubtedly a logical reason for establishing a relation between the volume of sales and the amount spent for advertising. This is not the only factor entering, neither should it be strictly arbitrary, but it is well enough to use something of this kind as a sort of working basis, and from the successful accomplishment of others the evidence seems to be in favor of spending from 3 to 5 per cent. of the gross sales for advertising purposes.—St. Louis Lumberman.

Annual Consumption of Wood by the Wood-Manufacturing Industries in the United States

Statistics have been compiled by the Office of Industrial Investigations of the United States Forest Service which show for the first time precisely how the lumber produced in the country is utilized. About forty-five billion feet of lumber of all kinds is the maximum annual production in the United States; of this, nearly twenty-five billion feet, board measure, are further manufactured, the other portion being used for construction lumber and timber and for similar purposes. This is exclusive of that material which reaches its final use in the form of lath, shingles, fuel, railroad ties, posts and rails, poles and equipment, pulpwood, cooperage, veneer, wood distillates, and the wood demanded by the tanning industry.

The first of the accompanying tables lists the industries included in the investigation and gives the quantity of material demanded in a single year by each of them. The quantity of each kind of wood received as raw material by shops and factories and converted by further manufacture into finished and salable articles is shown in the second table.

Between 50 and 60 per cent. of the lumber produced is subject to further manufacture. However, it should be remembered that considerable material reaches shops and factories in the form of logs, bolts, and billets, without having passed through sawmills, and such material is included in these statistics. This fact should be remembered in comparing the statistics with those of lumber production.

The table which follows lists the 55 wood-manufacturing industries which use wood as raw material and gives the annual demand by each of them.

Wood Used by Wood-Manufacturing Industries of United States

Industry	Quantity Used in One Year Feet B. M.
Planing mill products, sash, doors, and general millwork	13,428,862,066
Boxes and crates	4,547,973,180
Car construction	1,262,090,371
Furniture	944,677,807
Vehicles and vehicle parts	739,124,483
Woodenware and novelties, and dairymen's, poulterers' and apiarists' supplies	405,286,436
Agricultural implements	321,239,336
Chairs and chair stock	289,790,560
Handles	280,234,571
Musical instruments	260,195,026
Tanks and silos	225,617,686
Ship and boat building	199,598,228
Fixtures	187,132,848
Caskets and coffins	153,394,557
Refrigerators and kitchen cabinets	137,616,266
Excelsior	100,247,000
Matches and toothpicks	85,442,111
Laundry appliances	79,502,040
Shade and map rollers	79,291,575
Paving material and conduits	76,067,000
Trunks and valises	74,669,997
Machine construction	69,459,430
Boot and shoe findings	66,240,200
Frames and moulding, picture	65,477,783
Shuttles, spools, and bobbins	65,148,190
Tobacco boxes	63,154,226
Sewing machines	59,946,527
Pumps and wood pipe	55,826,938
Pulleys and conveyors	35,862,900
Professional and scientific instruments	35,070,928
Toys	28,926,552
Gates and fencing	27,450,540
Sporting and athletic goods	25,191,907
Patterns and flasks	24,299,403
Bungs and faucets	21,112,342
Plumbers' woodwork	20,313,450
Electrical machinery and apparatus	18,188,910
Mine equipment	16,987,697
Brushes	12,878,986
Dowels	11,980,500
Elevators	10,018,680
Saddles and harness	9,218,000
Playground equipment	9,064,812
Butchers' blocks and skewers	8,197,050
Clocks	7,894,249
Signs and supplies	6,888,366
Printing material	5,324,794
Weighing apparatus	5,021,550
Whips, canes, and umbrella sticks	4,946,880
Brooms and carpet sweepers	2,297,334
Firearms	2,093,901
Artificial limbs	687,080
Tobacco pipes	489,515
Aeroplanes	74,300
Dry kilns	59,000
Total for wood-manufacturing industries	24,673,846,064
General construction and building	19,835,914,936
Maximum annual lumber cut	44,509,761,000

French Market for White Spruce

Mr. Philippe Roy has forwarded the Department a sample of white spruce submitted by a French firm who are in the market for 5,000 metres of lumber (similar in quality to sample) to be used in the construction of flying machines. The lumber is of very high quality, no other grade being acceptable. Mr. Roy states that this firm is disposed to purchase f.o.b. Canadian port if it is not possible for Canadian producers to quote c.i.f. French port. It is also intimated that the Engineering Branch of the War Department would be disposed to purchase a fairly large quantity of this same quality of lumber provided the price is satisfactory. The sample referred to may be seen at the Department of Trade and Commerce, Ottawa, and the name and address of the firm in question obtained on application. (Refer File No. A-239.)

Market for Douglas Fir in India

Mr. H. R. MacMillan, Special Canadian Trade Commissioner, states that a Bombay lumber house is very desirous of opening up connections with a suitable firm of exporters of Douglas fir. They would prefer to deal with a firm of brokers rather than with sawmills. This firm, who wish to be put in touch with Canadian sources of supply, are important importers, and do a great deal of railroad and government business throughout India. Financial references can be given and an inquirer may secure information as to their financial standing from the National Bank of India. Canadians who may be interested in exporting timber to this market may obtain the name and address of the firm in question by applying to the Department of Trade and Commerce, Ottawa. (Refer File No. A-1499).

The Wooden Handle Trade

There is little likelihood that any substitute will ever take the place of wood for certain kinds of handles. Those which require elasticity and resiliency will continue to demand wood, while others of certain kinds may be made of metal, composition of rubber. More wood is yearly consumed in the manufacture of handles than for musical instruments. The annual total exceeds 280,000,000 feet in the United States. The builders of ships and boats do not take so much.

The kinds of handles are too numerous to be shown in any list, but they may be included in general classes. Sizes range from that for a button-hook a quarter of an inch thick and two inches long to the cant hook handle five feet long and three inches thick. Some of greater length are employed for farm tools like pitchforks and rakes; and if knobs for small drawers and cabinet doors; may be regarded as handles, some are of smaller sizes than those of buttonhooks.

All handles are not required to be of strong, tough woods, though many are. Some, like the ax and hammer handle and the pitchfork handle must stand excessive strains and violent jars and twists. Wood for handles of that kind must be carefully selected. Hickory is by common consent the best ax handle wood obtainable. A few woods are stronger than hickory and some are stiffer; but when strength, toughness, elasticity, and smoothness of grain are combined, no other wood eqauls hickory. It is sought for the best ax, hammer, and golf club handles. No other wood can stand so much bending, twisting, and jolting without being broken of permanently distorted. Though hickory is found growing in commercial quantities in only about half the states, its use as handles is listed in all the states.

The long handles of farm tools are of ash oftener than of any other wood. Ash is very stiff and is quite strong and is preferred for forks, shovels, rakes, and hoes. Several species of ash grow in the American forests; but that preferred for handles is white ash, which is more abundant than all other species of ash combined, and is found in trees of larger size than the others. Most of the species of ash are named from the color of wood, bark, bloom, or twigs, as white, black, red, green, and blue ash. Only the woods of white and black ash are customarily distinguished in the handle trade, but even there the difference is not always noted.

Short handles of various kinds are made of different hardwoods, such as maple, birch, beech, and oak. Handles for augers, small hammers, monkey wrenches, large knives, hatchets, and numerous tools for carpenters, smiths, and other artisans are in this class. Rather severe strains and shocks must be withstood, but short handles of this class are not put to the violent tests which the long hickory and ash handles of axes, hammers and farm tools must endure.

Immense numbers of small softwood handles are produced by factories. In this list are those for buckets, tubs, and packages. They are finished in different styles. Some are left natural, some are polished and stained, others are enameled. The woods of which they are made are pine, spruce, cedar, and fir. Handles of a similar kind are made of basswood, red gum, yellow poplar, beech, birch, maple, tupelo, and cottonwood. There are few woods which do not give

good service when manufactured into handles of this kind. The demand is large and the industry is extensive.

The makers of knife handles use some common and cheap woods and others of finer kinds and of high cost. Handles for butcher knives are often of beech or red gum, and may be in two parts with the knife shank riveted between them, or in one piece. Expensive foreign woods are preferred for handles of pocket knives. The thin pieces of wood for that purpose are known as "knife scales," and the quantity of wood required for a handle of that kind is small.

New York may be taken as a representative handle state, although some other states use much more wood in this industry. Ohio, for example, consumes nearly five times as much wood as New York in the production of handles, and Arkansas six times as much; but the variety of handle woods in New York is greater. The following list gives the woods and the quantity of each required annually by handle makers in New York:

Handle Woods Used Yearly in New York

Wood	Feet B.M.	Average Cost per 1000 Feet
Beech	3,076,000	$ 17.80
Sugar maple	1,418,000	18.50
Birch	861,000	13.70
Ash	466,400	29.90
White oak	336,500	40.59
Hickory	204,150	39.57
Basswood	37,000	24.32
Elm	30,000	18.00
Applewood	22,000	68.50
Silver maple	10,000	15.00
White pine	10,000	32.00
Lignum-vitae	1,500	250.00
Grandillo	685	113.87
Ebony	654	330.00
Rosewood	610	130.00
Cocobola	480	160.00
Total	6,474,979	$ 20.52

Although Ohio handle makers report no wood of higher cost than $31.24, the average cost in that state is $27.65, which is $7.13 more than the average for New York where five of the woods cost more than $100 per thousand feet. Ash leads in quantity in Ohio, beech in New York. Five foreign woods are used by handle makers in New York; not one in Ohio.

Waste in Lumber Due to Drying

Manufacturers who know admit that there is a waste of 30 to 35 per cent. due to improper methods of handling the lumber in drying. When not properly piled for air-drying, the overhanging boards check, twist and bend; stickers of uneven thickness and when not placed directly over each other, cause twisting and bending. The lack of knowledge of proper means for kiln-drying cause twisted, checked, warped and honey-combed lumber. When this lumber reaches the saw the defects removed as waste reach the large percentage mentioned above. Most of this waste could be prevented by properly handling in the yard.

Interesting details of the work of the Forests Products Laboratories were given by Mr. J. A. Coderre, forestry engineer of the Laboratories, at a meeting of the Montreal Chambre de Commerce on April 5. Mr. Coderre spoke of the desire of those in charge of the laboratories to give every information possible concerning the uses and qualities of all descriptions of lumber, and also what treatment will make woods already in use better for the purposes for which they are suited. Experiments were being made with a view to substitute Canadian woods for those now imported, the object being to show that native woods can satisfactorily fill many purposes for which foreign woods are now utilized.

Reports from Courtenay, B. C., indicate that the lumber industry in that neighborhood is very active, one mill at Royston, having received orders from a Winnipeg firm which will keep it running for two years; Mayor Kilpatrick's sawmill being in full operation and Urquhart's shingle mill being about to commence operation.

The Northern Pacific Railway has, during the past month or two, been furnishing a considerable number of cars for shipment of lumber by manufacturers on the lower mainland of B. C. This has greatly facilitated the trade of New Westminster and the Fraser Valley. During March the Company furnished about 500 cars.

A cigar shaped boom of logs was recently towed from Nicomen Island to Seymour Inlet, B. C., for the Shull Lumber Company. The boom drew 12 ft. of water and contained a million feet of timber.

Good Book-keeping Insures Success

How Accuracy in Accounting Methods Assists Dealers in Making Profits

By D. Cooper, C.A., Winnipeg

The main object of any merchandising concern is PROFIT. There are other objectives of great importance that should be kept constantly in view by the merchant—objectives that are closely related to the question of profit.

Profit consists of the sums obtained by the employment of capital in trading after paying all expenses of trading and after making any necessary provision for replacing lost capital.

It should be the aim of all who would court success—permanent and solid success—to sell merchandise of the very best grade, at the lowest possible price, to the greatest number of customers under the very best conditions for all concerned. Each and every transaction should result in mutual satisfaction and mutual profit. The greater the service rendered the greater the resulting profit—other things being equal.

To be able to sell the best grade of goods at the lowest possible price one must be able to buy keenly. To buy advantageously means that bills must be paid promptly and that cash discounts be secured wherever possible. This in turn requires sufficient capital to carry on the operations, and remember that insufficiency of capital is one of the greatest sources of danger in all phases of business.

Traders who cannot pay promptly cannot buy at the same price as those who can; the former are not able to take the discounts offered for cash, and, as a consequence, they are not able to sell to their customers at a price that can be defined as being mutually profitable to both parties.

A careful study of the business in all its phases will prove of value. A merchant should make himself thoroughly familiar with the goods he buys and sells. He should know how they are made; he should enquire as to the processes of manufacture; he should study transportation and learn the sources of the various products in the raw and in the finished state; he should study the requirements of local markets; he should learn how to manage—how to hire, train and direct employees; he should be honest; he should be familiar with simple business law—the law relating to contracts, bills of exchange and banking; and lastly, he should provide an adequate system for recording all his transactions in a simple and effective manner so that he may glean from his records a clear conception of the direction in which the business is moving.

The study of intelligently developed comparative statements will act for the merchant as a compass for the sailor and keep his course pointed in the right direction. The system must be so arranged as to bring automatically to the proprietor or manager at regular intervals, the results, in concrete form, of the trading operations—sales, purchases, inventory, collections, bad debts, goods returned by customers, and so on.

Without such information the business will probably drift along and, if eventually the business happens to be successful, it will most likely be the result of good luck rather than good guidance. On the other hand, failure is more likely to be the result from such loose methods of accounting. Experience has shown that in by far the greater number of insolvencies, the failure was due to the fact that the proprietor thought the business was going in one direction, while all the time it was travelling in another. He did not know. Had he known he could have remedied the defects and saved the concern.

In most cases, retailers and others are prone to believe that ordinary common sense bookkeeping could have kept them informed as to the cause and effect but, in my opinion, without accurate and dependable information as to results, the merchant or anyone for that matter, will simply drift on the open sea of Commerce until he finds himself involved suddenly in danger. In this event his calls for help are unheeded. He has not been travelling the chartered routes; hence he is left to shift for himself.

Take the case of another trader who can show a clear record of his business—year by year—its growth and development. In his case, even though in trouble in a period of stress, he may and often is able to show that his business is a profitable one and one worthy of support. He may form a Joint Stock Company or he may find some one willing to invest money for a share of the profits, or his bank may be willing to assist him.

All this is quite impossible where no records have been kept. There is no information upon which a reliable opinion may be based as to the wisdom of assisting the concern during a specially trying period; off-hand estimates or opinions as to what the business had done and is doing, made by the proprietor or manager, are of no value. They are not usually based on facts—neither can they be verified by accurate figures.

Unfortunately for Canada, traders are not compelled to keep books, whereas in France, for example, every trader is required by the Code of Commerce to keep three books—the journal, the inven-

tory book and the letter book. No particular form of accounts is prescribed by law. The journal in France is the daily book into which the trader must enter all his transactions, day by day. In addition to his business records, he must set down, month by month, the sums disbursed on his household expenses.

Before commencing to use the journal and inventory book, the French trader must take these to a Judge of the Commerce Tribunal who will initial each page and certify to the number of pages in each book. No erasures, blanks or marginal additions to entries are allowed. These regulations are designed as a preventative against wrongful alteration or substitution of figures. Where such exist, the books are not accepted as evidence, either in a court of law or in the event of insolvency.

Similar regulations are in force throughout Belgium, Spain, Portugal, Holland, Roumania and other European countries with but slight modification. In Russia no particular books are prescribed, but the laws are very strict as regards bookkeeping generally, and the penalties for non-accounting in the event of bankruptcy are severe. All Joint Stock Companies in Russia are required to publish in a State paper a Trading and Profit and Loss Account and a Balance Sheet once every year.

To bring the benefits accruing from accurate bookkeeping into more concrete form, let me cite what they would be in the case of a lumber merchant.

A lumber merchant has for sale different kinds of lumber, sash and doors, and so forth. He may, at the end of a period, find that he has just made expenses. It may be that he has no idea of the cash discounts he lost. It may be that he made good profits on one or more lines, and that he lost on other lines. It may be that his capital is being turned over once in one line, in the same time that it is being turned over six times in other lines. Even though he makes no profit on any one line of goods, still it may be that he will find it necessary to continue that line as a factor in holding other and more profitable business.

In any case, it goes without saying that if his records were to show him the profit he made on each different class of goods, he couldn't fail to benefit from that information. He would push the more profitable lines and only carry enough stock of the less profitable to satisfy the demands of his customers. If he had a comparative statement of his sales from month to month, alongside the figures for the same periods of the previous year, he would be able to anticipate slack months and busy months. In the former case he could plan how he might keep the month's sales up to normal. Then again, his expenses would be shown one month against another and one year against another. Any increase in the expense not warranted by increased sales should be carefully investigated and adjusted where possible.

Would it not be of great advantage if traders had constant information available as to debts which have to be paid at specified dates? Would it not be useful to know what orders for goods had been given for future delivery?

Accuracy is the twin brother of Honesty. It is nothing short of criminal negligence not to keep books. It isn't a square deal to your creditors—neither is it a square deal to your partners, your shareholders or yourself.

All these and a host of obvious other features will, I think, convince you of the absolute necessity of careful and accurate accounting in all businesses, from the one-man business to the gigantic corporations which began on a small scale and grew to their present size simply through the agency of a well defined business policy, based upon and continually guided by facts and figures reflecting precisely the effect of this policy and that policy on the progress of the business.

For the year ended December 31st last the net profits of the Riordon Pulp and Paper Company totalled $292,558, an increase of $45,480. Unusually low prices prevailed in 1915, but the improvements and enlargements at Hawkesbury resulted in a reduction of manufacturing charges and an increased output, while it is expected that the effect of the improvements will be shown in a material increase in profits during the present year. A substantial part of the company's output in pulp and lumber to be manufactured during the present year has been sold at good prices, and the outlook for the sale of the balance of the company's product at satisfactory prices is good. Arrangements have been made for the installation of a bleaching plant at the company's mill at Merritton, Ont., which should be in operation about July 1 next. The intention is to bleach the whole of the sulphite pulp produced at this mill, which will give the company a wider field in which to market this pulp.

David Mullen, Ottawa, Ont., who was engaged in the lumber business until a year ago, died recently at his home in that city. The late Mr. Mullen was 64 years of age and was born at Wakefield, P.Q., where he resided until moving to Ottawa some 19 years ago.

A Woman's Views on Retailing

By Mrs. C. C. Bowerman*

I wonder if you men have any idea of the things we women WANT that you have to **sell**?

The subject that Secretary Porter assigned to me is too large to be covered in the time at my disposal, but I can at least call attention to some of the points of retailing building material that I think have been overlooked. I shall limit myself to that part of your business which concerns the one thing above all others in which every woman is vitally interested—THE BUILDING OF A HOME.

How many of you men know what a woman really wants in a HOME? And if you do not know—how are you ever going to SELL it to her?

I am going to tell you some of the things she wants and why she wants them; and the nearer you come to providing those things for her, the nearer you will come to selling your material to her and consequently the nearer you will come to getting a check from her husband.

And right here I find a strange condition. In our office we have a set of the Porter-Ballard Plan Book SYSTEM, the "Home, Sweet Home" edition, and in that publication I find most of the answers to the questions I shall put to you. As this is published through the Western Association, I assume that you are all familiar with it.

Now, a woman wants a HOME to have the following elements: Her home must be—modern; attractive; comfortable; convenient; step-saving; moderate-priced.

And the homes represented in the plan book we have cover every one of those necessary elements.

But how is the woman going to know that? In other words, how are you going to sell what you have to sell, to a woman who wants such a home?

In the first place, you will have to let her know what you have. That means ADVERTISING. And what kind of advertising will appeal to her? "System" magazine recently asked this very question of the presidents of 94 women's clubs, the answer being a composit of the replies of the members of those clubs, thus representing very accurately the way women look at these things.

How the Women Answered

Here is the question:—"What method of sales solicitation appeals to you most as a customer—letters, personal calls; samples, newspaper advertisements, etc?"

The answers showed the following result:—57 per cent. favored newspaper advertisements; 13 per cent. favored samples; 7 per cent. favored personal letters; 7 per cent. favored telephone or personal calls; 2 per cent. favored demonstrations; 2 per cent. favored show windows; and 12 per cent. mentioned miscellaneous appeals.

Of course, I understand that this question was asked concerning general merchandise; but please note that you lumber merchants have at your command every single kind of an appeal—100 per cent of them—that the women themselves said had induced them to purchase.

Therefore, it is, to a certain degree of course, less important the way you put forth your appeal, as what that appeal really is. In other words, it seems to me that you should first find out what I want, and then, if you can do so, tell me that you can supply that want.

You can readily see that this subject could be extended into unlimited discussion, and I will therefore limit myself to the single phase of homes.

Note, as I stated above, that much over half of the women said they were influenced by newspaper advertisements. That means that you should use your local papers to tell us that you can satisfy our longing for that ideal home. Make that printed notice so attractive that we will, as soon as we see it, say to ourselves: "That's just what I want. Isn't that the dearest little home?"

And let me tell you a secret; when you do that much, the rest will be comparatively easy, for when we once make up our minds about wanting something, we stay right with it until we get it. You may think that you have made the decision, but, bless you, we made up your minds first.

After giving us the proper start—letting us "taste" that new home, so to speak—then you want to keep right on making its advantages more apparent. Use the other kinds of appeal,—the personal call, the letter, the show window, the demonstration, that the women have found so alluring.

Not to persuade us, remember; no, our minds have been made up on that point already. But to give us arguments that we can pass on to the check-writer of the family, and thus help you sell to us.

Invite Her to Your Office

Write us a nice letter and invite us to visit your office and see for ourselves that you have just what we want in a home. That's not so very hard to accomplish if you make your invitation attractive enough. But be very careful, when we do come, that you give us proof that you

*Address delivered before the Thirteenth Annual Conference of the Western Retail Lumbermen's Association, Portland, Ore.

really wanted us to come. You know a woman is very particular about her housework and she always polishes everything to the last degree when she expects a visitor; and she expects the same thing done for her.

Your office should be a real reception room. It should be kept in such a condition that your woman visitor will feel welcome and comfortable and at home, and will thus entirely lose the feeling of being on the defensive to protect her money. I really believe that cleanliness stands above Godliness with most women.

Missouri must have had a wonderfully large population at some time, for I believe most women must have been born there. They want to be shown. They want to feel and touch and taste and weigh and measure; and sometimes I really expect to have one of them ask for a sample of fir finish to match with her furniture.

Remember that a woman makes a business of buying; she loves to bargain—to shop—and you must consider that characteristic. You must make it easy for her to choose; you must meet her wishes thoroughly; you must even anticipate her desires; you must convince her that you are less trying to sell something to her than to fill her wants.

Now that you have induced her to visit your office, you will have before her, on the walls and tables, samples of your materials, pictures of Homes, and so forth. As a rule, while she wants a home, she has at the start only a vague idea of just what she wants. The first thing for you to do is, therefore, to ascertain generally her wishes.

Find Out the Price and What She Wants For It

For instance, you should find out about the price she wishes to pay; the size of the building; the number of rooms, etc., and each answer will narrow your field until you can finally offer for her selection a very few designs, any of which will meet one or more of her wishes.

Remember, also, that every woman has certain basic ideas about—not merely a home, but living in a home—and you must take those into consideration. Thus, let me illustrate with a sample design taken from the Home, Sweet Home plan book. This is the edition we use in Pocatello, and the one with which I am familiar.

Here for example, is design Number 702.

I wonder if any of you men have any conception of the number of steps a woman takes during the day in attending to her ordinary housework? I wonder if you know that she actually and literally walks hundreds of miles a year within those four walls? Don't you think that any means of reducing that travel would be most heartily welcome? I know what the woman has to do—I know that in the old style type of house—man-built—that point was entirely overlooked if, indeed, it was ever thought of.

Now, I say to my woman visitor something like this: "Modern home building has become a science as well as an art. I want you to look at this design, which in all other respects meets your wishes as to size and price. You know how many steps you take during the day, walking around halls and doors and back and forth in your present house. Now, draw straight lines between these points: Vestibule, living room, dining room; vestibule, hall, stairway, kitchen, back porch; living room, dining room, hall, stairway and so on.

"Note that in going from every usual place to every other usual place you walk in straight lines. And that arrangement of the rooms will save you one hundred miles absolutely useless walking every year."

Don't you think that sort of an argument would appeal to the woman who has walked all day in her house? If you don't believe it, just try it on your next prospect and see for yourselves.

Labor Saving Devices Important Features

Did you men know that a variation of only eight feet in the location of the kitchen sink means a difference of some 25 miles a year walking in getting meals?

Let me tell you right now that if you want to sell to a woman, or to a woman's husband, you must know what will appeal to a woman.

And I am inclined to suspect that one reason more homes have not been built is because only houses have been offered; mere buildings designed and constructed by men; and you know that to most men—business men—Home is only a place to eat and sleep in and go to business from.

In other words, you retail lumbermen, so far as you have had anything to say about the matter at all; so far as the architect and carpenter have allowed you to have a voice, you retail lumbermen have been trying to sell an article to the person least interested.

Woman's natural instinct is home-making, but you have for many years been ignoring this fact; you have been placing her under a great handicap; you have been giving her four walls, with rooms arranged to suit your own ideas or even perhaps to suit the sizes of materials the manufacturers send to you; you have gone on the principle that you were providing just as good a house as anyone else had; and you let it go at that.

It is just as easy to offer her what she wants as what she does not want; and it's easier to sell the first kind.

The man who designs a house will call attention to the splendid hall; but to a woman a hall is usually a place where the men-folks leave their hats, coats, rubbers and other impediments—a place they can muss us. A woman could easily get along without a hall, but she wants closets; lots of them, well-placed, large, well lighted. She wants places where she can put things away.

She Wants a "Culinary Studio"

And she wants a kitchen. No, she wants more than that. She wants a convenient, well-lighted, well-ventilated "culinary studio" where she can create meals. What do you men know about the preliminary work necessary to produce that appetizing dinner you find when you come home?

And she wants a home that is attractive to her visitors. She wants a home that is artistic on the outside. In fact she would not feel hurt to have such a home that strangers in the city will turn around for a second pleased look.

These are just a few of the things a woman wants in a home and they are all of them possible. If you men will find out what we women want, and then show us that you can fill that want, you will enlist us as unpaid, but as enthusiastic and capable salespeople.

I wonder if you ever considered the fact that the material you have for sale is the only material used in and around a home that the women cannot buy; I might go further and say that it is hard for anyone to buy it as it is used.

I believe that there is not a single home in any of the towns where you gentlemen are in business where at this very moment there is not something wanted which you have for sale.

It seems as though when the last workman leaves a house and the family moves in, that the interest of the building material merchant ceases. I think I am safe in saying that you gentlemen yourselves do not know all of the ways and means in which you could use your own stocks of materials in your own homes.

It is Easy to Provide Conveniences

There's nearly always a place for an extra shelf; there's an attic to be made into an extra room; there is always a step or so that needs fixing; there are stairs that can be made into various receptacles with great convenience to the woman of the house.

There are additional built-in features; clothes racks and posts; porches to be inclosed; hardwood floors to be laid over the old worn-out floors; closets enlarged or re-arranged; doors replaced or cut in; flower boxes; sleeping porches; pergolas; repairs and improvements without end; all of which require the goods you have for sale.

It's a woman's nature to make the best of things as long as she can—and it's a good thing for you men that she does so. But just try awakening her to the benefit of these things; call them to her attention in an appealing manner and see what will happen.

Don't write to her and tell her that her house is a disgrace to the town and she ought to fix it up. Certainly, things will be apt to happen in that case, also, but not exactly what you might like to have happen. Tell her of the advantage to her of, for example, having the treads of the back stairs boxed and hinged to hold the family overshoes. She'll see the point very quickly and she'll see that it is done, too. Try to convince her that you are trying to get for her what she herself wants, and you'll not only make the sale you have in view, but you will gain an active and earnest booster for your entire business.

Gentlemen, it is good business policy to find out from the woman herself what a woman wants; prove to her that you can supply those wants; make your place of business fit and proper and attractive for women to visit; don't try to force a sale on her but make it easy for her to buy—and above all, secure and maintain her confidence by deserving it.

The results to your business will more than justify all the thought and care and work you give it. Does this suggest anything to the wives of the retail building material merchants?

Lumber rates from Puget Sound to Australia, New Zealand, Peruvia and Chile have again made large advances. The rates to Australia and New Zealand ports have gone up 10 shillings per thousand feet, board measure and the rates to Callao, Peru and Valparaiso, Chile, have advanced 5 shillings per thousand feet. Rates to Adelaide or Melbourne, Australia, are now 120 shillings; Auckland, Wellington, Lyttleton, Dunedin and Sydney 110 shillings. Lumber rates from Puget Sound to Southern California ports have also advanced, going from $6 to $6.25 per thousand feet.

Mr. T. J. Stevenson, sales manager of the Riordon Pulp and Paper Company, Montreal, has been appointed a member of the executive of the Pulp Manufacturers' Association, New York.

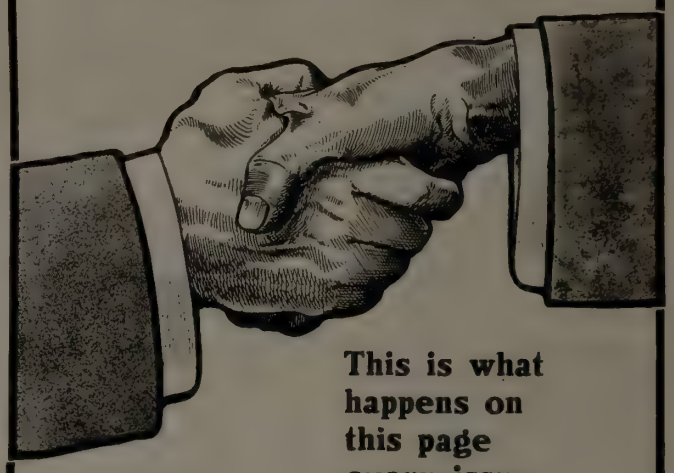
Mr. J. R. Booth, Ottawa, Canada's veteran lumberman, celebrated his 89th birthday on April 5th in his customary manner, by getting up early and attending to a full day's work.

WANTED & FOR SALE DEPARTMENT

Mr. Buyer

Are you in the market for a special bill of lumber? Would you like to pick up a real good second-hand planer or perhaps some logging equipment? Have you a vacancy in your plant for a filer or other employee? If you answer "Yes" to any of these, advertise on this page. It is the "Master of Ceremonies" and will introduce you to the man you want.

The Master of Ceremonies



This is what happens on this page every issue

Mr. Seller

You are looking for the man who is looking for you—you have for sale what he wants. All that is needed is an "Ad" on this page to bring you together. Appeal to this "Master of Ceremonies" and send us a small ad. today. What can we sell for you—or perhaps we can find you a job.

Send along your ad.

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch) each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word net. Cash must accompany the order. Minimum charge 50 cents.

Advertisement must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Cedar Wanted

Good cedar for boat building. Best prices paid for the right material. Write for particulars. The Peterborough Canoe Company, Limited, Peterborough, Ontario. 6-9

Red Pine Wanted

Wanted to buy a stock of Red Pine. Apply Box 363, Canada Lumberman, Toronto, Ont. 6-8

Hemlock, Pine, Basswood

Wanted to buy one million feet Hemlock, also 1-inch Cull Pine and 1-inch Cull Basswood. Box 364, Canada Lumberman, Toronto, Ont. 6-8

Lumber Wanted

Wanted several cars maple, beech or birch squares 1, 1⅛, 1¼ in. x 42 to 60 in. in length. Write for particulars. J. Finlay & Sons Co., Norwood, Ont. 5-8

Lumber Wanted

Lumber wanted—100,000 feet beech; 1-in., 1¼-in. and 1½-in. thick; will have to be about ⅛-in. thicker to allow for shrinkage, etc., so that it will finish up to above dimensions; both dry and green; state price f.o.b. Galt. Shurly-Dietrich Co., Limited, Galt, Ont. 8-8

Basswood and Hemlock

Wanted to buy: inch cull Basswood, and 1 in. and 2 in. Hemlock. Apply M. Brennen & Sons, Hamilton, Ont. 7-8

Wanted

We are in the market for a large quantity of 2-in. Spruce Plank 4 in. and up wide, 8 feet and up long. Good merchantable stock. Kindly write us your lowest price. Box 334, Canada Lumberman, Toronto, Ont. 5-t.f.

Wanted

Several cars 16/4 Birch, No. 2 common and better grade. Must be dry and ready for immediate shipment. Write us your lowest price and full particulars. Box 333, Canada Lumberman, Toronto, Ont. 5-t.f.

Ash and B. C. Spruce

1-in. and thicker White Ash, dry or green. 1-in. and thicker clear, red and white British Columbia Spruce. The Elgie & Jarvis Lumber Company, Limited, Toronto Street, Toronto. 8-8

Maple and Hickory

Wanted, Maple and Hickory Axles, dry. Jackson Wagon Co., St. George, Ont. 8-8

Wanted

Wanted for shipment whenever in shipping condition:
2,000,000 ft. 3 in. No. 1 Com. & Bet. Soft Elm.
1,000,000 ft. 2½ in. No. 1 Com. & Bet. Soft Elm.
1,000,000 ft. 2 in. No. 1 Com. & Bet. Hard Maple.
500,000 ft. 2½ in. No. 1 Com. & Bet. Hard Maple.
Box 332, Canada Lumberman, Toronto, Ont. 5-8

For Sale–Lumber

Hemlock Ties

FOR SALE—Considerable quantity of hemlock ties suitable for Electric Railways, Sidings, etc., ready for immediate shipment. Monteith Bros., Rosseau, Ont. 6-10

For Sale

100 M. feet dry lumber, consisting of Pine, Spruce, Hemlock, Tamarac, Oak and Birch; also saw and planing mill. L. Garnett, Isbester, Ont. 8-8

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que.

For Sale

65,000 Feet GOOD DRY B. C. FIR

2½ to 5 in. thick by 6 to 12 in. wide. 60 ft. to 78 ft. long. Immediate delivery. George Kersley, 224 St. James Street, Montreal. 7-10

For Sale–Machinery

Machine For Sale

Two second-hand McGregor-Gourlay Q. Y. Planers and Matchers, one 9-in., one 15-in. wide; in good condition, ran every day till October, when fast feed Matcher was installed. Located in Saskatchewan. Box 384, Canada Lumberman, Toronto, Ont. 8-11

FOR SALE
Second-Hand Logging Machinery

One Loader, Two Skidders, One Three-Drum Hoisting Engine. All made by the Clyde Iron Works.

The Stearns Salt & Lumber Company,
8-8 Ludington, Mich.

Producer Gas Engine

For sale, second hand 45 H.P. Producer Gas Engine with gas producer, air pump for starting, blower, and small gasoline engine complete and in good condition. Burns pea coal, could be operated at a cost of about $1 per day. Will be sold at a very low price.
Canadian-Warren Axe & Tool Company, Ltd.,
7-10 St. Catharines, Ont.

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

Portable Sawmill

Portable Saw Mill for sale in first-class condition. Capacity 10 M. feet per day. Double edger and everything necessary. Box 388, Canada Lumberman, Toronto, Ont. 8-9

Second Hand Sawmill Equipment

Consisting of
Forty Horse Boiler and smoke stack;
Thirty-five Horse Power Engine;
Three Knee Carriage and Track;
Three Saws, 4 ft. to 5 ft.;
Lumber Truck and Turn Table;
One hundred feet logcar chain, etc., etc.
Can inspect here.
B. BELL & SON COMPANY, LTD.,
8-8 St. George, Ont.

Engine For Sale

Corliss Engine, 150 H.P., 18 cylinder, 24 inch leather belt, with pump, first class condition, no fault, changing to Electric. Inspect at Guelph Lumber Co., Guelph, Ont. 5-8

Wood-Working Machinery

1—36" Crescent band saw, A1 condition	$75.00
1—24" Cowan double surfacer, A 1 condition	375.00
1—8" Crescent jointer	75.00
1—Variety saw table, iron	85.00
1—Wood frame, 8 ft. saw table	60.00
1—Combination drill and mortiser, McGregor-Gourlay, 4" stroke, table ¾ x 5½, raise and lower 12", side movement 10", knife 1" wide	50.00

Pollard Manufacturing Company, Ltd.,
5-8 Niagara Falls, Ont.

Machinery For Sale

Refuse Burner, 24 ft. diam, 100 ft. to spark arrester; all grate bars, 4 base doors, lined with fire brick; in good condition.

Smoke stock 7 ft. x 130 ft. to spark arrester, a1 condition.

Three Boilers, 6 ft. x 16 ft.; 70 4-in. tubes. 2 fire doors, 2 draft doors, fronts in a1 condition.

One No. 8 Buffalo Forge Co. Blower.

One Dean Duplex Steam Pump; 2—14 x 14 steam end; 2—12 x 28 water end, valves and piping.

All angle iron frames and galvanized roofing for large fire room.

All or any part at bargain prices.
Box 390, Canada Lumberman, Toronto, Ont. 8-8

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

Manager Complete Plant wants position, woods, railroad, saw mill. Big proposition wanted, no matter how difficult. Box 389, Canada Lumberman, Toronto, Ont. 8-8

LATH MILL MAN wants position to run a lath mill by the day or per thousand. Will go anywhere; ten years' experience. Reference. Box 369, Canada Lumberman, Toronto, Ont. 6-8

BAND, RESAW OR ROTARY SAWYER wants position. Six years' experience; sober and good references. Box 353, Canada Lumberman, Toronto, Ont. 6-9

BAND SAW FILER wants position, double or single cut. Twelve years' experience, first class references. Box 317, Canada Lumberman, Toronto, Ont. 4-9

EXPERIENCED LUMBERMAN wants position in lumber factory. Can take full charge of same and understand all the different machines, also filing. First-class references. Box 358, Canada Lumberman, Toronto, Ont. 6-8

DOUBLE BAND SAW FILER wants position, first-class references.

BAND MILL FOREMAN wants position, first-class millwright, and can handle men to good advantage. Box 359, Canada Lumberman, Toronto, Ont. 6-11

Experienced married man, fifteen years' experience, thorough knowledge shipping, inspecting, estimating, travelling, etc. Open for engagement, any time, best references; at present employed, desirous of change. Box 385, Canada Lumberman, Toronto, Ont. 8-9

Wanted—Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

TIMBER CRUISER and traveller wanted. Apply Box 365, Canada Lumberman, Toronto, Ont. 6-8

Business Chances

Tie Contractor Wanted

Wanted a responsible contractor who would undertake to get out a quantity of ties in Ontario. Apply Box 366, Canada Lumberman, Toronto, Ont. 6-8

Planing Mill For Sale

Modern planing mill and lumber yard in growing town in Niagara Peninsula. Write Room 67, 18 Toronto Street, Toronto, Ont. 7-8

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

Sawing Contracts To Let

We are prepared to let contracts at once for two or three portable or semi-portable saw mills to cut hemlock, hardwood and some pine on McKenzie Township near Parry Sound. Jobs will run from one million feet up, amounting in all to about fifty million feet. Would like to include some manufacturing and lath and shingles. Write at once, giving full particulars and experience and references.
HOLT TIMBER COMPANY, LTD.,
8-9 c/o Canada Lumberman, Toronto, Ont.

Miscellaneous

Screws For Sale

FOR SALE, at 85 and 10 per cent. off List, f.o.b. Brockville.
346 Gross ¼ x 14 F. H. Screws.
100 Gross 1½ in. x 14 F. H. Screws.
The McLaren Lumber Company, Ltd.,
8-8 Brockville, Ont.

Timber Limits For Sale

Berths No. 2 and No. 4 Nipissing, and Berth No. 4 Gurd. Hemlock, Birch, Pine and Spruce. Would sell berths separately. Close to Lake Nipissing. Great opportunity for jobbers on Nipissing berths. For particulars address Box 381, Canada Lumberman, Toronto, Ont. 7-10

30 Replies

are often received to "Wanted" and "For Sale" ads. on this page. Even 50 replies are not an uncommon return from the investment of the small amount a condensed ad. costs. And isn't that good business—to get right into close touch with so many people interested in what you have to buy or sell? For you can be sure their transactions with you will not end when they have closed the business your single ad. announced.

The Ferguson Lumber Company sawmill at Six Mile Creek, near Golden, which has been idle for several years, is now being overhauled, the owners having decided that market prospects now warrant a resumption of operations.

Prairie Province Lumbering

Although the prairie provinces are usually associated with but one pursuit, namely, farming, the forested portions give rise to a lumbering industry of importance, and, while inferior in development to those of British Columbia or the eastern provinces, are of great value to the immigrant settlement in the west. In 1913 some 188 mills in Manitoba, Saskatchewan and Alberta sawed approximately 250 million feet of lumber, valued at the point of manufacture at over $4,260,000. Of this quantity, Saskatchewan forests produced approximately two-thirds, Alberta one-fifth, and Manitoba the balance. The prairie market consumes about 1,434 million feet of lumber annually. Over one-half of this comes from British Columbia (in part from the Railway Belt portion), and the remainder is supplied from northwestern Ontario, the United States, and the home forests.

In the course of an address on the B. C. timber industry; delivered in the Legislature on March 8th, the Member for Comox, Mr. Michael Manson, said that over 770,000,000 feet of logs were cut in Vancouver district last year, the value of the timber being $16,200,000. Forty per cent. of this valuation represented labor, 17 per cent. transportation, 20 per cent. equipment and supplies, and 17 per cent. taxes, interest, etc. There were 445 separate logging operations in the district, 182 being represented by hand loggers. In 1915 the timber cut of the province, in board measure, amounted to 1,152,000,000 feet, valued at $29,000,000.

J. B. Sutton's shingle mill at Arrowhead, erected in July of last year, was purchased in December last by A. J. Waskett (formerly of Benton's Siding, Salmo district), and W. H. Donaldson, who have secured incorporation as the Diamond Lumber & Shingle Co., Ltd. A third machine is being installed in the plant, which will be operated night and day throughout the season.

The plant of the Edgewood Lumber Co., Ltd., at Castlegar, Nelson district, began cutting on March 13th, 65 men being employed in and about the mill in addition to about 200 in the firm's logging camps. Manager Waldie hopes to make a big cut this season and will operate until the latest date possible next fall in order to supply the strong prairie demand for lumber.

The sawmill at Cascade, Nelson district, owned by the Forest Mills of B. C., Ltd., was started up about the middle of March. About 80 men will be employed when the plant is in full operation.

Union Lumber Co.
Limited

Dry White Pine
Norway
Spruce
and Lath

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

The 18-Pounder 6-Round Shell Box
What It Costs to Manufacture It

The Superintendent of a box factory—an authority on the subject—estimates the cost under the most favorable conditions at 83 cents. He has written an extensive article, dealing with the various items, for the "Canadian Woodworker and Furniture Manufacturer." It will be published in the April issue. Every manufacturer who is studying his costs should read this article. If interested write for further particulars.

Canadian Woodworker
and Furniture Manufacturer
345 Adelaide St. West, Toronto

Review of Current Trade Conditions

Ontario

Retailers are reporting a slight improvement in the demand for building material, particularly in the smaller centres. Farmers apparently are coming into the market with moderate requirements for new buildings and additions to old buildings. In the larger cities the manufacturing industries are consuming a fair amount of stock, the furniture, piano and automobile manufacturers continue to use fairly large quantities of lumber and all are reporting quite an active trade. The building situation in the larger cities, while it is by no means active, shows a slight improvement and the indications are that, during the present spring and the coming summer, there will be a marked improvement in this line over the situation that existed last year. A number of architects who have been interviewed by the Canada Lumberman report that they have prepared plans for a fair number of buildings and that some of these are already materializing into contracts. Much of the building going on in the cities, however, is for manufacturers, there being only a very slight activity in the house building industry.

Continued discussion is heard in regard to the shell box industry. The large quantity of contracts recently awarded by the Imperial Munitions Board, as recorded in our issue of April 1st, does not seem to have created anything like the activity that might have been expected. We have heard that quite a number of these contracs have been refused by the parties who made the tenders, as the cost of manufacturing boxes has been advancing so rapidly, not only in regard to the price of raw material, but the cost of labor. These contracts were tendered for on very close margins; in fact many wholesalers who have figured upon stocks required, report that some of the contracts were tendered for at prices below the cost of production.

We understand that the Imperial Munitions Board is trying to place the contracts that have been turned down, but is not meeting with much encouragement. It is unfortunate that the conditions surrounding these contracts have led to such close figuring. If they had been let at prices involving a moderate profit in each case the advantage to the lumbering industry and the box making industry would have been very great.

The situation in connection with the production of lumber in Northern Ontario is rather uncertain at present. Reports from manufacturers indicate that in some districts the output will be considerably smaller han usual, while in other districts, notably that along the north shore of Georgian Bay, a fair production is expected. Hemlock production. will probably be considerably lower than usual Travellers who have recently called upon mills report that the quantity manufactured this year will show a decrease of from 25 to 50 per cent. as compared with previous years.

Eastern Canada

Sawing operations have again commenced at St. John, N. B. A few of the mills commenced early in April and the others were due to follow suit within a week or two. Heavy shipments of deals have been taking place lately, many vessels arriving and taking on cargoes for the Admiralty. During the next two months several million feet of deals will go forward on Admiralty orders. Most of the deals shipped recently have come from interior points. Prices are steady. Difficulty continues in connection with shipments to New England States, on account of the embargoes placed by railway companies upon lumber. If the railways are able to handle the business presented, a good season is expected by American buyers. Prices, when delivery can be made, for New England markets, are about $15.50 to $16 for 2 x 3 in. and 2 x 6 in., other sizes in proportion, f.o.b. St. John. Merchantable spruce boards are scarce and bring about $16.50 per M. Lath are about $3.25 f.o.b. St. John. Shingles are quiet with ample stock.

Driving operations are how under way on the St. John River from Fredericton to St. John. Bank logs are selling at about $13,50 to $14.00 and battens are bringing $9.50 to $10. per M. delivered St. John. The driving situation looks promising.

The lumber trade at Montreal during the past fortnight has continued on a quiet scale. Building permits, while small, are showing a little tendency to increase. Local yards are comparatively bare of stock. Large orders for spruce for United States points have been received recently, at better prices than those of a year ago. In each case prompt shipment is required. Cars continue scarce for shipment of lumber. The scarcity of vessels is also a continued handicap and it looks as though little or no improvement may be expected this year.

The spruce market at Boston has improved considerably during the past fortnight. At Boston and Maine points, quotations for spruce frames are $27, and at N. Y., N. H. and Hartford points the quotation is $28. Random is moving well at the following prices:— 2 x 3 in., $21.50; 2 x 4 in., $22 to $22.50; 2 x 5 in., and 2 x 6 in., $21.50;; 2 x 8 in., $25; 2 x 10 in., $26.50; 2 x 12 in., $27.50. Stocks of spruce at New York are scarce. There is a better demand for hemlock at Boston, building contractors showing signs of turning to it instead of Southern pine which is handicapped by the railroad embargoes. Very little hemlock is crossing from Canada to United States markets. Some is going by vessel but most of it goes to New York or Sound Ports. Hemlock boards are in good demand at Boston. Good clipped hemlock boards, 10, 12, 14, and 16 feet are bringing $22.50 per thousand feet, and some producers are asking $23.

The shingle market at Boston continues rather quiet but prices are firm. Red cedars are still strong, extras bringing from $3.68 to $3.88. White extras are selling at from $3.40 to $3.50. Lath are in good demand and firm. At Boston 1⅝ in. are selling at $4.20 to $4.25 and 1½ in. at $3.90 to $4.

Great Britain

Prices of spruce deals in Great Britain at present show very definitely that this timber has been under-valued in the English market in the past, as the advance that has taken place lately in spruce deal prices is greater in proportion than that which has taken place in any other classes of wood. 3 x 11 in. spruce deals are selling at from £32 to £35, 3 x 9 in. at £30 to £31, and battens at £27, £28 and £29 per standard. At Liverpool spot lots of spruce deals for liners are quoted by shippers at £30 per standard c.i.f. with war insurance extra, while £29 has been quoted at Manchester. Forward business is very limited and the absence of steam tonnage is sure to have a very serious effect on the Manchester market. Shipowners appear to be rather nervous about the use of Mersey ports. Stocks of spruce deals are quickly being reduced to a minimum at both Liverpool and Manchester, both in importers' and consumers' hands. The consumptive demand continues strong and arrivals are very much less than the quantity consumed. Birch spot values at Liverpool are still climbing. Recent arrivals have quickly passed from importers' hands to the consumers. As imports are restricted stocks will be rapidly cleared out. All pine goods are advancing in price at Manchester. Third quality Quebec pine is offered at about £36 for 3 x 11.

At London, the spot market continues fairly active and deliveries are quite extensive, considering the stock from which they are drawn. Forward business continues on a small scale as a result of the enormous freight rates now asked. At Foy, Morgan & Company's recent auction sale 3 x 9 in. unsorted Quebec spruce, at a wharf, sold for £29 5s. 3 x 9 in. fourth quality brought £26 10s. 3 x 8 in. unsorted red pine brought £26 10s. 2 x 4/13 hemlock from St. John brought £21 5s.

United States

Business and industrial conditions throughout the United States continue to indicate that this year will be an excellent one for the lumber industry and trade. The indications today are that during the present spring the building activity will be greater than it has been for years. This satisfactory condition appears to exist in all parts of the United States, but is far more pronounced in the New England States than elsewhere. Factories throughout the New England territory are overloaded with orders and are finding it necessary to increase their facilities for production, which is resulting in plans for new buildings and additions to old ones. The activity, moreover, in the East, is not confined to factories, but includes the house building industry as well, as a result of the great number of employees who are receiving good wages and planning to build or buy new homes. An interesting feature in connection with the building situation in the New Egland States is a great increase in the number of slow-burning or mill construction buildings that are being planned, or that are in the course of erection. The price of steel has soared so high that mill construction is becoming more and more popular.

The improvement in the building situation is only one feature in the general prosperity reported from all over the United States. In the steel trade, continued activity is reported and there are no signs of an early decrease. Steel mills, in fact, are loaded down with as

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

much business as they can handle for all of 1916 and part of 1917. If they would take on further business they could easily secure it. The railroads, in nearly all cases, are handling the heaviest business in their history, and this is at a time of year when, as a rule, there is a considerable reduction in the quantity of tonnage offered. The scarcity of railroad cars is conflicting with industrial expansion everywhere.

In the lumber situation probably the most interesting news comes from the Pacific Coast, and from the Inland Empire, where the output has been extremely heavy and the quantity of cars available for shipment has been fairly satisfactory. With the early resumption of traffic through the Panama Canal in sight, and a number of lumber carrying vessels under construction at Pacific Coast ship yards, the outlook for shipment of Pacific Coast stocks to Atlantic Coast points is good, and manufacturers are looking forward to a big trade in these markets.

Southern pine manufacturers have not been doing well in regard to the quantity of railroad cars received, and their business is being held back to some extent on this account. There is an excellent demand for material for mill construction buildings. Production is being maintained at a reasonable level. Shipments of material for railroad purposes are large. Lack of transportation facilities is also troubling the mills along the south Atlantic coast.

Encouraging conditions continue to be reported in connection with the hardwood situation. Vehicle and implement industries are active and most of the consuming factories are busier than they have been for two years past.

There is a good movement in northern pine. At Chicago, the demand is more marked for No. 2 and No. 3 boards. No. 1 Norway is also in demand. Stocks are almost off the market. At Buffalo there has been an increase in the demand for northern pine during the past fortnight, as a result of greater building activity. Lower grades are moving well. The car shortage is troubling dealers at North Tonawanda. There has been a strong demand during the past fortnight at this point for stock for retail yards and buyers are wanting immediate deliverey.

The hardwood trade at Buffalo has shown definite improvement since the first of February. A fairly good demand is expected from now on. Advances of about $2 per thousand are reported for firsts and seconds in maple, basswood and ash. Red birch is firm and sap birch shows an advance of about $2 in firsts and seconds. Common grades are unchanged. but firm.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Ottawa Valley Output Likely to Show Reduction

Ottawa, April 9th; (Special to the Canada Lumberman):—Owing to the excessive amount of snow and ice which remain in the woods, the spring drives in the Ottawa districts will be at least two weeks later than last year. However, as most of the lumber firms are still working at the spring cut, the lateness will not occasion much inconvenience. As to the quantity that will be brought down this season it is generally thought that it will be considerably less than last year. Some lumbermen think that it will be normal, however, when the large number of logs remaining from last year are added to this winter's cut.

During the past two weeks there has been quite an improvement in the lumber trade in the American market and local lumber dealers are looking forward to a still better trade from that quarter. The local Canadian trade has also picked up well, but this is owing mainly to the shell box business, which trade is consuming a large quantity of lumber.

All indications point to a greater shortage of tonnage to take care of the British shipments during the coming season of navigation, but the principal lumbermen are hoping that other markets will develop to dispose of the grades usually shipped to the United Kingdom. Just now, spruce is very strong in the New York market, and the same may be said of lath. Quite a number of sales of lath have been made during the past week, for the coming season, at an advance in prices over those of last year.

St. John Mills Commence Sawing

Saint John, N. B., April 6th, (Special to the Canada Lumberman):—The past two weeks have seen the beginning of sawing operations for the season of 1916. Messrs. Stetson Cutler & Co., and Murray & Gregory, Ltd., have started their mills; the former sawing largely for the American market and the latter for the English market. The other mills in this vicinity will follow along during the next few days, practically all sawing English deals.

Shipments of deals have been extremely heavy during the past two weeks, as many boats have arrived and departed with Admiralty orders. It is said that orders have been taken for delivery during the next two months which run into several millions. Nearly all the deals shipped lately have been from interior points, being portable sawn stock. Prices remain unchanged, the only great trouble is to get tonnage and cars, one seeming about as scarce as the other. Nearly all the railroads in New England have placed embargoes on lumber during the last few days. The embargo on the N. Y., N. H. & Hartford Railroad has been lifted, but for how long, seems impossible to say. Should the railways be able to handle the business put up to them, the American buyers look for a good season, and fair prices. On account of the embargo it is almost impossible to state prices, but where deliveries can be made, 2 x 3 in. and 2 x 6 in. are worth $15.50 to $16. 2 x 4 in., $16.50; 2 x 8 in., $19; 2 x 10 in., $22, f.o.b. St. John.

Merchantable spruce boards are almost impossible to find, and are readily bringing $16.50 per M. English deals are still firm at prices previously quoted and mills are well sold up.

Laths are bringing good prices, and are selling at about $3.25 f.o.b. St. John.

Shingles show no upward tendency, and stocks are ample. With the mills beginning sawing, stock will increase.

The box shook trade remains good, with foreign orders well placed.

The St. John river from Fredericton to St. John is now open and the drift down is being well followed up as many logs are afloat, the St. John Log Driving Company are well prepared and will take care of the logs adrift. This is an extremely costly process but, must be attended too or otherwise the logs would go to sea. Bank logs are beginning to come in and are bringing around $13.50 to $14.00, with battens at from $9.50 to $10 per M. delivered St. John. Driving conditions look good. All that is needed is rain to set in motion the ice, clearing out the streams, rolling in the logs and sending them down stream.

Locally the building trades are quiet and orders limited. Conditions do not warrant any expensive building operations, but should a change for the better occur, it is felt that building would take on a new lease of life, and, as factories would be fully prepared to meet any increase, a profitable season could no doubt be worked out.

The annual meeting of the St. John Log Driving Association was held on April 5th. The old board of directors was re-elected with the exception of A. Morrison, of Fredericton, who was replaced by H. Usher Miller, of St. John. At a subsequent meeting of the directors J. Fraser Gregory was re-elected president, and Walter Jackson secretary and manager.

The annual meeting of the Tobique Log Driving Company was held on April 5th. Mr. F. C. Beatteay was elected president, J. C. Hartley, secretary treasurer and Donald Fraser, Archibald Fraser, J. D. McLaughlin and H. Usher Miller directors. A contract was entered into with J. D. McLaughlin for driving on the river.

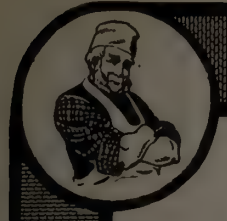
Car Shortage Affecting Montreal Trade

Montreal, April 10th (Special to the Canada Lumberman):—Judging by the building permits for last month, the building trade is picking up a little. The figures are nothing to boast about, but in view of the tendency to drop below last year's poor totals, it is satisfactory to find that the past month was almost equal to March, 1915. The permits were valued at $243,345, a decrease of $3,350, while for the three months the total of-$483,420, was $408,516 lower as against last year.

Local trade is on the slow side, with yards comparatively bare of stock. Members of firms interested in shell boxes who have just come back from Ottawa report that there are not likely to be further orders for some time.

Some very large orders for spruce for United States account have been received, at better prices as compared with those ruling this time last year. Prompt shipment has been requested.

There is a continued shortage of cars, which is affecting some Montreal wholesalers. In this connection, the C. P. R. has placed a temporary embargo on loaded cars for delivery to the I. C. R., it be-



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Cream of the West Flour

the hard wheat flour that is guaranteed for bread

It has that full flavored, wholesome, nutritious taste that can only be associated with Cream of the West.

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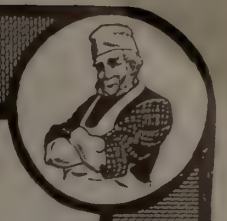

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The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

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ing contended that the Government road has failed to take delivery of loads which the C. P. R. is holding, resulting in congestion at C. P. R. terminals. Mr. F. P. Gutelius, however, denies that there is ground for this embargo, stating that the International is handling all C. P. R. traffic offered, and that the fault is with the latter company in not switching the cars out of the terminals.

Present appearances are against heavy exports from this port to the United Kingdom. The prospective tonnage will be smaller than that of last season, and the steamship companies do not hold out any hope of being able to ship large quantities on any vessel. Two or three lumber firms have already made arrangements for shipping a fair amount by tramp steamers, and it is more than likely that other tramps will have to be chartered if very large quantities of lumber have to be sent. The prohibition by the British Government of the import of birch, except under license, will mean an appreciable reduction in the wood exported from Montreal. At the same time this description of lumber is required for so many purposes, including war purposes, that it is probable the prohibition will not be pressed to an undue extent. Although the United Kingdom took large shipments from Canada last season, consumption has been rapid, and more stock will be required.

The continued restricted imports of sulphite pulp from European countries into the United States have again stiffened quotations of Canadian productions. The demand is greater than ever, and United States firms are making urgent requests for all the sulphite that can be made in this country. It will be many weeks before Europe can send anything approaching substantial quantities, and with an increasing request for our sulphite the immediate market outlook is extremely satisfactory. Ground wood has also improved, while newsprint mills are running to capacity.

Saw Gauges—Standard or Thin

Discussing the above subject from an extensive and varied experience with both kinds, I cannot find any advantage in thin saws for the work of today.

My preference is a saw 7-gauge at the centre and 8 on the rim, fitted with a point 9/32-inch wide, and for cutting hard woods or frozen timber, a still narrower kerf is better. My experience, together with that of thousands of mill men and skilled sawyers, has demonstrated that the extra gauge at the centre adds very materially to the standing-up qualities of the saw without perceptibly reducing the clearance. In saws 54-inch and up, 6-gauge at the centre and 8 on the rim, is still better, where heavy feed can be used. Very many mill men are using log saws two gauges heavier at the centre, regardless of the diameter of the saw and its feed.

A saw ground with a heavier centre is not so susceptible to the variations of speed. It will hold its line much better than the thin blade, thus preventing friction, heating, buckling, loss of power, and re-hammering charges, which is an item in the life of a saw. All the resistance applied to the rim of a saw in its passage through a log must be supported by its centre. A strong centre saw will stand up where a thin saw fails. The consequence is that the thin saw is running in and out of the log, using power wastefully, and making cull lumber, besides drawing the tension out of the blade by the friction produced between the saw and the log.

It will be in order to find the thickness in decimal parts of an inch in the different gauges we are discussing as well as in fractional parts of an inch.

A 6-gauge blade contains .203 of an inch or is scant 13/64-in. thick.
A 7-gauge blade contains .180 of an inch or is scant 3/16-in. thick.
A 8-gauge blade contains .165 of an inch or is scant 11/64-in. thick.
A 9-gauge blade contains .148 of an inch or is full 9/64-in. thick.
A 10-gauge blade contains .134 of an inch or is full 1/8-in. thick.

We find that an 8-gauge is 3/64-inch thicker than a 10-gauge on the rim, and is still thicker on the centre, according to the number of gauges added there.

The mill man desires a 9-gauge saw because he figures that in cutting ¼-inch kerf, he saves 1/32-inch over and above an 8-gauge cutting 9/32-inch, thus gaining one 4/4 board in thirty-two cuts. He can do this, if his power is ample, and his appliances just right, but his set works ought to graduate to the one-hundredth part of an inch, and lock when he sets up, with no lost motion between the set shaft and the knee, so that the cant is firm and rigid where he sets it; and to save one board on a decrease of 1/32-inch kerf, the log would have to be at least forty inches in diameter. It must be remembered that the thin saw requires more uniform speed and more teeth than the heavier standard gauge. The proper speed must be maintained throughout. A thin saw, travelling at the speed for which it is tensioned, does not travel on the same line when the velocity is reduced. This often occurs in one and the same cut. The product under such conditions is thin and thick boards, feather edged boards, and wedge shapes. The planing mill man gets fuel from thick boards in planing to specifications (freight paid). No one can tell where a saw will travel when it has lost its standing-up qualities for lack of velocity. It is seeking the course offering the least resistance to its passing through the log.

It is a mistake, and a serious mistake, for anyone to give specifications for a saw calling for a feed largely in excess of his actual requirements. The saw should be adapted to the actual capacity of the mill. This will be governed largely by the available power, or the power left for the circular, after allowing for auxiliary machinery, such as slab slasher, edger, sawdust conveyor, trimmer, etc. The specifications given the saw maker is usually the maximum power of engine, and the available power to drive the circular is not given. The lack of this information is misleading to the saw maker in adjusting the tension.

Sawyers and mill men have discussed the proper mandrel speed for circular saws, since when the memory of man runneth not. They seldom consider adapting thickness of saw to power and true capacity of mill because a circular saw is a circular saw. One saw requires as much clearance on each side as the other saw, regardless of thickness of blade. This is eminently correct, but the speed for a thick standard gauge saw should be 10,000 rim feet per minute, thin saws more. This will require a mandrel speed for a 52-inch standard saw of about 750 revolutions per minute. If the available power is insufficient to maintain the speed for which the saw has been tensioned then find the speed that you can well maintain, and have the saw maker adjust the tension of the saw to this speed. There is no better rule.—Disston Crucible.

Mr. A. W. Wheatley

Mr. A. W. Wheatley, president of the Lima Locomotive Corporation, Lima, Ohio, whose portrait we publish herewith, was born October 12, 1870, at Ashford, Kent County, England. At the age of fifteen he began, as a rivet boy, in the shops of the South Eastern Railroad, and in 1887, apprenticed himself as a machinist, attending night school. In 1892 he came to America and entered the employ of the Northern Pacific Railroad at Brainerd, Minn., as machinist, and in 1893 was transferred to Staples, Minn., in the same position. In 1895 he was made foreman, occupying that position until 1900; transferred to Livingston, Mont., as general foreman in December, 1902, and later was made master mechanic of Yellowstone Division, headquarters at Glendive, Mont. In June, 1903, he was appointed shop superintendent at Brainerd, Minn., and in April, 1904, was appointed general master mechanic of the entire system of the Northern Pacific

A. W. Wheatley, Lima, Ohio.

Railway. In February, 1905, he accepted a position on the Rock Island Railway as shop superintendent at Moline, Ill. In March, 1906, he accepted a position as assistant superintendent of motive power of the Union Pacific Railway, with headquarters at Omaha. In June, 1907, Mr. Wheatley entered the employ of the American Locomotive Company at Schenectady as general inspector. He was transferred to Montreal in December, 1907, as manager of the American Locomotive Company's plant in that city. In November, 1910, he was transferred to Dunkirk, N. Y., in charge of that plant. In June, 1911, he accepted an offer from the Canadian Locomotive Company at Kingston, Ont., and was chosen as vice-president and general manager of that company, which position he resigned on March 1st of this year to accept the presidency of the Lima Locomotive Corporation.

A steel dock is to be constructed at Port Arthur, Ont., to facilitate the shipment of lumber and pulpwood.

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No matter how large or how small our facilities are equal to the emergency. Try us.

Smart-Woods Stable, Storage and Circus Marquee.

Smart-Woods Mosquito or Black Fly Proof Fronts.

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128,350 Laths

In Ten Hours

Our Lath-Mill and Bolter have made a test cut in ten hours of 128,350 four foot laths, 1½ in. by ⅜ in., counted, tied and piled.

We also make a full line of Lath-Mill and Picket-Mill Machinery, for mills, both large and small.

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Wm. Milne & Sons, North Bay, Ont.
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Manley Chew, Esq., Midland, Ont.
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SPRUCE rough or dressed

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FOR **IMMEDIATE SHIPMENT**

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1,500,000 Mill Run Spruce lath, 4 ft.
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Wholesale Dealers in Rough and Dressed Lumber, Lath and Shingles
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EDGINGS

Ontario

The Canada Builders, Limited, Orillia, Ont., are contemplating the erection of a planing mill. The building will be 200 x 65 feet, of brick construction.

Mann's sawmill at the corner of Aylmer and Dalhousie Streets, Peterboro, Ont., was recently destroyed by fire. The firemen were able to remove most of the machinery.

P. W. Clement has bought Kippen's planing mills at Perth, Ont. Mr. Clement was formerly engaged for many years with Mr. Kippen as office manager and bookkeeper.

The Guelph Lumber Company, Guelph, Ont., are building a dry kiln adjoining their planing mill. The dry kiln will be equipped with the latest improvements and will be operated by the vapor system.

The Riordon Pulp & Paper Company, Merritton, Ont., are preparing plans and specifications for making additions to their plant. The architects are the Moulton Engineering Corporation, 120 Exchange Street, Portland, Me. The plant is to be of reinforced concrete construction.

Reports from Fort Frances, Ont., state that the Shevlin Clarke Company are expecting to operate their mill at full capacity both day and night during the present season, starting early this month. This will give employment to over 1,000 men in the town and another 500 in the woods.

The Hillcrest Lumber Company, Limited, has been incorporated with head office at Renfrew, Ont., and capital stock of $400,000, to carry on business as timber merchants, sawmill proprietors, etc. Those interested are J. M. Austin, G. B. Ferguson, D. W. Stewart, J. Geale and S. T. Chown.

Oliver Schram, Hymers, Ont., will erect a modern sawmill upon the site of the old Vigar's mill on the water front at Port Arthur, Ont. Some of the old buildings will be used and new ones will be added. The company has a contract for three million feet of lumber for James Hourigan & Company, to be shipped to Chicago.

The Reid Wrecking Company, Sarnia, Ont., are repairing their booms in readiness for this year's towing. The company will tow down the lake about 25 million feet of logs for the Cleveland-Sarnia Saw Mills Company, Sarnia, Ont. The Cleveland-Sarnia Saw Mills Company started sawing for the season on April 4th. The plant will be operated daily until the ice forms next fall.

The International Lumber and Wood Products Corporation, Limited, has been incorporated with head office at Toronto, Ont., and capital stock of $50,000, to carry on business as manufacturers of and dealers in lumber, timber logs, pulpwood, etc. The provisional directors are C. E. Ritchie, E. B. Stockdale, C. W. Kerr, F. W. Stockdale and P. B. Rapp, all of Toronto.

The Town Council of Gore Bay, Ont., will submit a by-law to the ratepayers to exempt Mr. W. E. George's planing mill and sawmill from taxation for ten years and to give him a cash bonus of $500 in order to assist him in rebuilding the plant. It is expected that the township will also grant a bonus of $500 and exemption from municipal taxes for ten years. If this assistance is carried out Mr. George will rebuild.

Beauman & Letson, Elmira, Ont., recently lost their sash and door factory by fire. The amount of the loss is estimated at $10,000, which was partly covered by insurance. The owners will rebuild at once and will be in the market for the following machinery:—sander, planer, matcher, rip saw, swing saw, buzz planer, shaper, turning lathe (hand), band saw, trim saw, mortise and tennon machine, sand drum, 2 boring machines upright and side, and belting. Communications are to be addressed to Noah Beringer, Arthur Street, Elmira, Ont.

Eastern Canada

The sawmill belonging to Albert Caron, St. Adalbert, P. Q., was recently destroyed by fire at a loss of $4,000.

The sawmill belonging to Aug. Blais and F. Latourneau, St. Paul du Buton, County Montmagny, P. Q., was recently destroyed by fire.

A sawmill is being erected on the Sixth Range of Ditchfield near Cookshire, P. Q. The parties interested reside in Sherbrooke, P. Q.

The Miner Lumber Company, Limited, Coristine Bldg., Montreal, P. Q., are in the market for the purchase of woodworking lathes.

Jos. Cauchon, Chateau-Richer, Co. Montmorency, P. Q., recently lost his sawmill by fire, the loss being $7,000. The owner will rebuild and will be in the market for machinery. The building will be of frame construction with tin roofing.

John Breakey, St. Helene de Breakeyville, P. Q., is contemplating the erection of a sawmill to cost $7,000.

L. Wisintainer & Son, 58 Boulevard St. Lawrence, Montreal, P. Q., are calling for tenders for the construction of a sash factory on St. Catherine

Street East. The architect is L. J. Bigonesse, 92 Notre Dame Street East. The building is to be of trussed concrete construction.

W. J. Carnworth's lumber camp near Harvey Corner, Albert County, N. B., together with all its contents, was recently destroyed by fire.

The sawmill belonging to Omer Bergeron, St. Clothilde, P. Q., was recently destroyed by fire, incurring a loss of $7,000. The owner will rebuild and will be in the market for machinery for steam power.

The Cape Breton Pulp Company's buildings at Murray, Ste. Anne's Bay, are now practically completed and the machinery for pulp making is being installed. The buildings and plant are of the latest type. At first the company will only prepare wood for shipment, but before the end of the year it is expected that they will be turning out pulp.

Western Canada

Brown & Rutherford, lumbermen, Winnipeg, Man., have been registered as co-partners.

The International Mercantile Company, Limited, lumber dealers, Wymark, Sask., have sold their lumber business to the Beaver Lumber Company, Limited.

Alexander McRae, Revelstoke, B. C., will erect a sawmill with a capacity of 25,000 feet per day to cut timber on his limits situated in the vicinity of Trout Lake.

The Baker Lumber Company, Limited, Waldo, B. C., resumed operation at the end of March. Everything points to an active and prosperous year in the lumber business at this point.

J. R. Morgan, Limited, has been incorporated with head office at Prince Rupert, B. C., and capital stock of $10,000, to acquire, operate and deal in timber limits, sawmills, shingle mills, box factories, pulpmills, etc.

McNair & Graham, shingle manufacturers, Rosedale, B. C., are making additions to their plant. They are installing a new dry kiln and building a boarding house. They have commenced operating a night shift which increases their capacity by fifty per cent.

The Saginaw Canning Company, Limited, have been incorporated with head office at Vancouver, B. C. and capital stock of $25,000. They are empowered, among other things, to carry on business as timber merchants, sawmill, planing mill and shingle mill proprietors.

The Forest Mills of B. C. Limited, are resuming operations at their mill at Cascade, B. C. It is expected that employment will be given to about 80 men when the plant is in full operation. Plans have been completed for the operation of the plant throughout the entire summer.

The Eldorado Lumber Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $25,000, to carry on business as manufacturers of and dealers in lumber and shingles, shingle mill and sawmill owners, loggers, and lumber and shingle merchants.

The Northern Cedar Logging Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $10,000, to carry on business as loggers, timber merchants, sawmill, shingle mill and pulpmill proprietors and to manufacture and deal in timber, lumber, shingles, etc.

Tenders are being received by the Minister of Lands for British Columbia until May 10th for the purchase of License X83, to cut 6,510,000 feet of Douglas fir, hemlock, cedar, and white pine on an area adjoining Lot 2695, Thunder Bay, Jervis Inlet, New Westminster District. Two years will be allowed for the removal of the timber.

The Nanaimo Canners and Packers, Limited, Nanaimo, B. C., who have recently obtained a charter are granted powers which include the following:—to carry on business as suppliers of lumber, sawmill owners, loggers, lumber merchants and manufacturers of and dealers in lumber, timber, laths, shingles, sash and doors, etc. The capital stock of the company is $50,000.

The new sawmill at Lombard, B. C., belonging to the Smith's Timber Company of Vancouver, will commence operations about the middle of this month. Messrs. Miller and Slater, who have just finished their logging and sawing contract for the Cook's mill are moving their logging outfit to Lombard and will operate the new mill for the Smith's Timber Company.

The Pacific Mills, Limited, 808 Standard Bank Building, Vancouver, B. C., are contemplating the erection of paper and sulphite mills, etc., at Ocean Falls, B. C., 300 miles north of Vancouver. Work will be done by day labor under the company's supervision. The plant will be of reinforced concrete construction. Two wharves will also be erected. The president of the company is Mr. J. H. Lawson and the secretary Mr. W. S. Lane.

The Consolidated Lumber & Shingle Company, Limited, has been registered as an extra-provincial company with head office at Bellingham, Wash., and provincial office at 40 Lorne Street, New Westminster, B. C., to carry on business as manufacturers and dealers in lumber and shingles and to own and operate sawmills. The capital stock of the company is $10,000. J. R. Grant, New Westminster, is attorney for the company.

Abernethy & Lougheed Limited, owners of the sawmill at Port Haney, B. C., are making preparations for taking out 30,000,000 feet of timber this summer from their limits in the Stave Lake district and other parts of the Dominion railway belt. The mill at Port Haney is to be re-opened this month, but the bulk of this season's output of timber will go to other mills. Last year Abernethy and Lougheed Limited took out about 25,000,000 feet.

Blair & Rolland, Limited
Lumber & Pulpwood
20 St. Nicholas Street, Montreal, Que.

Dressed as Required, Spruce and Pine

MILL RUN 1 in. x 4 x 10 ft. up
" 1 in. x 5 x 10 ft. up
" 1 in. x 6 x 10 ft. up
" 1 in. x 7 x 10 ft. up
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" 2 in. x 5/7 x 10 ft. up
" 2 in. x 8 x 10 ft. up
" 2 in. x 9 x 10 ft. up
" 2 in. x 10 x 10 ft. up
MILL RUN 3 in. x 4/5 x 10 ft. up
" 3 in. x 6 x 10 ft. up
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" 3 in. x 8 x 10 ft. up
" 3 in. x 9 x 10 ft. up

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1 x 4 up x 8 up—about 60 per cent. 12 and 13 ft.

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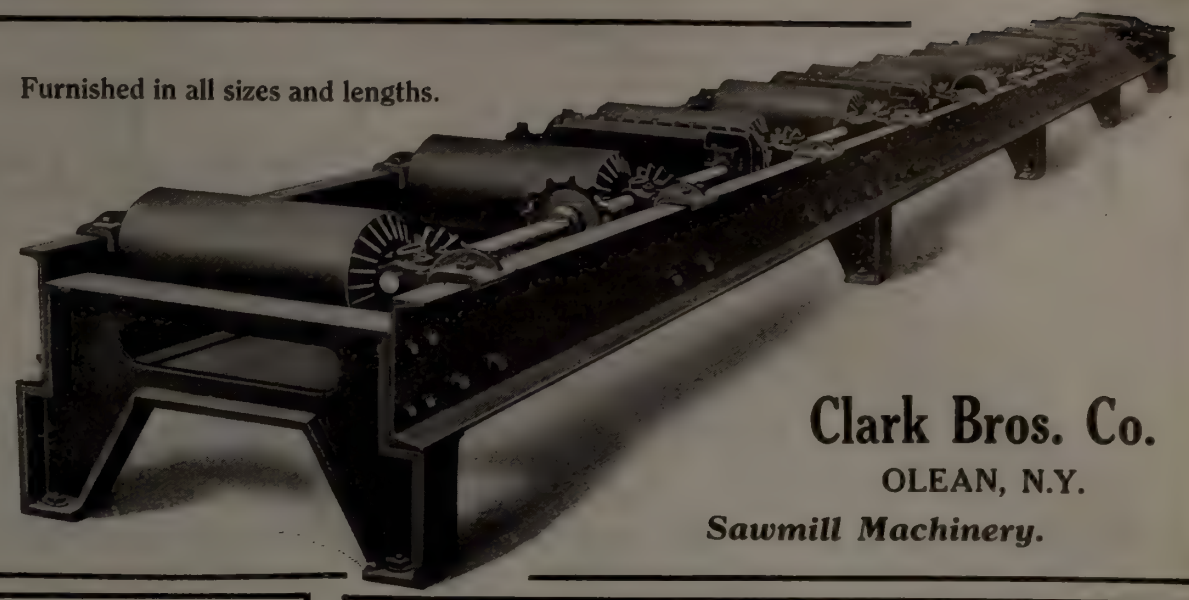

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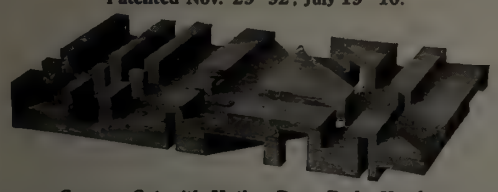

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Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

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Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa,
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Deputy Minister.

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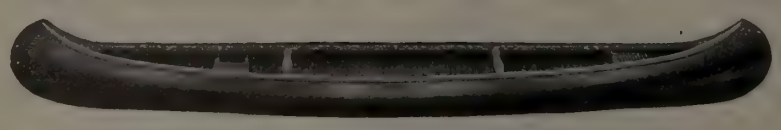
PETERBOROUGH CANOES



Our 16-ft. Canvas Covered Model.

Whether you want it for work or for pleasure The "PETERBOROUGH" is the best value obtainable.

We Build Boats for Every Purpose

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Peterborough, Ont.

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Made in sheet metal, covered with khaki waterproof duck, interlined with asbestos, size when closed 7 x 7½, with belt loops. Every outfit contains enough "canned heat" to cook nine hot meals. Extra cans of heat can be obtained at $2.50 per dozen wholesale. Write at once for samples, catalogues, and full details. Shipments now.

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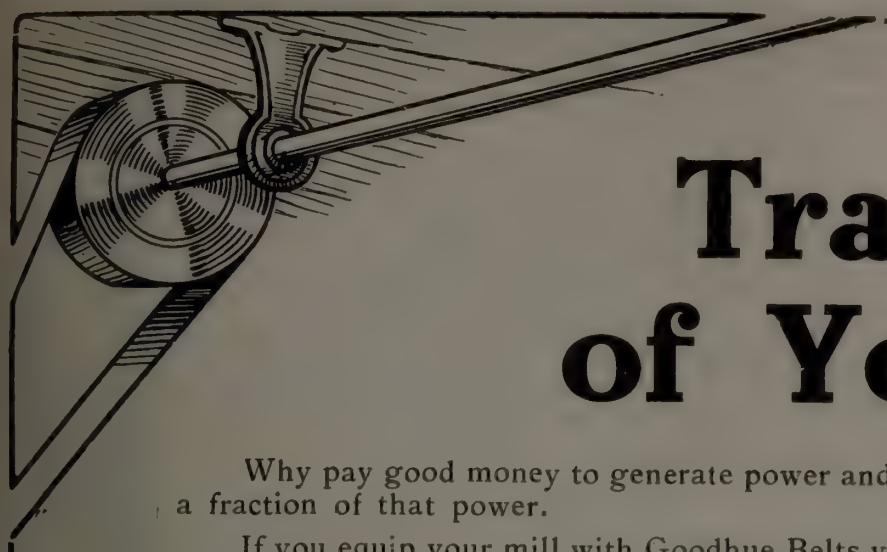

Transmit 100% of Your Power

Why pay good money to generate power and then employ a poor belt that will only transmit a fraction of that power.

If you equip your mill with Goodhue Belts you can transmit 100% of the power generated.

Goodhue Belts stretch 15% to 25% less than other belts and have just the right amount of "cling" on the pulley.

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Winnipeg Agents: Bisset & Webb, Limited, 151 Notre Dame Ave. East, Winnipeg, Man.
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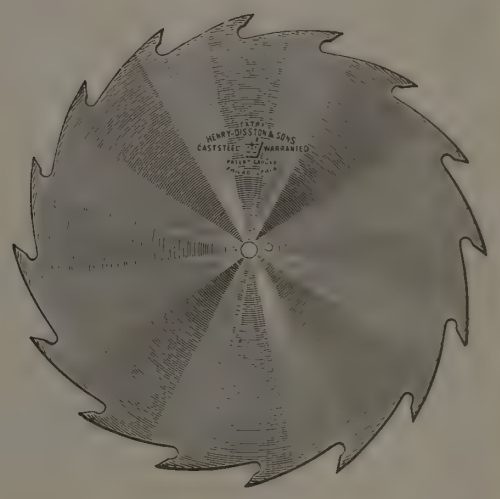
J. L. GOODHUE & COMPANY, LIMITED.
DANVILLE, QUEBEC CANADA.

DISSTON SAWS

have been made from steel made by us in our own plant since 1855. More than sixty years experience in the manufacture of saw-steel coupled with a study of operating requirements extending over three quarters of a century have resulted in saws of highest excellence.

In tension—, set—and edge-holding qualities Disston Saws are as near perfection as the world's foremost saw-makers can make them.



Where quality means economy, the proper test is service.

DISSTON CIRCULAR SAWS
DISSTON BAND SAWS
DISSTON CHISEL-TOOTH EDGERS

Henry Disston & Sons, Inc.

2-20 Fraser Ave., Toronto, Can.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1¼-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing ...	27 00	29 00
1 x 8 common and dressing ...	27 00	29 00
1 x 10 common and dressing ..	31 00	32 00
1 x 12 common and dressing ..	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ...		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft. ...		16 00
2 x 4 to 12, 10 and 16 ft. ..		20 00
2 x 4 to 12-in., 12 and 14 ft. ...		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet: 8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain..		31 50
Fir flooring, 1 x 4, edge grain..		35 00
Fir flooring, 1 x 4, flat grain ..		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1¼-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 25
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	40 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1st and 2nds, 4/4	42 00
Birch, No. 1 com. and bet., 4/4	35 00
Birch, 1st and 2nds, 6/4 and 8/4	45 00
Birch, 1st and 2nds, 10/4 and 12/4..	52 00
Birch, 1st and 2nds, 16/4	55 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4..	34 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet...	28 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	32 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1st and 2nds, 4/4	40 00
Hard Maple, common and better, 4/4	30 00
Hard maple, 12/4 & 16/4, 1sts and 2nds.	46 00
Red oak, plain 1st and 2nds, 4/4....	66 00
Red oak, plain, No. 1 com., 4/4.....	40 00
Red oak, plain No. 2 com. 4/4.....	32 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain 1sts and 2nds, 4/4.	68 00
White oak, plain, No. 1 com., 4/4....	40 00
White oak, plain, No. 2 com., 4/4....	32 00
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	66 00
Red and White oak, plain, No. 1 com. 5/4 and 6/4	43 00
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00
Red and White oak, plain, 1sts and 2nds, 8/4	72 00
Red and White oak, plain, No. 1 com. 8/4	48 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00
White oak, ¼ cut No. 1 common	57 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up $52 00		54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ...	29 00	30 00
Pine, No. 1 dressing shorts ...	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ...	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips ...	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips ...	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips ...	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	25 00	26 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x 10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11' ...	17 50	18 00
1"x 3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12 ..	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16' ...	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles:		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	70	75
According to average and quality, 30 to 35 feet	50	60

Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Quebec Spruce Deals		
12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00
Cuts and Better	
4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00
No. 1 Cuts	
1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00
No. 2 Cuts	
1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00
No. 3 Cuts	
1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00
Common and Dressing Mill Run	
1-in. x 4-in.	25 00
1-in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00
No. 1 Barn	
1 inch	31 00 45 00
1¼, 1½ and 2-in.	36 00 45 00
2½ and 3-in.	45 00
4 inch	50 00
No. 2 Barn	
1 inch	28 00 36 00
1¼, 1½ and 2-in.	30 00 36 00
2½ and 3-in.	38 00
No. 3 Barn	
1 inch	21 00 28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00 25 00
Box	
No. 1, 1, 1¼, 1½, 2-in.	22 00 25 00
No. 2, 1¼, 1½, 2-in.	19 00 23 00
Mill Culls	
Mill run culls, 1-in.	19 00
1, 1¼, 1½ and 2-in.	20 00
No. 2	17 00 18 00
Lath	
No. 1, 32-in. pine	1 80
No. 2, 48-in. pine	4 35
No. 1, 48-in. pine	4 85
No. 3, 48-in. pine	3 85
Hemlock Lath 48 in.	3 80

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	6 ft.	8 ft.	10 ft.	14x16 ft.
	S. 1 S. and 1. E.			
2 x 4, 6, 8..	14 00	17 00	20 50	21 50
2 x 10	18 00	18 50	21 50	22 50
2 x 12	18 00	19 00	23 50	23 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	21 50
2 x 4, 10, 18, 20	23 50
2 x 6, 8 to 16	21 50
2 x 8, 8 to 16	21 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	29 50
2 x 10 and 2 x 12; 8-16 ft.	26 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	28 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	30 50
No. 1 Common Boards	
4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50
Flooring	
4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00
Shiplap Finished	
6 inch	22 50
8, 10 and 12 inch	23 50
Siding	
6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	24 50
Lath	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50
PINE—ROUGH TIMBER	
3 x 6 in.; 8 to 16 ft.	27 10
3 x 8 in.; 8 to 16 ft.	24 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.....	27 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	29 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	20 50
2 x 4 in.; 12 and 14 ft.	21 50
2 x 4 in.; 10 and 16 ft.	22 50
2 x 4 in.; 18 and 24 ft.	23 50
2 x 4 in.; 22 and 24 ft.	24 50
2 x 4 in.; 26 to 32 ft.	26 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.....	23 00
2 x 10 and 2 x 12 in.; 18 and 20 ft. ..	25 00
2 x 10 and 2 x 12 in.; 22 and 24 ft. ..	26 00
2 x 10 and 2 x 12 in.; 26 to 32 ft. ...	28 00
2 x 14 in.; 10 to 16 ft.	28 00
2 x 14 in.; 18 and 20 ft.	30 00
2 x 14 in.; 22 and 24 ft.	31 00
2 x 14 in.; 26 to 32 ft.	33 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	24 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	25 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	26 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	27 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft. ...	27 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	27 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	28 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	28 50
FLOORING	
Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	
SHIPLAP	
B. C. Fir, 6 in.	22 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ..	23 00
No. 2 Shiplap, 6 in.	22 00
No. 2 Shiplap, 8, 10 and 12 in.	23 00
FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.	
Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00
SHINGLES	
XXX B. C. Cedar	2 75
LATH	
Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ⅜ x 1⅜ in. x 4 ft.	5 00

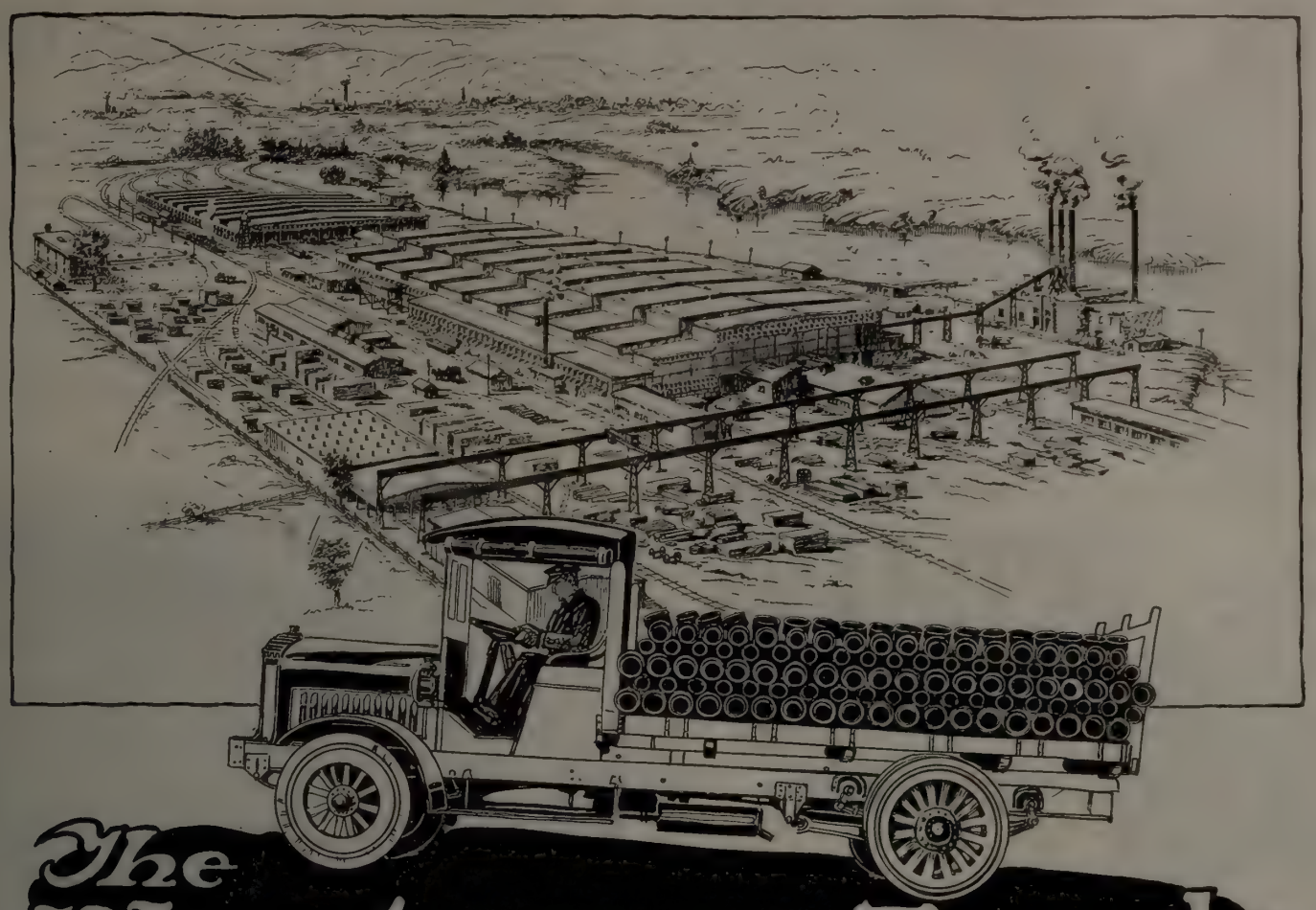
BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$94 00
Uppers 5/4 to 8/4	92 00
Uppers 10/4 to 12/4	97 00
Selects 4/4	84 00
Selects 5/4 to 8/4	82 00
Selects 10/4 to 12/4	92 00
Fine common 4/4	61 00
Fine common 5/4	65 00
Fine common 6/4	65 00
Fine common 8/4	67 00
No. 1 Cuts 4/4	51 00
No. 1 Cuts 5/4	57 00
No. 1 Cuts 6/4	59 00
No. 1 Cuts 8/4	61 00
No. 2 Cuts 4/4	32 00
No. 2 Cuts 5/4	43 00
No. 2 Cuts 6/4	45 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	33 00
No. 3 Cuts 6/4	34 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	46 00
Dressing 5/4 x 10	51 00
Dressing 5/4 x 12	52 00
No. 1 Moulding 5/4	58 00
No. 1 Moulding 6/4	58 00

Continued on page 62)



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National Steel Car Company, Limited

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No. 1 Moulding 8/4	58 00
No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	37 - 39	24 - 26	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

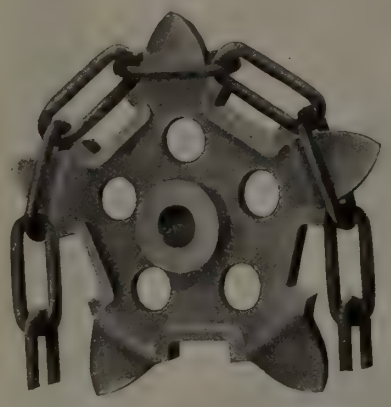
4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in...	96 00	98 00
Selects, 1 to 2 in.	85 00	88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	70 00	74 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	37 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 00	34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	28 00	29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		23 50
Spruce, 8 in. and under dimen.		27 00
10 and 12 in. random lengths, 10 ft. and up	25 00	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	23 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	23 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	20 00	21 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	21 00	22 00
1¼-in. spruce laths	4 15	4 25
1½-in. spruce laths	3 85	4 00

New Brunswick Cedar Shingles

Extras	3 40	3 50
Clears	2 90	3 00
Second clears	2 40	2 60
Clear whites	2 25	2 30
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.	3 60	3 75
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear	3 50	3 00



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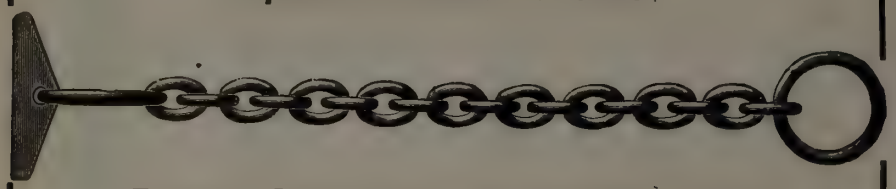

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Induced draft for twelve return tubular boilers is furnished by two Sturtevant Multivane Fans, each driven by a Sturtevant Horizontal Steam Engine. Only one unit is used at any one time, the other being held as a reserve.

The hot gases are drawn from the fan and are blown into a centrifugal separator which allows the gases to escape through a chimney at the top. Cinders drop out through the outlet at the bottom, falling into the river below.

Sturtevant mechanical draft engineers have made a thorough study of the burning of sawdust and mill waste and can give valuable advice to Superintendents. Why not investigate our proposition?

Write at once, giving full details.

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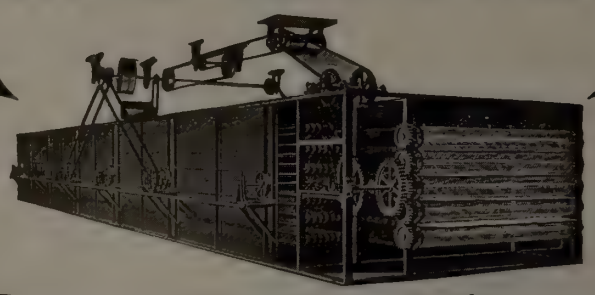

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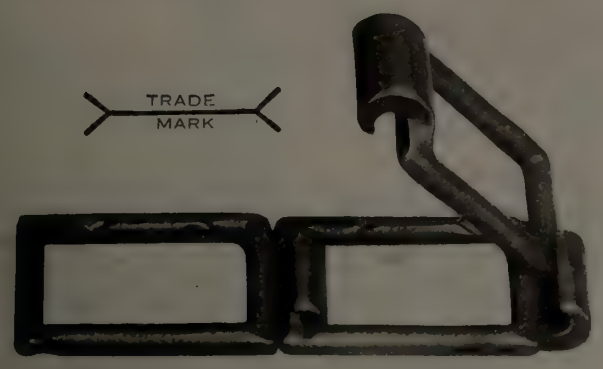

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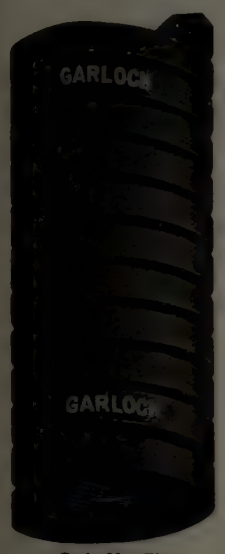

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CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

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VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

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There is a distinct advantage in using **Atkins Segment Ground Cross Cut Saws.**

You will realize this fact when you try them.

By actual test we are cutting 25 per cent. more timber with least cost for refitting. Let us send you our book "C.L." Write for it to-day. ATKINS PERFECTION No. 5 and No. 69 EUREKA FALLING SAWS are the most popular Saws in Canada to-day. Send us your name for further information. Let us tell you what these Saws are doing. Then you can use your own good judgment later on.

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Makers of Sterling Saws

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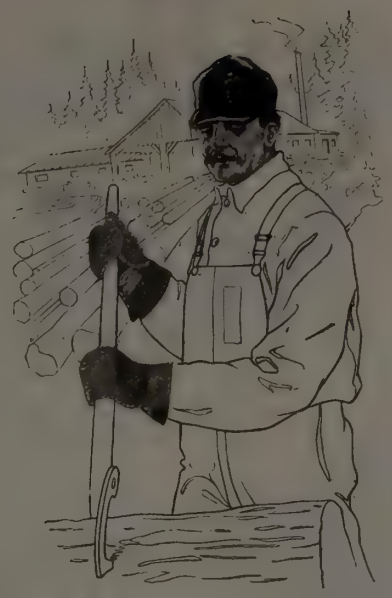
Insure Your Hands



We've been 40 years learning how to give you the greatest work glove value for the money.

ASBESTOL
REG. IN U.S. PAT. OFF.
EISENDRATH'S CELEBRATED HORSE HIDE

Gloves and Mittens

are worn and endorsed by thousands of lumbermen.

DEALERS: "ASBESTOL" Gloves and Mittens are sure repeaters. Order from your wholesale house and ask for selling helps.

Eisendrath Glove Company

2001 Elston Ave. **CHICAGO, ILL.**

Made in U. S. A.

A Lumber Mill

in Maine recently tested a coil of Plymouth C Ship Sisal Lathyarn against a coil of another brand in the corresponding grade.

The Plymouth coil outmeasured the other 2800 feet, or an average of over 21 feet for each of the 130 threads.

Plymouth Lath-Yarn

will invariably equal or outmeasure other yarns. Plymouth's full yardage, uniform strength and superior weather-resisting qualities make it the most satisfactory and economical lathyarn on the market today.

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'O' PLYMOUTH MASS. WELLAND, ONT.

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Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

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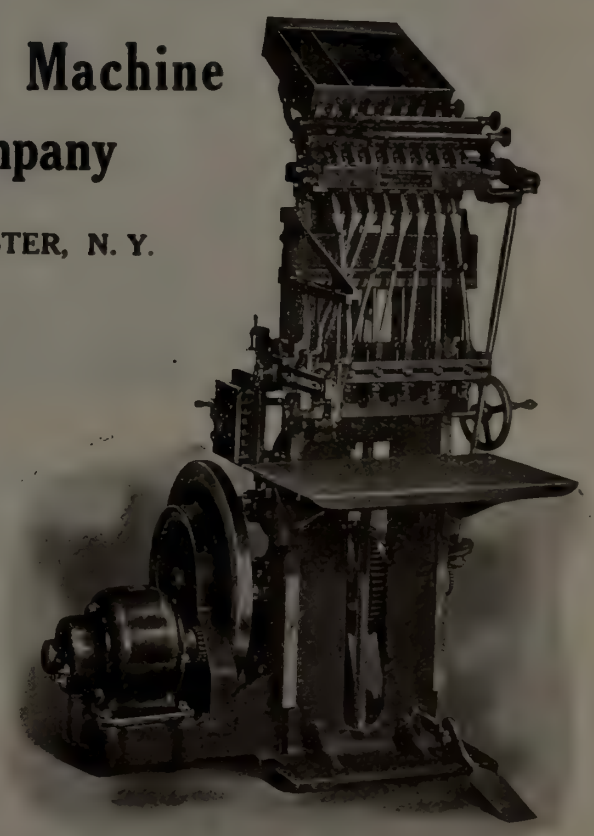
ROCHESTER, N. Y.



Manufacturers of—

Nailing Machines,

Lock Corner Box Machinery,

Box Board Matchers,

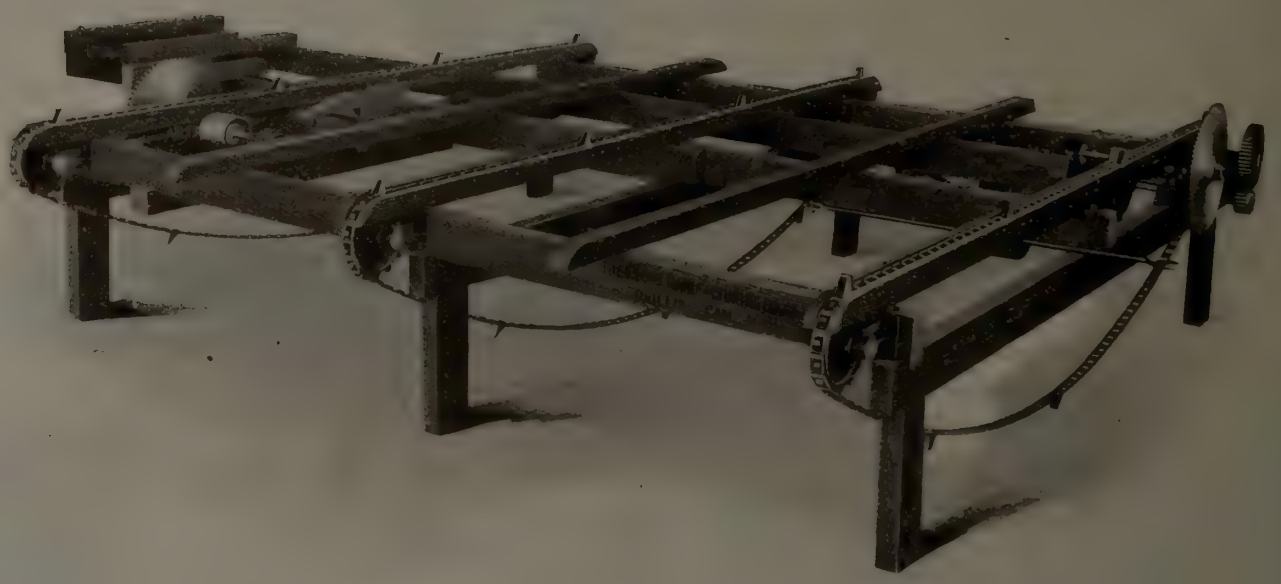
Box Board Printing Machines.

Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the **Morgan Machine Company** for latest developments in machinery for the Box Industry.

Morgan Machine Company

ROCHESTER, N. Y.

Overhauling Your Mill



When overhauling your mill get in touch with us about repairs and new parts. We give special attention to the maintenance of all kinds of saw mill machinery. Some of your equipment can doubtless be more profitably replaced than repaired. Let your new machines be "Long's".

The illustration shows our No. 2, two saw, left hand trimmer. The machine is substantially built and gives a large output with low power consumption.

Ask us for our catalogues

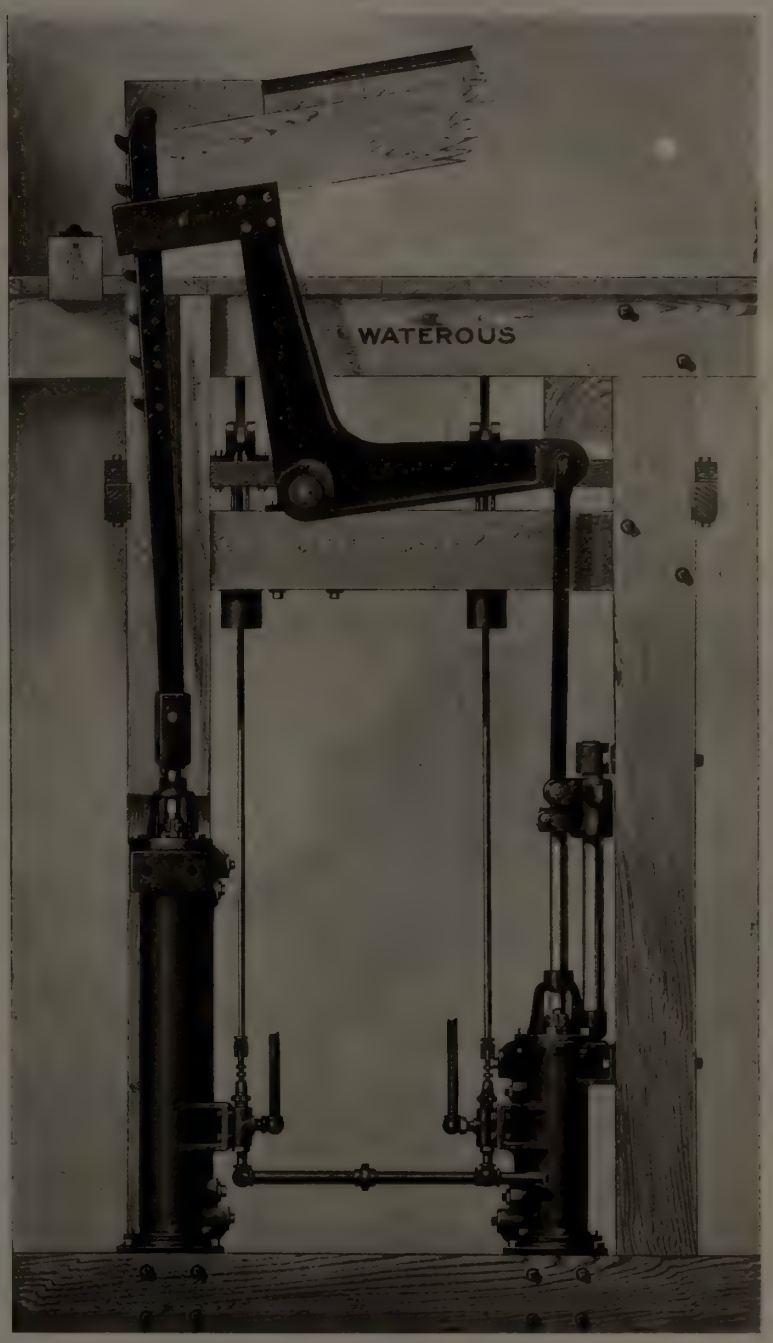
The E. Long Manufacturing Company
Limited
Orillia - Ontario

A Steam Nigger for Medium Mills

One drawback of the ordinary Steam Nigger is the fact that it requires an expert to handle it. Only a slight skip on the part of the operator is sufficient to cause disastrous results.

Where the carriage is of medium weight, unless in the hands of an experienced man, the danger of wrecking the carriage is especially great.

The **Waterous Kendall Nigger** is practically *accident-proof.* While it possesses both the speed and power of the ordinary Steam Nigger, it is so designed that a green operator can do quick and effective work without endangering the carriage in any way.



WATEROUS KENDALL NIGGER

By attaching the Nigger Bar to *one* cylinder only, one motion of the operating lever turns the log and *a quite distinct and separate motion* is required to load it.

The stroke of the cylinder controlling the loading motion is made very short and thus further precludes the possibility of a serious mishap.

The **Kendall Nigger** is constructed to be powerful and rapid in action. The cylinders are 10 in. and 8 in. in diameter, pistons are steam cushioned at both ends of stroke, valves are adjustable to permit increase or decrease of operating speed without affecting the power of the machine.

Nigger Bar is of wrought iron, dogs are extra wide, top dog is winged, a steel roller is supplied. No Floor plate is necessary. All lever and crank connections are made short and direct, so that the machine gives instant response to the movements of the sawyer's lever.

A great many of these Niggers are already in use in mills, where speed and accuracy on the log deck are essential, but where a medium weight carriage is operated. If your conditions are similar the **Waterous Kendall Nigger** will give you unequalled satisfaction. ***Ask for details and descriptive catalogue No. 123.***

OUR LOG DECK EQUIPMENT INCLUDES:

Log Loaders	Oscillating Niggers
Kickers	Cant Trips
Flippers	Board Lifters
Stationary Niggers	Log Turners

The Waterous Engine Works Co., Ltd.

H. B. Gilmour, Vancouver, B.C. BRANTFORD, CANADA Branch—Winnipeg, Man.

"FROST KING" METAL

$5,000,000.00
worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. **Price 30c per lb.**, Fort William and East; West of Fort William **35c per lb.**, delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

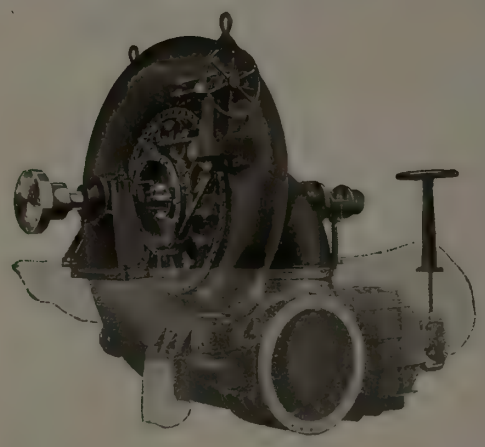
Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Smith Hydraulic Turbines

for driving the

Paper Mill and Pulp Grinder



This type of equipment specially designed for high head developements.

Our particular claim for these turbines is service, the kind of service that responds to the demand

Promptly and Efficiently

Write for Bulletin F

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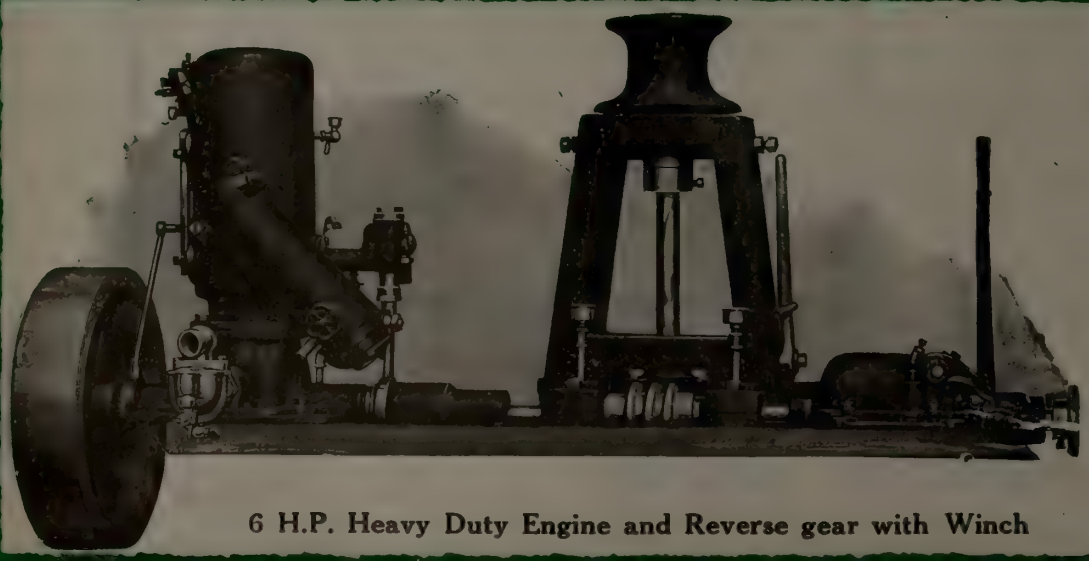
The J. C. McLaren Belting Co.

Limited

General Mill Supplies MONTREAL



6 H.P. Heavy Duty Engine and Reverse gear with Winch

River Driving Costs

will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

Adams Launch & Engine Co.

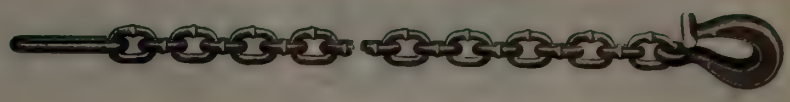
Penetang, Ont.

Canada Lumberman
Wood Worker

WATER WHEELS GOVERNORS, PUMPS

Highest quality

Boving Hydraulic & Engineering Co.
LINDSAY, ONT. Limited



Made in all styles

Electric-Welded Boom Chain

We also specialize
Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

You can dry and cure lumber better in three weeks by using

Canadian Dry Kiln Apparatus with Humidity Control

than if it were air dried for 2 years. And your lumber will not warp or check, or be subject to severe expansion and contraction.

Write Dept. 17 for further particulars.

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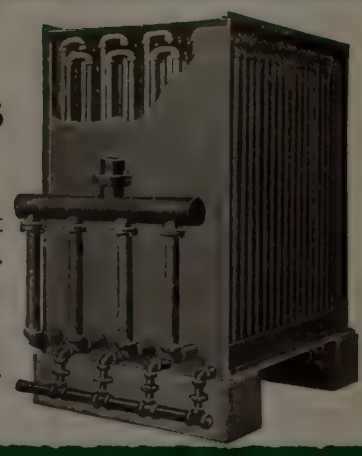
St John Montreal Toronto Winnipeg Vancouver



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We manufacture practically every article that can be made of Asbestos—including

Asbestos { Packings, Boiler Gaskets, Pipe and Boiler Coverings

Turner Brothers Canada, Limited
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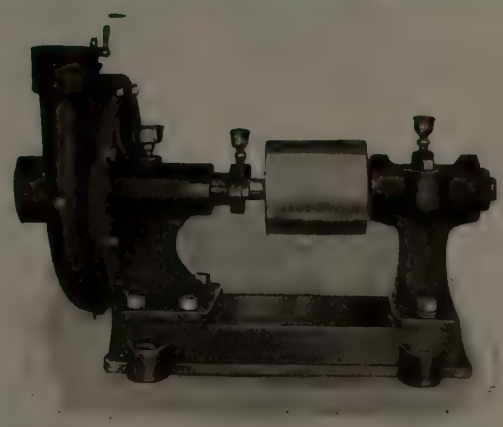

When next in the market for

PUMPS

let us figure on your needs.

The Smart-Turner Machine Co., Ltd.
Hamilton, Canada

Morrison Lumber Measuring Register

Keep Tab On Your Stock

The Morrison Lumber Measuring Register can be used in the saw mill, planing mill, woodworking plant and retail lumber yard. It can be quickly attached to any machine and is guaranteed to accurately measure every stick as it is fed under the wheel of the register. It saves you money, time and labor.

Write for detailed information.

The James Morrison Brass Mfg. Co. Limited
93-97 Adelaide St. W., Toronto

J. M. T. Steam Specialties

We make a high-grade line including Reducing Pressure Valves, Pop Safety Valves, Injectors, Ejectors, etc., etc.

Classified Directory to Advertisements, Page 66

COSTS LESS PER DAY

AMPHIBIA BELTING

COSTS LESS PER DAY

Put Good Belting

on your

Good Machines

Your machines are expensive, and naturally you expect them to turn out the quality and quantity of work commensurate with their cost.

Then why harness them with belting which cannot begin to do them justice?

Use

"AMPHIBIA"

Planer Belting

and get the most work from your machines, in the quickest time, at the lowest cost per day of service.

Try a sample run of "AMPHIBIA" Planer and prove its merits.

"Leather like gold has no substitute."

Sadler & Haworth

Established 1876

Tanners and Manufacturers

For 40 Years Tanners and Manufacturers of the Best Leather Belts

MONTREAL, 511 William Street

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"AMPHIBIA"

The FLEXIBLE WATERPROOF BELT

"AMPHIBIA"

Geo. Gordon & Co., Limited

Cache Bay, Ontario

RED and WHITE PINE

Cross Arms, Shaped, Bored and Painted

3¼ x 4¼ x 3′ 6″	2000 pcs.
3¼ x 4¼ x 4′	1600 "
3¼ x 4¼ x 6′	2300 "

Cross Arm Material D 4 S

3¼ x 4¼ x 4	12000 pcs.
3¼ x 4¼ x 6′	9000 "

All Selected Norway.

Dressing done on short notice. ***Send us your inquiries.***

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

QUALITY LUMBER

HEMLOCK

Mills will commence cutting about May 1st.

Send along your Special Bills and let us figure with you.

Cutting at Bala on C. P. R. - - Cutting at Bracebridge on G. T. R.

SPECIAL OFFER THIS WEEK
250,000 4 x 5-10/16" Mill Run Spruce

Have You Tried a Sample Car of T & G QUALITY BRAND B. C. SHINGLES?

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852 Cambie Street
Vancouver

Terry & Gordon
Wholesale Lumber Merchants

Head Office
704 Confederation Life Bldg.
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Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

SPRUCE

50,000	-	2 x 4—10/16	-	No. 1 Spruce
45,000	-	2 x 8—12/16	-	"
25,000	-	2 x 10—12/16	-	"
13,000	-	2 x 12—12/16	-	"

HEMLOCK

100,000	-	1 x 4 and up 6/16	-	No. 2 Hemlock
150,000	-	2 x 6 " "	-	"
50,000	-	2 x 4 "	-	"
20,000	-	1 x 4 and up 10/16	-	No. 1 Hemlock
20,000	-	2 x 6 " 10/16	-	"
50,000	-	2 x 8 14	-	"

PINE

1 Car	-	1 x 4 12/16	-	Mill Run White Pine
1 "	-	1 x 5 "	-	" "
1 "	-	1 x 6 "	-	" "

The Long Lumber Company

HAMILTON, ONT.

Mobilized

Have you all your resources and available means mobilized for a drive to capture bigger business? In mobilizing don't forget

Hocken's Hemlock

We are mobilized and are running double tower to fill our orders. Better get our prices.

Hocken Lumber Co., Limited

Otter Lake Station, Ont.

HIGH GRADE

B. C. DOUGLAS FIR, CEDAR, SPRUCE and WHITE PINE

in

FLOORING - V MATCH - BEADED - CEILING - SIDING - TRIM - MOULDINGS
SILO STOCK - BOAT LUMBER - LADDER and TANK STOCK
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WHOLESALE LUMBER MERCHANTS

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Pine and Veneered Doors

Our pine and veneered doors for domestic and export trade are made on the principle of "Not how cheap, but how good."
Our guarantee of faultless workmanship and choice materials goes with every door.

SEND US YOUR ENQUIRIES

Benson & Bray, Ltd., Midland, Can.

Bartram Brothers

Cable Address, "Bartram"
Code, ABC 5th edition.

Ottawa, Canada

Limited

Red Pine

Spruce

"SPECIAL"
Mill Run Spruce, Bone Dry

1 x 3 x 8/16	-	-	*85,000*
1 x 4 x "	-	-	*200.000*
1 x 5 x "	-	-	*255,000*
1 x 6 x "	-	-	*390,000*

White Pine

Shingles——————Lath

EXPORTERS OF DEALS TO U. K. AND EUROPE

Watson & Todd Limited
OTTAWA
DRY 1½" NORWAY

1915 CUT 1½" SPRUCE
In Good Shipping Condition
Send us your enquiries

The
Harris Tie & Timber Co.
Ottawa - Canada
Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

Fraser Limited
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Rough and Finished
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Head Office and Mills at:
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We offer for Immediate and Spring Shipment
dry stock 1915 cut in all grades.

Our production is the largest in Canada.

Our Shingles are uniform in quality, being well manufactured and graded.

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Prices and Terms alike to all buyers

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Manufacturers of

SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

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HARDWOOD LUMBER

Dimension Stock, Mattress Frames, Hard and Soft wood slabs cut to lengths required. Hemlock, Cedar, Posts.
Orders receive prompt attention.
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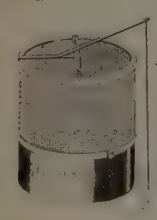

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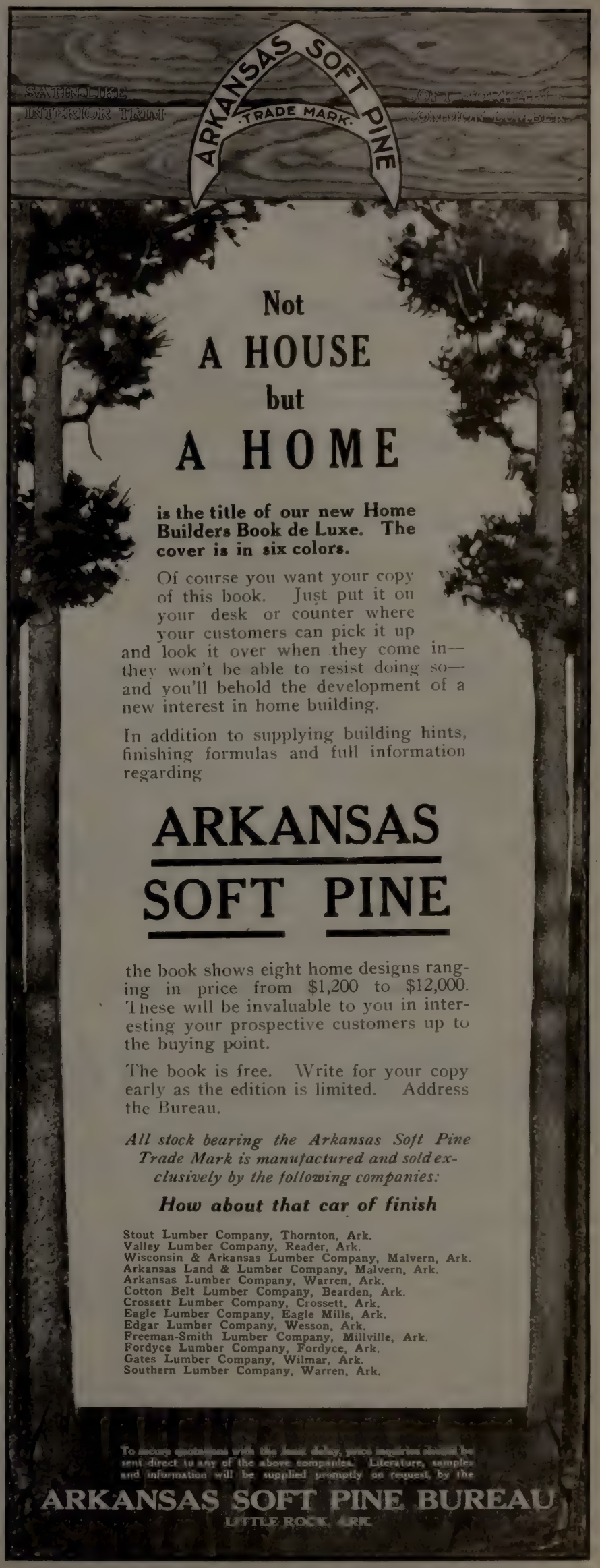

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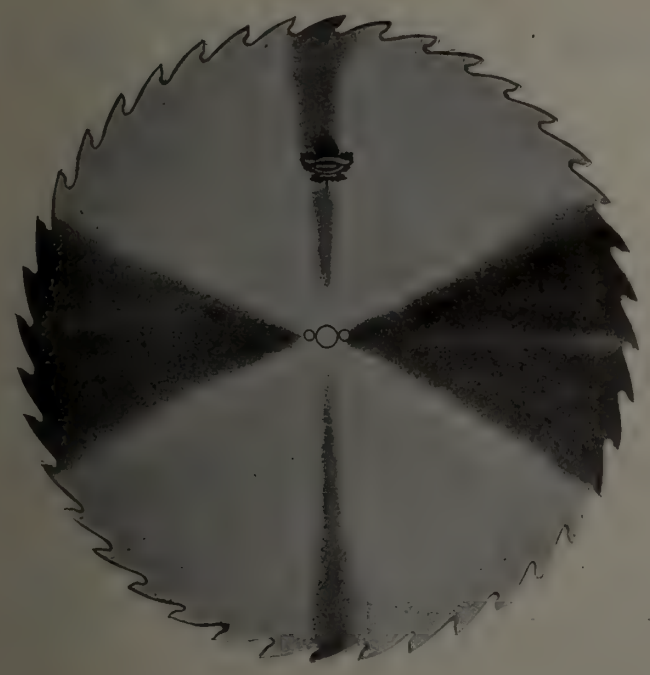

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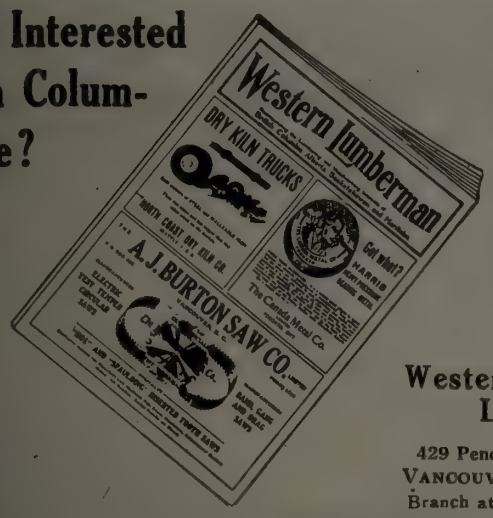

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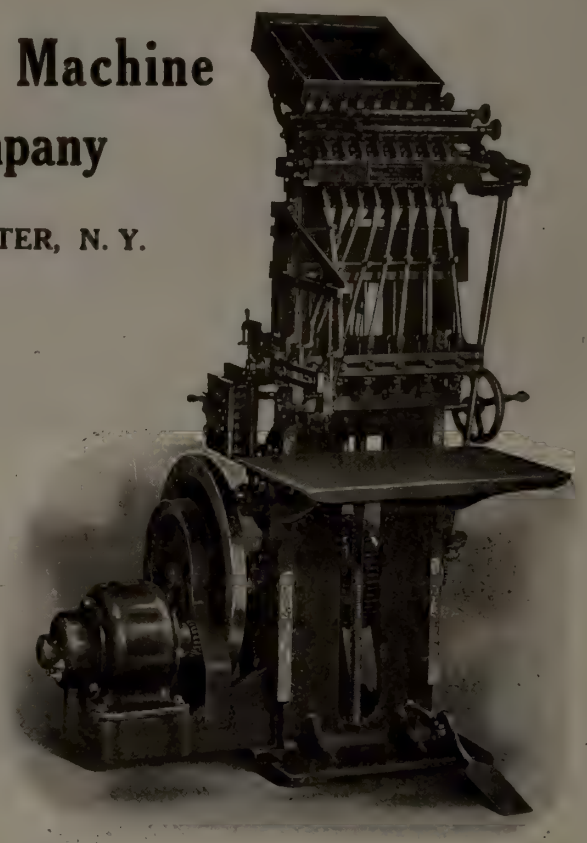

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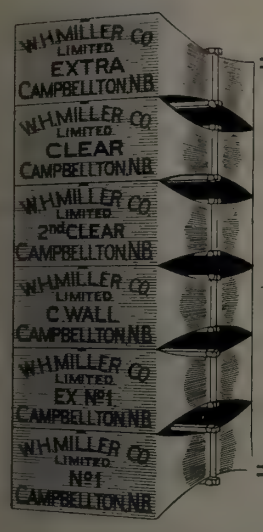
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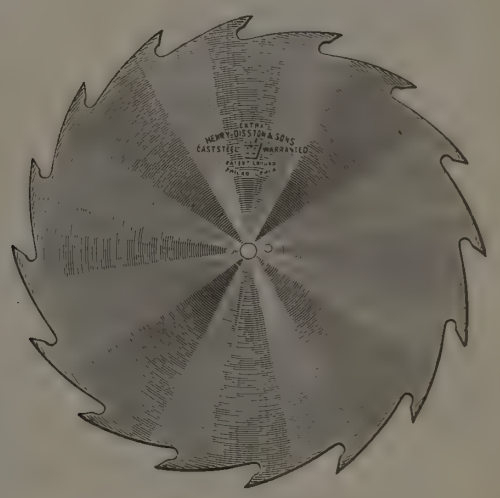

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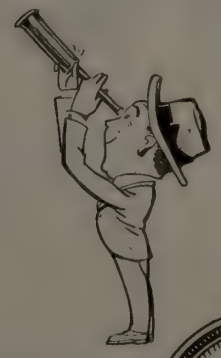

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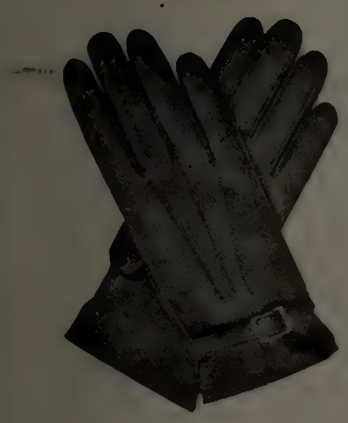

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TORONTO **MONTREAL** **WINNIPEG**

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Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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What Per Cent. Efficient Are You?

Something unique in the way of business study is furnished by a retailer in the Southern States who gave an address at one of the large conventions of lumbermen recently held. We have all read and heard so much about "System" that we have grown rather tired both of the word and the idea which it represents, because it has been so set up and worshiped as a fetish, often to the real neglect of other business factors that are of equal importance. The application of genuine "System" and so-called "System" to business conditions has been worked out in such wealth of detail that something in the way of revulsion is awakened by the mere mention of the word. We do not imply that the proper study of "System" as it applies to our individual business requirements is to be neglected, but that it has been overdone and that we need to be careful lest we make too much of it, to the detriment of the rest of our business details.

However, the idea we now have in mind is something new to us along this line, being a suggested method for making a detailed analysis of one's own business ability and personal equipment, and finding out to what per cent. he is efficient. As worked out in detail, this idea is presented elsewhere in the present issue, in an address delivered by Mr. R. J. Tolson, who has drawn up a fairly comprehensive list of important qualifications for a retail lumberman. These he reduces to their most elementary and easily understood forms, tabulating them under 16 heads and then leaving it with his hearers, or readers, to make their own personal applications, entering up the resulting figures and arriving at a definite conception of their own efficiency. While the writer does not set this idea forward as a practical, or scientific solution of the whole problem of analyzing business efficiency, he has furnished us with something quite valuable in the way of a means for getting at the truth about ourselves in a frank and easy manner. The idea is, in fact, applicable to all varieties of business men. A great many business men regard themselves as 100 per cent. efficient. An honest analysis along the lines suggested in this plan would probably surprise most of them.

Mr. Tolson's method may be faulty. It may not be comprehensive. It may omit consideration of some very important elements. However, it does provide a suggested plan which can be applied, with variations, to every man's individual case. The general rules laid down are quite good, and it rests only with the individual to make the necessary variations and apply the scheme to his own case honestly. He will then know, far more definitely than he ever did before, just where he stands in regard to his own business ability. Unfortunately, this scheme, laudable and interesting as it is, provides only a means by which a man may size up himself; not a means by which one man may size up another. But even at that, it is quite a timely contribution to our study of "System" and our modern tendency to make the most of ourselves, our equipment, and our activities.

One of the most interesting features of this plan is that it attaches no importance whatever to either capital or luck. Capital is extraneous to the man; has nothing whatever to do with his personal ability. Luck, if there be any such thing in the business world, is so fickle that it cannot be subjected to analysis. The efficient man usually puts himself oftenest in the way of luck, and finds it easier to make an alliance with capital. To see what your own rating is in the efficiency market, read this article by Mr. Tolson, then apply its principles honestly to your own case. It may open your eyes; it will at least do you a lot of good.

The Wide Awake Retailer—A Man of Many Parts

Much of the success of the lumber industry is undoubtedly dependent upon the manner in which the retail lumber trade is conducted. Every wholesaler, calling upon retailers, has the man whom he visits pretty definitely classified in his own mind into two general divisions, which include, in the first class, those who are alive to the possibilities of increasing their trade, and in the second class those who are more or less dead ones. We are reproducing elsewhere in this issue a portion of an address delivered recently before a lumbermen's association by Mr. J. C. Dionne, who told very forcibly how a retailer can get everything possible in the way of trade out of his district. In the first place the suggestion is definitely put forth that, in order to realize all the possibilities of his business, it is necessary for the retailer to consider his ability to serve his customers. No matter in what kind of a community a retailer carries on his trade this fact holds good. Either in a large town where there is a great deal of building in progress or in a comparatively quiet farming community the retailer's key for opening the door of success is his ability to serve—and by serving we mean today far more than we meant a few years ago. This fact is brought out very definitely by contrasting the equipment of a dealer a decade or two ago with the equipment of a modern dealer. The former carried a stock of building material and he knew a good deal about it. With his knowledge and his stock he was supposed to have acquired all that was necessary to conduct a successful retail lumber business. Today, knowledge and stock are important in their way, but they constitute only a portion of what a dealer must have if he wishes to do a successful trade.

Business does not come to a man of its own free will nowadays, as it used to do, to some extent, in the good old days of our forefathers. Getting a man's business is no longer a matter of keeping materials in stock and delivering them to him when he happens to want them. Getting business is a wonderfully complex matter today. It has its material side relating to stocks, equipment, yards, etc., its office side, relating to bookkeeping, management of employees, etc., and its psychological side relating to the creating of a demand, the foreseeing of possibilities in the way of demand, the turning of these possibilities into realities and the directing of the demand into the channels of your own trade.

None of these features of progressive trading can be neglected nowadays. They work together to produce the final result, in so intimate a manner that if one of them is neglected the efficiency of all the others is greatly impaired. Starting from the position of the old

timer with his stock and his knowledge about it, there comes next the manner in which the stock is kept. The yard can be made to bring trade just as surely as a good traveller can be trained to get orders. A yard should almost speak to the people who visit it or pass it by. It should be kept in attractive order; its fences, sheds, etc., should be neatly kept up and they should all help to illustrate the attractiveness of lumber for its various uses, by being well constructed and brightened wherever possible by the use of well selected color schemes worked out in good paint. Similar ideas apply to the office. A man or a woman entering the office ought to commence unconsciously as a result of what he or she sees, to think how nice this, that or the other material which is displayed would look in their own home, or how its use could be adapted for purposes which would help in their home decoration or improvement. The retailer's own house even should be made, so far as possible, to act as an example for his fellow citizens. No matter how humble his home may be it will be a standing advertisement, or the reverse, for the lumber yard, according to the way in which it is kept.

And talking of advertisements, the retailer has a great opportunity in connection with his trade, in his judicious use of advertising space in his local papers. There is nothing which gets quite so intimately under the skin of the ordinary citizen in a large or a small community, as the pointers and information generally, which appear in his local newspaper. The retailer is losing the service of a great salesman if he does not use advertising space of this kind scientifically. No mere mention of one's name in an advertisement will do good. The basis of good advertising is suggestion. It should be used to suggest the variety of stocks carried and their wide range of usefulness, driving the point home in every case with definite examples known to appeal directly to the people of the community in question. There is nothing quite so easy to waste as newspaper space and nothing which will bring greater results than the printed word judiciously adapted to appeal to the man who has money to spend. These ideas are strongly set forth in Mr. Dionne's article. It will repay careful study by our retail readers. We are certain that no retailer can read it without starting a useful train of thought about his business methods.

Recruiting Methods—Why Not Modernize Them?

Dean Cappon, of Queen's University, voices the sentiments of a very large percentage of the Canadian people when he says: "Let there be decent consideration for those who think they have good enough reasons not to go, at least as yet, to the war."

Possibly, if Dean Cappon spoke all that is in his mind, he would put it more strongly. Doubtless he has seen the ill-advised methods of recruiting that are being utilized from day to day by the rank and file of various battalions. Doubtless he realizes that the present system of semi-coercion has little to commend it, and, in a very large number of cases does more harm than good. Its biggest weakness, perhaps, is that it fails to discriminate between the man who holds back because he is a coward and the man who delays because his intelligence tells him that his proper place, as yet, is where he is.

The methods of recruiting as practised in Canada, if Toronto may be taken as a criterion, lack nothing so much as intelligence and good sound horse-sense. There is ample and laudable enthusiasm—but misdirected. Khaki enthusiasts fail to see, or refuse to see, that the business of the country is next in importance to the war, and as such demands fair consideration. They fail, or refuse, to see that many a young man, however desirable as a member of their unit, may be, by comparison, still more useful as a civilian in this present time of stress. They fail, or refuse, to grant to the intelligent individual the right to use his own judgment as to when is the proper time for him to give up the one and take hold of the other. In other words, the present system of recruiting is specially designed for the dilettante, the indifferent, the man lacking in moral and mental fibre; it is a reflection on the patriotism of the man who does his duty as he sees it.

All of this, and more, no doubt Dean Cappon has prominently in mind when he makes a plea for merely "decent consideration" for the men who do their own thinking. If these men had followed the line of least resistance many of them would have been in uniform months ago. Fortunate it is, as we see it, that, in the absence of the slightest apparent effort on the part of our Government to cope with this problem of filling up the ranks of the numerous battalions they have authorized, there are men strong enough to brave the jibes and insinuations of miscellaneous, misguided recruiting agents. They are simply juvenile attempts at a man's job! How can we combat efficiency except with efficiency?

The men who are strong enough to "think" to-day, men who are strong enough to resist following the lines of least resistance, cry out for some movement on the part of our Government which will enable us, as a nation, to carry on our share of this war in such a way as to conserve in the best possible manner our fighting resources—present and future. There is not a man of these who is not ready to go when and where he is told—if the authority who gives the order—**knows.** Why doesn't our Government find out? Why hasn't it an inventory of every citizen of Canada, that it could say to him, "Here is your place!"? But instead of acting, our Government delegates this authority to the illiterate private in the ranks, and, indirectly at least, authorize the man of small intelligence to badger and coerce the man who sees his duty clearly and is doing it. Why cannot our Government move in this matter?

The Retailer and the Salesman—How their Interests Coincide

In these days, when the salesman who represents a mill or a wholesale firm has more time than usual to devote to a consideration of how he stands personally with his customers, it will repay him, and the retailer also, to give the subject more than a passing thought. In fact it will be to their benefit to give the matter pretty extensive study. In the first place the relation of the salesman and the retailer is something far more intimate than that of the ordinary dealer and purchaser. In order to produce the best results, both to the retailer and to the salesman, their relationship should be of a peculiarly intimate nature. Their business interests overlap at many points. They can be mutually helpful or otherwise, just in proportion as they realize this fact.

Take the case of the retailer, for instance, and think of what he gets from the good salesman who is anxious to serve him as thoroughly as possible. He gets, in the first place, stocks of lumber. He gets also, a great deal of valuable advice about prices and available supplies, and he gets an acquaintance with the grades of lumber that are best suited for his special line of trade. Then take the salesman's case! he gets from the retailer, not only orders for stock, but knowledge about the requirements of the local and surrounding markets and valuable information about what may be required in the near future. He learns of opportunities that are continually developing for moving certain lines of stock of which his firm may have a long supply. He learns in advance of requirements that will make it profitable for his firm to buy stocks which he knows where to locate. We might enlarge this list of mutual interests almost indefinitely. It points clearly to the necessity for co-operation on a very friendly and intimate basis.

It will pay both parties therefore, to cultivate each other's friendship carefully. Business conditions today not only make this co-operation possible, but encourage it. When a salesman calls upon a retailer he only has a few calls, at the most, to make in the one town, and it will frequently happen that both parties can afford time for a friendly discussion of trade affairs, for the purpose of developing these lines of mutual assistance.

While on this subject, one of the most important factors that the salesman can bring into play comes to mind, namely, his knowledge of

grades and values, by means of which he can assist the retailer to lay in such stocks as will make his trade more profitable. He becomes, after calling upon the trade for any length of time, intimately acquainted with the requirements of the various districts, and he can give the retailer valuable advice and sell him stocks which are specially suited both to his purse and trade. Giving the retailer value for his money is something to which the salesman cannot devote too much attention. In the United States, during the past year, a factor has come into play in this connection which is of much significance, namely, trade-marking of lumber. At the bottom of this idea is the fact that a mill which is proud enough of its output to place a trade-mark upon it by which the consumer will know where it comes from, must be turning out something of superior quality which the purchaser can depend upon being maintained in future shipments.

A good line of lumber bearing a trade-mark would invariably appeal more to a retailer and to a consumer than some other line of equally high quality which does not bear any trade-mark. It is human nature to prefer an article in which the manufacturer has such confidence as to identify it with a definite mark. This plan of trade-marking lumber has not yet come into existence in Canada to any extent, if at all. But it has such advantages in its favor that we believe the success of the idea in the United States will lead to its adoption in Canada to a greater or less extent in the near future. After all, the man whom it is more important to please than all others is the one who is going to use the lumber, and the surest way of pleasing him is to sell him a line which serves his purpose well and which he can depend upon obtaining again when he needs a new supply. Even without a trade-mark it has always been in exact proportion to the certainty with which a salesman can guarantee his goods and furnish repeat shipments of equal quality, that his business has flourished. In other words the man who can deliver just what the purchaser desires, both now and in the future is the one who will get and keep his trade, and in reaching this conclusion we come back to the fact which we put forward in starting this article; that the surest way to enlist the sympathy of a retailer is to get at his personal side, by talking over trade with him and endeavoring to make him, not only a customer, but a personal and intimate trade acquaintance, who will buy your goods and co-operate with you in the exchange of useful information about the many important interests which you both have in common. Co-operation means increased trade for both parties.

Creosoted Blocks the Ideal Pavement

The only complaint against creosote blocks for wood paving has been overcome, it is reported, through a process developed at the Forest Products Laboratory maintained by the United States Government at Madison, Wis. The opponents of wood paving have used in their arguments the fact that with certain conditions of treatment the pavement is liable to "bleed" during hot weather. By this term is meant that the oil oozes from the blocks and forms a black, sticky mass over the entire street. This is of course annoying to residents along such streets and the Forest Products Laboratory has been investigating the problem with a view to preventing "bleeding." A process has been perfected whereby blocks treated with creosote and exposed to the direct rays of the sun on some of the warmest days or even when placed in an oven where a temperature of 212 degrees Fahrenheit is maintained, remain perfectly dry. It is expected that this process will be adopted generally.

Creosoted wood blocks, already extensively used as paving material for city streets, have been coming into use as flooring for the last four or five years, according to the Forest Service. Its durability, noiselessness under heavy traffic, and sanitary properties are its chief advantages for paving and also give it special value for making floors, especially for use where heavy trucking, the moving of heavy machinery, or other severe use makes the maintenance of floors a serious problem. Its rather high cost is its chief disadvantage.

Wood block is now widely used for flooring in factories, warehouses, machine shops, foundries, various types of platforms, wharves and docks, and for such miscellaneous purposes as hotel kitchens, hospitals, laundries, and slaughter houses. Possibly one of the oddest of these uses is for the floors of wild animal cages and runways. Notwithstanding the recent increase in the use of wood block for these purposes, it is believed that the growth of this industry will be even more rapid in the future. These floors are well liked by the workmen because they are easy on the feet.

Most of the blocks for these floors are now made of southern yellow pine. Hemlock, larch, Douglas fir, black gum, beech and maple are also used. The blocks are sawed from long sticks of timber and are treated in huge steel cylinders from 6 to 7 feet in diameter and 100 feet or more in length. Creosote oil is run into the cylinders and pressure is then applied to force it into the wood. The oil is a product obtained in the manufactuer of coke from coal and its purpose is to prevent decay of the wood, and also to prevent shrinking and swelling of the floor after it is laid.

The blocks are laid with the grain vertical, so that the most wear-resistant surface is exposed, and usually on a concrete foundation. The joints or cracks between the blocks are then filled with hot paving pitch or asphalt which binds the many separate pieces into one continuous surface. According to the experts, the cost of creosoted wood-block floors averages about $1.50 per square yard for the blocks alone and about $2.40 per square yard for the completed floor.

For best results these floors should be laid under competent supervision, for unless certain fundamental rules are followed trouble is very liable to ensue. Most of the trouble is caused by the swelling or the shrinking of the wood, due to changes in content of moisture, difficulties which may be guarded against, however, by carefully following the most approved methods.

A war against currants and gooseberries where they are found in the vicinity of white pine, has been declared by forestry and agricultural experts. These bushes have been found to be the most vulnerable point of attack of the latest tree disease, the white pine blister rust, which has been imported to America from Europe, where it has made the growing of white pine impossible. The United States Senate has already taken up the problem of this plague, with the introduction by Senator Gallinger of a bill giving the Secretary of Agriculture funds and authority to combat this disease. This disease, first found within the last few years, is certain to become a most dangerous tree disease unless steps are quickly taken to control it, and the peculiar nature of the disease is in its being spread by the currant and gooseberry. The disease cannot spread from one pine to another, but can spread from a pine to currant or gooseberry bushes, and from them back to the pines, which it will kill, even when the trees are thirty years old. The disease was imported to this country on nursery stock of white pine, and plantations from such stock in the states of New York, Pennsylvania, New Hampshire, Vermont, Massachusetts and Connecticut have been found to be infected. Plantations in other states have been found to be infected. The governmental authorities declare that where this disease is found, the safe thing to do is to kill all infected pines, and all currant or gooseberry bushes in the vicinity. The disease attacks several varieties of white pine, including the sugar pine of the Pacific coast. The federal government is asked to make an appropriation of $50,000 for the fight against the pest. Massachusetts has asked its legislature for $10,000 for the war against the blight, and other states where the plantations are already infected are to be asked to aid in the fight.

A pamphlet has been issued describing the course in lumbering which is being given at Harvard University for the purpose of training men for the lumber business. The course is offered by the Harvard School of Business Administration in co-operation with the Department of Forestry. The pamphlet describes the various courses of instruction which relate directly to lumbering. An indication is also given of the extensive attention that is given to business subjects. The course is a very thorough one and will be of great advantage to young men who intend to go into the lumber business in any of its forms.

Lieut. Jas. M. Cane Wounded

Lieut. Jas. M. Cane

Lieut. Jas. M. Cane, son of Mr. J. G. Cane, the well known Toronto wholesale lumber dealer was reported wounded recently in France. Word to this effect was received by Mr. Cane, 97 Delaware Avenue, Toronto, on April 13th. Lieut. James M. Cane was for a time engaged in journalistic work in Toronto before leaving for the Front. Besides having occupied positions with important Toronto daily newspapers, he was at one time an assistant on the staff of the Canada Lumberman, and was well known in this capacity to the lumber trade in Toronto. It is now over a year since Lieut. Cane enlisted with the 4th Canadian Mounted Rifles. He was transferred to the 37th Battalion and went to England last November. For some time he was stationed at Shorncliffe camp as infantry instructor, but about five or six weeks ago was sent to France with a draft of officers from the base.

The last letter his father received from him was written some eight weeks ago and stated that he expected to be sent to France. Mr. Cane has received no further word regarding his son's injuries, but is hoping to receive a communication soon. A brother of Lieut. Cane, Pte. Chas. M. Cane is in France with the 58th Battalion, having enlisted over a year ago and having been sent to France from England in the early part of March.

Equipment of the Forestry Battalion

When the 224th Overseas Battalion paraded recently in Ottawa, for inspection by his Royal Highness the Governor-General, the equipment carried by the members of the battalion created considerable discussion among lumbermen in Ottawa and elsewhere. We have heard several lumbermen discussing this matter and in order to explain the affair we have made enquiry of the Officer Commanding. It will be recalled that, upon that occasion, the Forestry Battalion paraded with various implements, among which were broad-axes. As broad-axes are used for squaring timber, and as the Forestry Battalion will probably be employed chiefly in the felling of timber and have little or no squaring to do, there was some criticism about this equipment, a few lumbermen going so far as to intimate that the carrying of broad-axes laid the battalion open to ridicule.

The Officer Commanding, referring to this subject, says:—"Your information as to part of the implements which our battalion carried during this parade in quite correct, but they carried also peavies, camp-dogs, cross-cut saws, etc. This parade was not intended to show what implements they should carry, but merely for inspection by his Royal Highness the Governor-General. Our equipment altogether will be that used in the lumber industry in Canada and therefore, this parade cannot be taken as affording any example of the equipment we will carry abroad."

The 224th Forestry Battalion has made quite a record in recruiting, having, in about one month secured some 1,800 men.

Broken Boom Creates Excitement at Ottawa

A large boom of logs near Lemieux Island on the Ottawa River, which broke loose recently, caused much excitement when they reached the Chaudiere Falls at Ottawa. The falls took on quite an old time appearance when over 2,000 of these logs came rushing down the river. A dam would form below the Chaudiere Bridge and this would be broken as a fresh lot of logs would strike down. The real danger, however, was above the falls at the new dam, where the logs, in getting through the narrow sluices, would pile up in dangerous fashion. Only skilful and prompt work on the part of the men in charge of the dam prevented the logs from forming a dam right across the falls which would have resulted in flooding some of the E. B. Eddy mills. The logs are owned by J. R. Booth and the Shepard & Morse Lumber Company. A somewhat similar occurrence took place about the same time on the Gatineau River where some thousands of logs boomed at the Cascades broke adrift and swept down the river piling up in a jam nearly 50 feet high at the government boom at Gatineau point. A gang of men were put to work upon the boom and managed to strengthen it so that it held until the water receded from its high level and the danger was past.

Captain W. B. Bartram Joins 80th Battalion

Captain W. B. Bartram.

Captain W. B. Bartram, president and manager of Bartram Bros. Ltd., Ottawa, and director and sales agent of the Devon Lumber Company Ltd., Ottawa, has accepted an appointment as Captain in the 80th Overseas Battalion, C. E. F. which has its headquarters at Belleville, Ont. It is expected that the Battalion will be leaving for Overseas in the very near future. Captain Bartram is well known to the lumber trade in Eastern Canada and in the United States. He has been identified continuously for 25 years with the lumber business, having worked through all its branches in the woods, sawmill and planing mill, and made a special study of conditions in connection with the export trade. Under his management the business of Bartram Bros. Ltd., has grown rapidly until it is one of the most important in Eastern Canada, covering all the important centres of Quebec, Ontario, and the Eastern States.

During Captain Bartram's absence the business will be carried on by Mr. Colin M. Bartram and Mr. E. M. Ball, both able and experienced lumbermen.

Details of Port Nelson Timber Shipments

The quantities and varieties of timber, and their prices, which have been used in connection with Port Nelson Harbor works by the Dominion Government were reported in the House of Commons recently by Hon. Mr. Reid, in reply to a question. In connection with the Port Nelson works 4,391,619 feet B. M. of long leaf yellow pine wharf and heavy crib timber have been purchased from the United States, also 168,018 feet B. M. of oak, hard pine and Oregon pine for clam shell dredge hulls and spuds, nearly all of which was dressed timber. The cost of the above was $109,395.80. The amount which has already actually been put into the Port Nelson works is as follows:—long leaf pine 1,447,619 feet B. M. The quantity in stock at Port Nelson is 2,163,000 feet. 761,000 feet B. M. was lost in a fire on the steamship Alette, 20,000 feet B. M. was lost from a deck load in transit. There has also been used for clam shell dredge hulls the full amount of oak, etc., mentioned above. The portions of this timber purchased in Toronto were secured through representatives of B. C. lumber companies amounted to 1,245,160 feet B. M. of B. C. fir wharf and crib timber, and 75,691 feet B. M. of B. C. fir in select dressed scow timber. This stock was transported by steamer after the opening of the Panama Canal. The Toronto orders also included 4 octagonal pieces 29 in. x 29 in. x 72 ft. long, dredge spuds; one piece 16 in. x 16 in. by 76 ft. long, dredge spuds; one piece 14 in. x 14 in. x 84 ft. long, derrick boom.

In addition to the above Toronto orders, about 4,250,000 feet B. M. of other Canadian native timber was purchased for building construction, interior of cribs and other purposes for which it was suitable.

In reply to a question as to the total cost of timber landed at Port Nelson the Minister said that separate costs for each commodity had not been kept. In general, the average cost of transporting freight of all kinds to Port Nelson was $56.65 per ton in 1913, $13.59 per ton in 1914 and $9.62 per ton in 1915. The direct lightering charge at Port Nelson was $2.75 per ton in 1914 and $2.50 per ton in 1915.

Pitprops for the United Kingdom

An inquiry has been addressed to the Department of Trade and Commerce, Ottawa, from a British house of timber importers desiring to get into touch with parties in Canada in a position to supply pitprops. This firm, who have been large importers into all the principal ports in the United Kingdom for the last fifty years, have hitherto been getting their supplies from the Baltic but owing to the cutting off of the customary sources of supply due to the war, a portion of their orders has been filled in Newfoundland. It is stated that, provided prices were right, almost unlimited quantities could be taken every year, full cargoes at a time. The name and address of the firm making the inquiry may be obtained on application to the Department of Trade and Commerce, Ottawa. (Refer File No. A-976.)

Loggers' Rights on Ontario Rivers

Important Judgment in a Case Involving Regulation of Flow by Construction of a Dam

An important and interesting judgment regarding the rights of loggers upon rivers and streams in Ontario was delivered recently by Chancellor Sir John Boyd in the case of Hunt v. Beck. The defendants in this case had acquired timber rights from the Crown by the purchase of limits in an unsurveyed territory owned by the Crown, in which were found the Western sources of the Thessalon river, a floatable stream. They began operations in 1913, and constructed a series of dams upon that river, which were essential for taking away their timber. The plaintiffs had no particular status upon the river, but during the season of 1914 were driving logs down it from a tributary of the river which joins it below the confluencee of its two branches, and about 15 miles below the defendants' operations on the western branch of the river. The plaintiffs complained that the defendants had deprived them of water sufficient for the purpose of floating their logs in the river.

The case before Chancellor Sir John Boyd was an appeal from the report of the local judge who found in favor of the plaintiffs upon their claim to recover from the defendants damages for wrongfully depriving the plaintiffs of water sufficient to float their logs down the Thessalon river; as well as a motion by the defendants for judgment on their counterclaim.

Chancellor Sir John Boyd held that as to the flotation of logs in the river, the plaintiffs and defendants had equal rights under the Rivers and Streams Act, but that as to the user of the water above where the defendants had made improvements, they had preferential rights as statutory licenses. "They were the first and the only occupants of these head waters of the Thessalon river, and as to their various works to facilitate the driving of logs to the market they were statutory licensees. The statutory license, implemented by the erection of works, did by necessary implication give them superior rights in regard to the use and control of these improvements, as between them and the plaintiffs operating on the river at Wood's creek. As a matter of natural justice, the timber licensee who had the right to further his operations by the construction of dams, etc., had also the right to put them to the most beneficial and profitable use for his own undertaking primarily, and was not called on, to his own prejudice, to make his reserves of water subservient to the needs of a lower operator. If any detriment arises from the proper and reasonable use of the dams to facilitate the transmission of the defendants' logs (and nothing to the contrary of this is proved), then the plaintiffs have to submit to the disadvantage as a necessary consequence of their position. This water so stored was essential to the defendants' use; were they to suffer by its release that the plaintiffs might benefit thereby? Briefly, there has been no diversion or diminution of the water, no interference with the natural, ordinary flow of the stream; and the rightful retention of the water by the defendants cannot be turned into an illegal detention from the plaintiffs.

"After carefully reading and considering the voluminous evidence, I am compelled to the conclusion that in all aspects of the case, whether of fact or of law, the plaintiffs have not established a claim for damages. The judgment given in the primary court is to be reversed, and the action stands dismissed with costs. The amount agreed upon as to the defendants' counterclaim should be paid by the plaintiffs—with without costs."

Embargo Problems Drive Shippers to Extremes

As showing the shifts to which consumers of lumber are at times driven with the railroads maintaining an embargo upon many commodities at certain points, due to a car shortage and the need of a better system of per diem charge, it is stated that the Brandywine box factory of the Du Pont Powder Company, at Carney's Point, New Jersey, several days ago arranged for the shipment by express of not less than ten carloads of lumber to be used for making boxes in which exports of powder are made. Because of the embargo it became necessary to adopt some means other than the regular one of securing the lumber for the boxes in time, and the express idea was adopted. The shipment is said to have cost not less than $6,000, and to have come from Maine. At the present time the box factory is being called on to supply some 8,000 air and moisture-proof boxes, about the size of a steamer trunk, daily, to meet the demand of the powder company. Into these wooden boxes are fitted metal cases of zinc, containing the powder. The box factory is required to work night and day without stopping to keep up with the needs of the powder works, some 800,000 pounds of powder being turned out there every 24 hours.

Good driving conditions are reported upon the Nashwaak River, N. B.

Should We Stop Recruiting in Ontario?

To the Britisher, to the Canadian, there is something repulsive about the word "conscription." Voluntary service has been so long recognized throughout the British Empire as the ideal form of military law that we do not take kindly to the thought of being compelled to shoulder arms. But in the face of what is happening in Canada, if we look right at the facts we cannot but feel that there is much to be said in favor of conscription.

What is the situation in Ontario? Recruiting has been carried on to such an extent and in such a haphazard manner that our industries are crippled, production is at low ebb, labor for the factory is unobtainable, and contracts which rightly belong to us are going to the United States. Ontario is suffering as the result of her activity in recruiting, a statement which cannot be made of certain other provinces of the Dominion. Conscription would remedy this inequality.

This war is a business and should be conducted in a businesslike way. Have we not recruited beyond the requirements? If we have not, why are battalions which were in camp at Niagara last year preparing to return there this summer? The time necessary to train a soldier is surely not a satisfactory answer—and all the time our industries crying for men.

Sir Robert Borden offered to send 500,000 men if required, but it would seem that the Minister of Militia's call for the second 250,000 has not yet been justified.

If we are recruiting more men than are required, it means a loss to the country and to the Empire. Every man's time should, in this crisis, be employed where it will be most effective.

The scarcity of labor is serious. The suggestion has been made that women take the place of men in the banks and offices and other business places, and that the men thus replaced who do not join the colors go to the farms. Yet in the face of this situation we find the Government appropriating $100,000 for a campaign in the daily newspapers to encourage increased production and thrift on the farm, where the supply of labor is already totally inadequate. There are grave economic problems before us. Can they be satisfactorily worked out under the present system of recruiting? What are the opinions of our readers?

St. John River Logs Well in Hand

A jam of logs which formed at Grand Falls an the St. John River, N. B., broke on April 17th and the logs commenced to run freely. It was then feared that the St. John River Log Driving Company would not be able to have their booms at Fredericton swung in time to catch the logs coming down the river. Special efforts, however, were made, and the Mitchell boom was closed on the morning of April 19th, thus sealing the river and catching the logs. The Sugar Island boom was closed the same afternon. Lumbermen estimate that the jam at Grand Falls contained about 1,500,000 feet.

Reports received from Fredericton, N. B., under date of April 22nd state that all the drives on the Upper St. John River had then started, and water conditions were favorable. About 50 million feet will be driven from the Upper St. John this season for the boom at Fredericton. John A. Morrison, Fredericton, will drive about 12 million feet this season. W. J. Noble will drive about 7 million feet. J. Kilburn has about 6 million feet of old logs to come out. The first bank logs arrived at Springhill on April 21. They were for Fraser Ltd., having been contracted for previously. Present indications are that the price of bank logs this year will be as high as last year, if not somewhat higher.

The Partington Company's drives on the Nashwaak River and the Nappadoggan started on April 17th. Between 12 million and 15 million feet will be driven on these streams this season.

On the Oromocto River the drives came along rapidly and were all out about April 17th. About 6 million feet will be driven on the Oromocto and other streams in Sunbury County this season.

Drivers are being paid higher wages than a year ago, owing to the scarcity of men. Last season the wages ranged from $2.25 to $2.50. This year the men are receiving from $2.50 to $3 per day, and in some cases even more.

Infomation which we received from private sources on the Miramichi River in New Brunswick about the 22nd of April was to the effect that the outlook for stream driving operations was not very encouraging at that time.

Three Quebec lumber contractors from the eastern townships were recently found guilty, at Concord, N. H., in the Federal Court, of violating the Alien Contract Labor Law by taking men from Canada to the State of New Hampshire to work in lumber camps there. One man was fined $100 and costs, the second man $1,000 and costs and the third man $500 and costs. Twenty-two other Canadians who had been detained as witnesses were ordered to be deported.

Direct Results from the Retail Yard

Stocks Disposed of by Bright Advertising, Backed up by Energetic Sales Work

By H. J. Cooke

You all remember how business was, or rather wasn't, in the spring of 1915. Everyone was very much more interested in the war, and when it was going to end, than they were in building; no one seemed to have any money and the lumber business absolutely ceased. Our company had a lot of perfectly good lumber yards, well managed, and the only criticism we had of them was that they were not selling anything, and when business dropped off with us to a point where we were confronted with the proposition of either selling lumber or turning our yards over to the local cemetery associations for burial, we decided to try the startling and revolutionary idea of spending more money for advertising. In other words, go on the novel theory that a lumber yard was a mercantile establishment, and what was good for the dry goods, grocery, automobile and even the saloon business couldn't hurt a lumber yard very much. So as an experiment at two of our most defunct points we put in a complete stock of serviceable but low priced lumber, and then commenced to write ads. This was something new to us. Don't misunderstand me—we thought we had written advertisements before—lots of them. They usually consisted of a space about three inches high and four wide, containing such classic and standard phrases as "Let us figure your bill," "Headquarters for all kinds of building material," "Best lumber for least money," and the rest of the phrases that precedent had taught us were the real and regular stuff in lumber yards advertising and that anything else was socialistic. Then, too, I was once in the wholesale business and advertised then. When they asked for the copy we wanted run, I just gave them a letter head and told them to run that; consequently we advertised very extensively who the officers of the company were, our capitalization, and a lot of other facts of no interest in the world to anyone but ourselves. I mention all these things to show that we knew a lot about advertising, but this time we changed our methods somewhat, and instead of seeing how small a space we could get out on, we endeavored to get as much space as we could and still leave the editor room for letters from his country correspondents. We took pages and half pages and told people in big black-faced type an inch high that could be read across the street that we had certain items of lumber which we would sell them at certain prices, and suggested in these advertisements uses to which this material could be put. In other words, we were trying for a chance, merchandizing instead of "running a lumber yard." And I verily believe that if we hadn't done this advertising at our yards at that time we would not have sold enough to pay salaries, as nearly 90 per cent. of the goods we sold were the heavily advertised items. We have introduced this heavy advertising at all our yards, and it has shown us results at every point right from the jump; not weeks after or months after, but as soon as the papers containing the ads were out. I am not going to give you a lot of dry figures as to what advertising has done at certain yards, because statistics are very uninteresting things, and then, too, that would be telling; but when I say that some of our yards have shown an increase in sales of as much as $20,000 a year from $600 per year spent in advertising, and have shown profits in line with the increased sales, I believe I am saying something that is interesting, and that we got results. It is about the most fascinating business proposition I ever had anything to do with to advertise certain items of lumber, say, on Monday, and on Tuesday see on your sales sheets where they are hauling those advertised items out of the yard. I believe that one reason why this advertising has been so effective is that it has been a step in the direction—just a short step—of dispelling somewhat the cloud of mystery which to the average consumer surrounds the purchase of a bill of lumber, because it offers him a definite article at a definite price. A banker and merchant, a man of affairs in a small town, told me a few weeks ago that he never had bought a bill of lumber in his life that he didn't feel he had been skinned in the transaction somewhere because he couldn't check up the deal. A farmer drives in your yard and tells you he wants 12 pieces of 1x12—16 boxing, 12 pieces OG batterns, eight scantling 20 feet, five pieces lathing 12 feet, and about 15 pounds of nails. You ask him what grade he wants (instead of finding out for what purpose he wants the stuff and then you telling him what he ought to have). You load his wagon; he asks you how much it is. You say, "Wait a minute; I've got to figure this." Then you get a big piece of paper, and pencil and to him make a lot of mysterious figures for awhile then go back over the figures and finally tell him he owes you $12.80. As he is paying the money, Mr. Customer wants to show some interest in the trade so he asks what you charged him for the boxing and you say $32.50 per thousand. He doesn't realize or think that he only got 192 feet of boxing that cost him $6.25, but that $32.50 a thouasnd sticks in his mind and he tells you how he remembers when he was a boy that "Paw got better lumber than that at the mills for $12, and that lumber sure is higher." The only part of it he remembers is that thirty-two fifty and when his neighbor comes over to see what he is building, he asks "What did you have to pay for that lumber?" he tells him $32.50, and friend Neighbor thinks to himself, "I can't afford to do any building; lumber is too high." The 15 pounds of nails is the only item where he is sure he got what he paid for, as he saw you put 15 pounds on the scales and he can figure that 15 pounds of nails at a nickle a pound is 75 cents. Wouldn't the average lumberman feel rather confused if he went in to buy a couple of collars and on asking the price was told that collars were $18 per gross? He would have to figure what part of a gross he bought or else trust that the clerk was figuring correctly. It's much more simple to be told they are two for a quarter, and I believe that some day lumber is going to be sold by the piece, and when a man comes in your place of business and wants a price on 1x12—16 you will tell him 52 cents each, and if he puts ten on his wagon, he knows as well as you do that he owes you $5.20. Here is a price list gotten out by a very active lumber mail order house. Do they say this lumber will cost so much per thousand? No, you bet they don't. They say that a 2x4—18 No. 1 will cost 34 cents each, a number two 31 cents, and 6x6—12 96 cents each, and so on right down the line. And when the consumer sees those prices he feels more at home because he knows he can check the transaction as well as the man he is buying from.

But to get back to my subject: Retail lumber yard advertising to get results should be based on the theory that there are on deposit in the banks thousands of idle dollars and the advertising if properly handled will put a lot of them into improvements. A man living on the eighth floor of a steam heated apartment house in the city doubtless has very little use for lumber, but did you ever drive out to a friend's house on Sunday afternoon, and when he was showing you his garden, or his Rhode Island Reds that he didn't finally start in and tell you where he was going to build a sleeping porch, or an ell on his house and show you where he was going to bring it to? Every man who owns a home has these building ideas in his mind. Indefinite perhaps, but there, and when that man is confronted all the time with lumber and building material advertisements he is going to decide finally to have that work done, and advertising should have just that idea in mind.

A great many of you gentlemen, mostly the manufacturers, have automobiles. Do you think you would have bought your car if the automobile people had waited until you found you had to have one and then courteously waited until you got good and ready and asked each dealer for a bid, and then bought it where it was cheapest? Yet that is the way lumber is sold. How many houses in your town have been built as a result of salesmanship or where the lumber dealer had anything to do with encouraging the owner to build it? Alone in his solitude the prospective builder is allowed to ponder on his ideas, no lumber salesman being impolite enough to hurry him, until finally he decides that it is no use waiting any longer, that his family has outgrown the old place and a new one is necessary. I sometimes wonder where the lumber business would be without nature. Nature grows the trees from which lumber is made and then increases families so that there is a demand for it in the finished state. I know that demand can be created for lumber, because a man who bought several tenant houses from us told me that he would have built them sooner, but he thought lumber too high until he read our advertisements. One man came to our yard and took a load of advertised flooring and stored it under the house until he could use it for fear the bargain would get away from him. Right around the first of the year, when we were busy with inventories and statements, we did not give our advertising the attention it should have had and our business slipped off. We started the campaign again with renewed vigor and almost instantly we could see increased sales. Really, it looks like some kind of magic, and another thing—it is not your competitor's business you are taking, but business you have procured. Any advertising that has as its motive the taking of business from your competitor is, in my opinion, money thrown away.

In conclusion I want to say that I know from experience that the lumberman who is willing to invest a few hundred dollars in printer's ink in any kind of well thought out advertising, shove out his money and take a chance on the returns, who doesn't expect to harvest his crop until he has planted it, and hoed it, or in other words get results before he invests; who will give advertising the same consideration as he does other vital parts of his business, as the mail order houses do,

and will then back up his advertising to the letter with the goods and the service, and use reasonable business judgment, cannot help but increase his sales and his profits, be a factor in improving the community in which he lives, and make a success out of his business. He may accomplish all these things without advertising, but every dollar he spends for advertising can be considered as just so much money paid out as insurance that he will.

Buying Special Order Millwork

Once I furnished the millwork for a nice little residence that was being built without any scale drawings, from a rough sketch which the owner had made on letter paper. The prospective residents wanted plenty of light in their home and the sketch indicated the wrong proportions of wall space. After the building was under roof they discovered that there was no place to set the piano except in front of a window. That would not do at all, so they decided to close up the window. The house was of hollow tile construction and the total cost of that alteration would have more than paid for a good set of plans. The stairs on this job were left to the skill of the carpenter, and he built them on the cut and try system, by guess, etc. The result was a flight of stairs that was not at all bad, but the way that carpenter did cut and slash that nice oak finish at $100 a thousand would make any millwork salesman smile in his sleep. And the length of time he took to do it was doubtless a fine thing for him, but where did the poor owner get off? It is quite possible that he would take the position that he had his house the way he wanted it, and that in building he had not been tied up to any set of plans that had to be followed. But has he got it the way he wants it? He has not. He has it the way the carpenter wanted it. He may "kid himself along" with the idea that it suits him, but the fact is that he has a house that was built for a carpenter with no family and a very commonplace idea of artistic design.

Some people have an idea that plans present some terrible difficulties, and are only meant for the use of mechanics and other persons directly connected with the work which they represent, and that outsiders are better off if they leave them alone. Just why this is so I have never been able to understand, unless it is that certain architects and others connected with the building industry have the idea that it is better for their business to keep their clients in ignorance. As a matter of fact plans are only pictures drawn without perspective and in exact proportions, and details are only larger pictures of parts of plans. Specifications are descriptions of, and directions for, the construction that can not be indicated on the drawings. If a man is too foolish to be able to know after a careful study of a set of plans whether or not be able to know after a careful study ofa set of plans whether or not the completed house is going to suit him, he does not need a house anyway, and if he does the State will probably provide it.

The usual reason for not using plans in building is the expense, but if you or your customers could know of the hundreds of real cases similar to the one cited that have come under my observation you would know better. I do not believe any man ever saved a dollar in building by not having and following a good set of plans. I will admit that there are poor plans that are worse than nothing, and that good plans not followed are likely to prove a nuisance, but these things should go without saying. Nothing that is poor is economical, and any good thing can be abused.

I am not all for the architects either, but there are so many "dub" architects puttering around that the uninitiated public is frequently deceived. Some of these "dubs" get large contracts and are able to "point with pride" to their accomplishments. A certain government building that I know cost $5,000,000 and reminds the average observer of a rough-neck washerwoman in a new calico dress, but I would rather "point with pride," if I could, at the staircase in the old library down on Randolph Street in Chicago than at that gay washerwoman Government building. I know where there is a millionaire's country home designed by an architect of national reputation, that has an imported, hand carved, Venetian marble mantel of exquisite design and workmanship, costing a small fortune, planted right down in a great living room of massive colonial architecture, with beamed ceiling, heavy cap trim and heavy pilaster casings, all of California redwood, rough finish. What do you know about that? The mantel is a dream, and the colonial trim is all right, in its way, but I can not just grasp that architect's idea of harmony. On this same job the two inch thick pilaster casings make it impossible to open any door wider than straight out into the room. Perhaps that architect deserves his reputation. I do not know. I leave it to you.

To employ a really good architect would be a privilege, and were I able to do that when I build I would just tell him how much to spend and then I would go off to Europe and stay a year, and then come back and move in.

But all that requires more of those hard iron men than most of us have, and we lumber dealers build more common, little, modest homes than we do of mansions, and under those circumstances the best way for a builder to do is to get from the local dealer one of those books of designs which all live wire dealers have for free distribution, and to study it carefully till a selection can be made. The plans which accompany these books are usually along fairly good architectural lines and many of them are as good as any one would want. One of the finest homes I have ever been in was built from plans selected from one of these books and specifications filled in by the lumber dealer on stereotyped blanks. In truth, many of the designs given are copies of houses actually built and in use, so that there is no guesswork about the correctness of the drawings or the appearance of the buildings when completed. There are so many different systems of this kind for the dealer to select from that there is really no excuse for being without at least one, and more would be better according to the extent of his business. Some dealers charge for the plans and make a profit on them. Some prefer to use them as an advertising stunt and present the plans as an inducement to buying the material. These things must be worked out according to local conditions and to the ideas of the dealer.

There are several methods of buying plan-work, differing according to the ability and the aggressiveness of the dealer. The best way but doubtless the one requiring the most work is for the buyer to take from the plans a list of the material he wants to buy and submit several copies to millwork houses for estimate. In making up these lists he should omit such items as he has in stock and should accompany each list with details and descriptions complete enough to give a thorough understanding of what is wanted. If there are any items which can be changed to conform to the stock of the house to which the inquiry goes, such possibilities should be noted so that each list will be particularly suited to the firm to which it is sent. This would of course make the lists differ somewhat from each other but when the material is finally received there will not be difference enough to amount to anything and the saving in dollars and cents will more than pay for the extra work.

The other way, and by far the most popular, is to send the plans to a millwork house and let the man there do the work. In this case the wholesale estimator either makes up a blanket bid covering the general items he wishes to furnish, or he makes a detailed list which is more or less complete and which is the extent of his responsibility at the price named. When blanket bids are made the estimator usually adds 10 or 15 percent to cover omissions and errors, and in the case of detailed lists it is very necessary for the buyers to check same very carefully to be sure that everything is included. In either case the number of estimates that can be obtained is evidently limited to the number of plans that are available and it is hardly possible for the dealer to omit material that he has in stock. Mistakes and misunderstandings occur that are hard to erase, and the dealer gets disgusted with the millwork end of his business and is indifferent when the mail-order houses begin to work inroads in his trade. Sending plans away for estimate is certainly the easiest way to handle plan-work but it is far the most expensive and quite likely to be unsatisfactory. There may be large and particular jobs where it might possibly seem to be the best way on account of the necessity of following the details closely, but even at that, details are easily traced and specifications are easily copied, so that in my experience I have never found a case where I did not think it worth while to make my own lists.

One thing I must suggest in connection with the above is that while plans are undoubtedly made to be followed and severe changes in them tend to destroy much of their usefulness, yet slight changes in details to allow the use of stock designs of moldings, etc. can not work any harm whatever to the owner and may possibly give him the greater value than to conform absolutely to the details as indicated by the architect. For example, I have been required to figure special veneered doors on account of a certain little quirk or cove in the sticking which if changed by the merest trifle would have permitted the use of a stock door. And seasoned stock doors are always better than special order doors that have not been in existence long enough for any one to know what they are going to do when hung. Oh, I know that idea is directly contrary to what most of you have fondly believed for years, and that most architects and contractors pass out the idea that a veneered door must be made to order to be any good, but if you think about it reasonably a little you will know better.

We all have our ideas about architects and we also know that the profession includes the good, bad and indifferent. Many of our old stock designs are patterned after the Greek and Roman styles of architecture and if properly and consistently used are as suitable today as they ever were. The condemning by architects of stock moldings, cap trim, collonades, door sticking, etc., just because they are stock designs, should be discouraged as well as the indiscriminate jumbling together of various styles of architecture by others.

In concluding let me drive home the thought that any community that has the plan habit in its building will build better, more attractively, more harmoniously and with less expense or friction than the community that has the cut and try habit and builds by the guesswork of its jack-knife carpenters. And it is the duty and to the advantage of the local lumber dealer to encourage the use of plans in every possible way.—American Lumberman.

Canadian Timber Trade in South Africa

Conditions Which Restrict Its Use—Market for Dressed Lumber, Sash and Doors, Mouldings, Handles, Etc.*

By H. R. MacMillan

The three important classes of dressed lumber imported are flooring, ceiling and shelving.

Flooring

Throughout the country in all classes of buildings Scandinavian flooring is used, about one-third from Norway and two-thirds from Sweden. It is imported ready manufactured in one grade, known as colonial firsts, which is really a mixture of first, seconds and thirds, in two important sizes, 6-inch by ⅞-inch and 6-inch by 1⅛-inch. Small quantities of 4-inch and 4½-inch widths in the above thickness are also imported. The usual lengths are 6 feet and up odd and even lengths to 24 feet. All flooring is planed, tongued and grooved; the machine work is excellent. All Scandinavian flooring is full of hard black tight knots ½-inch to 1½-inch in diameter. The flooring when laid is usually covered with linoleum or carpet.

The price of Scandinavian flooring in normal times is $32 to $34 per thousand feet board measure, when sold wholesale in large quantities at a South African port. It is imported at $29 to $31 c.i.f.

Eastern Canadian manufacturers should in normal times be able to compete with these prices, particularly as flooring is dutiable, and they have the advantage of a 3 per cent. preference. The flooring does not consist of carefully selected lumber, but is simply sound redwood (Pinus sylvestris) free from checks or loose knots, run through a flooring machine and well manufactured.

Douglas Fir for Flooring

Douglas fir flooring has been extensively used in South Africa in schools, halls, Government buildings and to a certain extent in better class residences. So far as wear is concerned edge grain flooring gave excellent satisfaction. Several serious cases of dry rot occurring in Government buildings have led to an embargo being placed against its use by certain public works engineers in important districts. This is unfortunate as the Government was by far the most important purchaser and their action will influence others. Architects now hesitate to recommend it for dwellings because of dry rot. A representative case of dry rot in Douglas fir flooring occurred in the new Government Museum, Pretoria. The flooring used was edge-grain 4½-inch by 1¼-inch Douglas fir. It was laid on a cement foundation with an air space under the floor. It cost when laid $14.40 per 100 square feet. Within one year 2,000 lineal feet had to be removed because of dry rot. The remainder was given two coats of carbolineum and after three years now appears sound.

The flooring is evidently affected by dry rot when shipped in the same cargo with wet timbers. Unless some means can be discovered of preventing dry rot the market for Douglas fir flooring is likely to be small in the future. On the other hand, the market will be excellent if it can be demonstrated that dry rot is overcome.

Attempts have been made to manufacture Douglas fir flooring in South Africa by re-sawing and machining selected merchantable deals and timbers. Flooring so manufactured has not been as well manufactured as the imported and has contained 20 per cent. or more flat-grained boards. Flooring domestically manufactured will not compete with the imported.

The Public Works Department estimates 4½-inch by 1¼-inch Douglas fir flooring to cost when laid $14.40 per 100 square feet, and 4-inch by 1⅛-inch Scandinavian flooring to cost $12 per square. The Scandinavian floor is full of knots.

Teak and other hardwood floors are used in very costly residences.

Swedish flooring is extensively used by the Railway Department in lining freight cars.

Ceilings

Nearly all ceilings in South Africa are varnished wood, even in plaster finished houses. There are very few pressed steel, plaster or other ceilings. The standard ceilings are Scandinavian colonial firsts, Baltic redwood, planed, tongued, grooved and double beaded, 6-inch by ½-inch, with a very small proportion of 4-inch by ⅝-inch. No "V" joint ceiling is imported. Scandinavian ceiling is made from the same class of timber as Scandinavian flooring and costs c.i.f. about $2 more per thousand feet board measure.

Whereas for Government buildings and better class residences there was a demand for Douglas fir flooring, there has never been a good demand for Douglas fir ceiling. It has always retailed about 2 cents per foot superficial more than Scandinavian ceiling and the price has killed it. Douglas fir ceiling shipments have also suffered severaly from dry rot.

The Public Works Department estimate that ⅝-inch by 4-inch Douglas fir ceiling costs them $9.60 per square when in place, as compared with $8.40 for Scandinavian.

Eastern Canadian manufacturers should be able to compete in South Africa with ceiling as well as with flooring.

Shelving

The shelving trade in South Africa is apart from the lumber business. Shelving is the general name given to 1-inch by 12-inch to 16-inch by 12 feet to 16 feet dressed boards, number one or two, preferably white pine, but sometimes spruce, Western balsam or larch, Russian yellow pine, or Douglas fir, carried in stock throughout the country by general merchants and hardware dealers and sold for shop fittings, household carpentry, shelving or coffins. The demand is for a wood that is free from checks or loose knots, is smooth, easy to work, will hold paint and not split easily. The shelving imported for the interior is rough to save freight charges, the remainder is dressed to ⅞-inch.

It is a curious development of the trade that lumber for carpentry work may be bought more easily in the South African town than in the Canadian town. In South Africa a small stock of shelving is carried by every hardware store, along with nails, paint and other woodworking materials. This undoubtedly leads to an increased use of this class of lumber.

Quebec pine formerly held this trade, but has in late years become too high in price. Western white pine is now the chief shelving lumber imported.

The greater part of the shelving imported is purchased by commission houses in South Africa who forward their inquiries to New York buying agents. A list of these buying agents is in the hands of the Commissioner of Commerce. Small quantities are purchased with lumber cargoes shipped from the Pacific coast. The purchases made through New York are shipped overland by rail from as far west as Idaho and British Columbia and forwarded to South Africa by liner.

Shelving an Important Trade

The trade is an important one. Several wholesale hardware firms handle 5,000 boards a month and many bulders and general merchants import in carload lots. The prices for Western white pine shelving have been $22 per thousand f.o.b. mill and $38 per thousand feet f.o.b. New York.

The bulk of the importing for this trade is now in the hands of the American commission houses mentioned. Many South African dealers would buy from Canadian shippers and benefit by the preferential duty if they could get in touch with Canadian exporters who could be relied upon to send forward a satisfactory article. There is an opportunity here for Montreal or Vancouver lumber brokers. Lists of reliable shelving importers may be secured from the Canadian Trade Commissioner at Cape Town. Western yellow pine and spruce will both be found suitable for shelving.

An energetic Canadian brokerage firm taking this business up should be able to secure a large proportion of the trade, shipping Quebec pine when cheap enough to Montreal or New York, and Western white pine, Western yellow pine or spruce by rail to Montreal, Vancouver or New York. The American commission offices handling this as a side line with other trades have branch offices in South Africa. Other American houses having no branches in South Africa send a representative out at intervals of two years or so to keep the trade alive.

With the shelving trade could be handled a trade in clears and interior finish.

Other Woods Imported

Fairly large quantities of clear white pine, sugar pine, Western larch, redwood, Siberian yellow pine are consumed in South Africa yearly. The chief uses are for pattern making, shop fittings, cabinet work and joinery. The very best qualities obtainable are desired, and the c.i.f. prices vary from $52.50 per thousand feet c.i.f. on a 60 shilling freight rate for Western larch, which is the cheapest clear lumber imported, to $110 per thousand c.i.f. for clear white and sugar pine. The sizes usually purchased are 1-inch, 1½-inch, 2-inch, 3-inch by 12-inch to 18-inch by 18 feet to 24 feet.

It has been found recently that perfectly clear white pine, resembling Quebec white pine, but a little yellower in color and shorter in grain, can be purchased in unlimited quantities in Vladivostok. A full sailer cargo recently arrived in Durban. The first, second and third grades were free from knots or any defects and would grade as firsts in Canada. The cargo was nearly all clears and consisted chiefly of 2-inch, 3-inch and 4-inch by 8-inch to 24-inch in 16 feet to

* Continued from April 1st issue.

24 feet length. This Siberian white pine appears superior in grading and working qualities to any other clear timber imported into South Africa and is believed to be cheaper in price. It is imported at a c.i.f. price in the neighborhood of $70 per thousand under war freight rates. If there are large quantities of it tributary to Siberian ports Canadian exporters of clear lumber may expect to meet some keen competition. The manufacture is excellent, equal to the best Swedish.

Interior Trim

There is a demand in South Africa for a wood for interior finish that will come between the Scandinavian woods used in cheap buildings and the teak at $2.50 a cubic foot and the mahogany at 16 to 20 cents a square foot used in the most costly business offices and dwellings. Redwood is used for this purpose now at a cost of $1.35 per cubic foot c.i.f. Those who have used Douglas fir for this purpose have found it satisfactory for interior finish, stairs, panelling and furniture manufacture. There are yet a large number of builders and architects who have not seen it used and who do not believe it satisfactory.

The greater part of the clear Douglas fir used in South Africa is re-sawn from merchantable timbers. Naturally the best quality of clears cannot be secured in this manner, and the reputation of the timber suffers accordingly. Further, if a shipper is so unfortunate as to send forward a merchantable cargo that will not produce a fair proportion of clears for the importer there is a complaint.

Advertising Necessary

Douglas fir has been found satisfactory for joinery and interior finish. The quantity used for these purposes can be greatly increased by intelligent advertising amongst architects and builders. The aim of the advertising should be to point out the proper grade to use for best results, to make known the results that may be obtained by various methods of finishing, and to show how the wood should be used to prevent splitting or checking. Such advertising should not be carried on at long range, but by a man on the ground.

The samples exhibited before architects in South Africa surprised them. They had not known the possibilities of the timber. The flashy slash grained effects are not so popular as is the close grained quiet finish. Few of the merchants importing Douglas fir know the possibilities for interior finish. The head office of one timber importer finished in pitch-pine was pointed out by the owner as something quite beyond the possibilities of Douglas fir.

An opening exists for three-ply for panelling and for manufacture in South Africa into special lines of doors. Sugar pine three-ply is now imported for that purpose.

Any company desirous of shipping clear fir or three-ply to South Africa should make arrangements through the Canadian Trade Commissioner to have reputable firms in the different cities handle their goods.

Mouldings

The mouldings used in South Africa are practically all made in the country from Scandinavian red deals. Such goods as are imported are from Sweden and Norway. Small quantities of white pine facias, balustrades and verandah brackets, blinds and finials are imported from the United States which could be supplied from Eastern Canada. These goods are imported by the leading general merchandise and lumber companies. A list of wholesale moulding prices may be obtained from the Commissioner of Commerce.

Where Douglas fir is specified for interior joinery the moulding is usually made to order to special designs. There is but little prospect for a market in Douglas fir mouldings. The leading timber dealers, especially those who import Douglas fir by cargoes, operate planing mills and discourage the importation of manufactured goods.

The quantity and origin of the box shooks imported into South Africa in 1914 is shown below:—

Country	Value of Imports, 1914
Sweden	$61,935
Norway	11,982
United Kingdom	7,922
United States	1,205
Holland	863
Germany	731
Canada	23
Total	$84,661

The importation of box shooks increased steadily from $45,892 in 1909 to $95,022 in 1913. Whereas the importation of all other wood goods showed a decrease in the first eight months of 1915, box shooks were purchased in larger quantities than ever.

The importations credited to Great Britain represent transhipped shooks. The proportion supplied by Sweden has grown in eight years from one-half to three-quarters of the total.

The shooks imported into South Africa represent about half the total used. The remainder are manufactured in the country from imported Canadian short spruce deals.

South African purchasers desire to buy Canadian shooks, on which there is a tariff preference of three per cent. The Trade Commissioner has sent forward many trade inquiries and no business has resulted. There is an opening for an excellent export trade. The market available is the $409,000 now done each year with foreign countries, and the $400,000 now done by South African manufacturers who are working under the handicap of small factories and imported timber. The fruit and manufacturing industries of South Africa are developing rapidly, especially the former, and the demand for boxes will inevitably rapidly increase. There is no prospect that local wood will be suitable for anything but low grade boxes for many years. A well-organized factory in Eastern Canada properly located with reference to raw material and shipping facilities could do a big business in South Africa.

A large proportion of the box supply for South Africa is purchased by two London companies whose names may be secured from the Commissioner of Commerce.

Any company willing to export shooks to South Africa should, when communicating with agents or importers, send sample shooks to show the character of wood used and quality of manufacture.

It is possible that arrangements could be made to ship boxes from British Columbia with lumber cargoes. If this can be done orders can readily be secured. Such methods of shipments would suit the fruit industry, for which all the boxes are desired in September to November of each year and can be taken in one shipment. A trial shipment of apple boxes has been made from the Pacific coast and found satisfactory.

Inquiries and specifications for fruit boxes have been sent forward at different times (refer Trade Inquiry No. 65). Western manufacturers desirous of quoting on these for delivery fall of 1916 should secure them, together with a list of importers, from the Commissioner of Commerce.

Sashes and Doors

The imports given under houses and frames refer almost exclusively to sash and doors. The imports during 1914 and the countries of origin are given below:—

Country.	Value of Imports, 1914
United States	$20,677
United Kingdom	15,854
Sweden	12,942
Norway	1,612
Germany	640
Australia	84
Canada	35
Total	$51,844

The importations under this head have grown greatly from $29,095 in 1909, but have remained fairly constant in the past three years. The United States has held the lead for several years. The shipments credited to Great Britain represent re-exports.

The major part of the imports consists of doors. The sash, which were formerly imported, are now manufactured in the country, mostly from fourth grade Scandinavian deals, though small quantities for better houses are made from Siberian white pine or teak. Nearly all the doors used are imported. The only exceptions are the doors for costly private residences and public buildings, nearly all of which are manufactured in South Africa from teak and cost $1.75 to $2.50 per superficial square foot. The manufacture of Siberian pine doors in South Africa may be expected.

The Swedish doors are all manufactured with glued two-piece panels, which split. A one-piece panel is necessary to meet the requirements of the South African trade.

Sizes and Prices

The doors imported from the United States are white pine. The greater proportion of the doors imported are four-panel DM third grade. The chief sizes and prices are:—

Size.	Price each, f.o.b. Steamer, New York.
2 ft. 6 in. by 6 ft. 6 in. by 1¼ in.	$1.54
2 ft. 6 in. by 6 ft. 6 in. by 1½ in.	1.73
2 ft. 6 in. by 6 ft. 6 in. by 1¾ in.	2.25
2 ft. 8 in. by 6 ft. 8 in. by 1½ in.	2.85

These prices ruled in September, 1915, and are subject to a discount of 15 per cent. with a further discount of 2½ per cent. for cash. The door business is important in South Africa and will continue to be so. The doors imported from the United States come from New York and Michigan and are probably made from Canadian pine. It should be possible to make them in Canada.

Douglas fir doors have not been tried in South Africa excepting

a few made by local joiners, which have given good satisfaction. Those shown to the architects attracted faborable attention. The three-ply door is best adapted to the climate and is better manufactured than any door in use in the country. There is a market for a better looking door than Swedish that will sell for less than teak or mahogany. The three-ply Douglas fir doors fill those requirements. If arrangements were made with lumber dealers to carry small stocks in each city business would result. It is quite likely that the purchasers would paint Douglas fir doors, as except on teak and mahogany no natural finish is used. For this reason a cheap door might succeed better in the South African market than the clear door. Both should be tried.

Handles

The importations of handles into South Africa for 1914, and the countries supplying them are shown below:—

Country	Value of Imports, 1914
United States	$ 8,693
United Kingdom	5,066
Canada	782
Norway	296
Total	$14,837

The great mining industry of South Africa, the use of the hoe as the universal agricultural implement by the natives and the extensive public works have resulted in a large import trade in handles.

The demand has been for hickory, but as hickory is becoming increasingly difficult to get, maple is being accepted in small but increasing quantities for pick and hoe handles, the two most important lines.

Handles are imported in crated cases of 10 dozen. Many sizes are used, which may be obtained with wholesale prices from the Commissioner of Commerce.

Prices of Handles

The ruling price for hoe handles 54-inch by 2-inch is 85 cents per dozen f.o.b. steamer New York, less 2 per cent. Pick handles, "A" quality hickory, are purchased at $2.05 per dozen f.o.b. New York, less 50 per cent. discount. Drill hammer handles, hickory, cost f.o.b. New York, for 1¼-inch by 1-inch, 24-inch long, $1.60 per dozen, 1½-inch by 1-inch, 36-inch long, $3.53 per dozen, less 75 per cent. and 5 per cent. discount.

Handles are now being made in South Africa from native woods. The further use of native and planted woods may be expected to cause a decrease in importations.

Handles for this market must be well manufactured.

Staves

The staves used in South Africa are chiefly oak, imported from the United States for the liquor trade and do not offer a hopeful prospect for Canadian manufacturers. Staves and empty casks are imported to the value of about $18,120 yearly.

Shingles

Shingle roofs are very uncommon in South Africa. The only shingles used have been a few mine buildings, explosive works, a few of the better class houses and bungalows and a few seaside bungalows.

Galvanized iron is used for the reason that it can be laid quickly with the labor available, and is cheaper. On the Rand, the most populous centre in the Union, in normal times American cedar shingles 6 to 2, 18-inch, sell at 12s. 6d. ($3) per bundle. Galvanized iron sells at $67.20 per ton. The cost of a galvanized iron roof laid is $18 per square, including the rafters and plates. The cost of laying galvanized iron is $2.40 per square. The cost of a shingle roof, partly owing to the more expensive roof framing required, is $24 per square. The galvanized roof, if painted every two or three years with cheap red oxide, will last twenty years. The shingle roof to last twenty years must be painted regularly; the cost of painting shingles is greater than is the case with iron.

Tenders were called in Johannesburg recently for the construction of ten cottages each with sixteen squares of roof. The prices submitted for shingle roofs were $250 per cottage higher than for galvanized iron roof.

Shingle roofs were seen in Johnnesburg that were in excellent condition after eighteen years' service.

Because of the price, shingles have been used only for the best private residences. Tiles are now competing with shingles on this class of building. Excellent tiles are now made in South Africa, and a tile roof finished in Johannesburg costs $21 per square, as compared with shingles at $24. The tiles themselves cost $8.40 per square delivered on the job.

That shingles have given eighteen years' satisfactory service in the South African climate is a proof that they will stand any climate. This indication of durability is the only valuable feature of the shingle business in South Africa.

The match industry in South Africa has been dependent on supplies of Baltic alder. The possibility of a supply of timber from Canada has been taken up thoroughly by the Trade Commissioner at Cape Town, and both white birch from Quebec and alder from British Columbia have been tried. Both have been found satisfactory. The problem to be solved is the regular delivery of these timbers in a moist condition to factories at Durban and Cape Town. 400,000 cubic feet yearly are required of blocks 9-inch to 20-inch in diameter. The c.i.f. price should be, in normal times, about 35 cents per cubic foot.

Wood Paving

The mileage of paved streets in South Africa is very small (less than one mile). No increases are likely for some time. Labor is cheap and the tendency is to use macadam and rock base asphalt paving. The only wood block paving is in Cape Town, where a small quantity of creosoted Baltic pine has been used.

General Summary

There is a constant market in South Africa for three of the important forest products of Eastern Canada, red deals, box shooks and doors. The raw material for these manufactures is cheaper in Canada than in either the United States or Sweden, the two countries at present doing the bulk of the trade. It is only a question of organizing the manufacture on a competitive basis and seeking the business.

That there is any Douglas fir sold in South Africa is due entirely to the initiative of the South African merchants in seeking it, not to any selling efforts on the part of the producers of Douglas fir, who have committed here, as elsewhere, the fatal error of considering that their selling responsibilities have ended when they have finished competing with one another for the privilege of supplying lumber to a commission house. South Africa is a country importing $6,000,000 worth of timber a year. Douglas fir came into this market a new commodity a quarter of a century ago, unknown to purchasers, builders, architects, engineers or merchants. As with all new commodities there were prejudices against it. No one, not even the dealers, were interested in it. Douglas fir manufacturers, the only persons interested, were 13,000 miles away and had no direct representatives.

The result was just as might be expected. Instances have been quoted showing the unreasonable, almost incredible prejudices existing against the timber. These prejudices, which differ in every part of the country, have risen through ignorance of the timber. A cargo of flooring is affected by dry rot. No one is in the country to take the question up at once, and Douglas fir flooring is tabooed. Merchantable is used for car sills where select should be used; it is not satisfactory and the railroad goes back to pitch-pine or teak at twice the price. On the other hand, one mine, of one hundred on the Rand, uses Douglas fir and finds it satisfactory; no one finds it out and conducts a systematic campaign to educate the other mine managers. No one does these things because there is no one in South Africa whose business it is to do so. So long as timber is used the timber merchants are secure. The money which might have gone to removing these prejudices and developing the market has gone to the merchants, who charge four times as much profit on Douglas fir in South Africa as on Swedish timber. The profit on wholesaling Douglas fir in South Africa is greater than the total f.o.b. price in British Columbia.

Establishing of Sailings

The establishing of regular sailings even of small vessels once in two months, between British Columbia and South African ports would greatly increase the exports of Douglas fir. The purchase of cargoes, with accompanying heavy investment, the holding of cargoes in stock with interest charges accumulating and stock deteriorating one year or more would no longer be necessary. The importations would no longer be restricted to five or six merchants for the whole of South Africa. All persons engaged in the trade would import, and more energy would be shown in pushing the sale of the timber.

The elements of a great and successful market campaign exist in South Africa. Douglas fir is delivered to South Africa cheaper than any other timber.

About $5,000,000 worth of timber is now imported yearly for general building and construction purposes alone. The country is yet undeveloped. Even greater quantities of building and construction timber will be required in the future. Every producer of Douglas fir knows it is a construction timber, then why does Douglas fir represent only seven per cent. of the imports of building timber to South Africa? Because no one in South Africa is selling Douglas fir, and the moment it arrives in the country it is robbed of its one great advantage, its cheapness.

It is only necessary that the problem be treated on broad lines. The timber industry, if organized, is wealthy enough and strong enough to market lumber in the same manner as gasoline, tobacco or steel products are marketed. The cost of doing this in South Africa will be very small, and when it is done the exports will leap from insignificance to importance.

Relation of Retailer and Salesman

Mutual Interests Can Be Developed By Friendly Co-operation—How It Works Out

By J. C. Proctor

The relation of the retail lumberman to the wholesale lumber traveling man is a broad or narrow subject, as the one trying to discuss it may make it.

The retail lumberman, it would seem, is in a position to become, and should become, better acquainted with the salesmen in his line of business than the retail dealers in other lines do with the salesmen in those lines. The nature of the lumber business throughout makes it more or less active throughout the year. This causes buying at all times of the year, bringing buyer and seller together often. With the limited number of yards in a town the salesman has, as a usual thing, plenty of time at each yard. And if the dealer is not pressed for time, a few minutes talking results in good for both. In that way a more friendly feeling and a closer relationship should result. Both have what the other should want. Not only in actual merchandise, bought or sold, but in being of mutual help to each other. The dealer learns of conditions in other localities that may effect prices or prompt delivery. The salesman gets to know the grades and sizes of stock peculiar to each town and soon knows where any specials his firm may have can be disposed of to the best advantage. Such knowledge profits both.

There is a limit on both sides of doing favors and being kind and courteous to each other. It is with granting this limit that it would seem that a retailer would be short-sighted not to see that it is greatly to his advantage to stand well in the salesman's opinion. And the salesman must nowadays stand well in the retailer's, for the help that it is possible for either to give is not always given promiscuously.

Those Who Stand the Best Chance

The ones who have been proven to be thoughtful and square and have appealed to the respect and liking of either must stand a better chance of receiving whatever advantage or help the other has to offer. Very often time is a matter of much concern to both. More often, possibly, to the retailer; and consideration of this point by both means not unfrequently a touch of tact and friendliness that is often overlooked. The retailer who is well thought of is much more apt to have his needs in the particular kinds of material used in his locality looked after by the salesman than the one who has not always had this relationship in mind. A slip in courtesy or tact may lose a valuable help in times of rapidly rising prices; valuable suggestions in the way of a low price of short lengths. Number 3 boards, shiplap or center-matched may also assume unrealized points of quality and usefulness and entice him into a venture of purchasing articles that may answer where a better grade has been used before. This lower grade material, one might believe from all one hears, would almost cause a dealer to wonder why he never bought a better until he gets it—and then he knows why.

Substitute lines of lumber also have a way of creeping in to many yards for a few months on a rising market, until they have caught up and passed the regular lines. Would these changes in stock, with their accompanying saving in cost, occur as often if the relationship of the salesman and retailer were strictly on a business basis only? A salesman is going to sell all that he can to anyone that it is his business to sell, but if only a limited amount of material can be sold, he will naturally give the opportunity to the retailers that stand well with him and his house.

The Omnipotence of Price is Passing

The times have not passed, but it would seem that they were passing, when price is the only point that sells lumber. Price will always be the main point of a lumber "buy," but more and more it would seem that price alone will not make the sale. The difference in timber, grading, millwork and drying at the different mills are all being taken more and more into consideration. The dealer no longer wants anyone's No. 1, No. 2 or clear, but keeps tab on the mills that have shipped him the most satisfactory article in the grade he wants. Naturally all buyers want to do the best they can in price, granting they have found what they want in material and service. But isn't the price question between dealer and salesman just what each salesman makes it? A dealer will soon learn whether a salesman will cut his price or not, and the one that will cut his price will be expected to cut again, and maybe will soon learn to have his price so that he can afford to shade it by an advance to take care of a cut. The man that makes a price and knows no other, may lose some business now and then, but isn't he more apt to come out ahead in the end? His first price is very likely to be always the best he can do, and it would seem that this would soon count both in business secured and in the respect of the dealer. Prices may differ to the various dealers in the same territory on the same material, and there are plenty of arguments about this. To be or not to be is the question. The salesman who makes two prices will likely in time have the chance to quote only to the ones where he uses his best price. Possibly to those he quotes the higher prices he does not care very much to sell. Whether or not this may be so, the right relationship can hardly mean anything but his best price to all, other considerations being equal. This different price to different people on the same article probably exists in all kinds of business. It suits the one getting the low price, and cannot suit the one getting the other end of it.

The salesman may not be at fault on these differences in price; possibly his firm has had trouble in settlements, disputes over shortage or undergrade that may justify them in wishing to fight shy of the buisness or to take it only at a large profit. Trade-marking of lumber that has taken a start should be a matter of a great deal of interest to both retailer and salesman. It looks as if it would soon come into very general use. The mills that will go into it are the ones that must be taking particular pride in their timber, millwork, or methods of drying. Maybe in all of these points or in some of them at least, the trade-marked lumber should be an article that can be depended upon to run uniform all the time and something that repeat orders will bring dependable grade on always. Once started in handling and pushing a trade-marked article, the retailers would know better than they now do, the different grades in their yards. As it has been the retailer has been trying to get the best in the grade he wanted, but a No. 1 piece of dimension or a No. 2 board covers a multitude of sins often, and sometimes many points of quality.

He Doesn't Remember When He Should

On a rising market, or in a hurry at times to replace suddenly depleted piles, does the retailer always remember where he received the best grade, and does he not often still think that a No. 1 is a No. 1 no matter where it comes from, until the car gets in, and then he remembers too late? What he gets may be a grading-book No. 1, but far short of what he could have received if more care had been used in buying. With the quality part fixed in his mind, by the hammering of trade-marked lumber by the salesman and getting to know that it means something, the old grading rules will not bother him so much. He will, if he keeps it up soon, have a stock that he will be proud of, and the salesman will feel that he is selling something else than just lumber.

The red cedar shingle people, oak and maple flooring firms have been doing it for a long time. The yellow pine people—Cady, Kirby, Bogalusa, the Arkansas Soft Pine bunch and others—are already at it, as well as the cypress people. Doesn't this look as if it were going the old grades several better and would give both retailer and salesman something much more satisfactory to buy and to sell than the old way?

The retailer buys primarily from the salesman or firm that has shown him that he can rely on getting the grade and service he wants, but isn't it true that there are many firms that differ but little in these points? The one that gets the most business from a certain territory is the one that has been either wise or fortunate enough to have the right sort of representative there—a man who is certain of all facts that will lead to prompt shipment and proper care of all orders; one who knows from personal experience gained through either working at the mills or from frequent visits there, all of the grades his mill gets out; how one grade may be exceptionally good and others not so bad; how the lumber is milled, and how it is dried—in fact everything that should be known by both salesman and retailer.

Shouldn't Abandon the Order to the Office

Salesmen should not let the office tend to the order entirely after it is once written up; but the interest shown in keeping after the orders until they are shipped, and in wanting to see the material after it is in the yard, and taking pride in a good lot or admitting a fault when one exists—it would seem should help in gaining confidence in the salesman and his house. A salesman who takes interest in stock other than his own, praising a good grade another firm has shipped or showing a fault in another lot, surely cannot hurt his house or himself. Doesn't he leave the feeling that he is on to his work all the time and does not lose interest in the retailer and his order as soon as the order-book is closed, and that he is interested in the order from the time it is written until it is delivered, and in knowing that his mill has shipped what is right? Undoubtedly practically all of the salesmen know about the products of their mills and how the business is handled, but too few speak out about it.

Prior sales are often a cause of misunderstandings. It looks as if they should be regarded simply as a bet between dealers, as to whose order will reach the office first. But does the dealer always look at them in this light. The day or two that goes by before he learns whether his order has been accepted may have afforded him a chance to have made a like purchase without the string of a prior sale attached. It is not the fault of the house or the salesman that has made the sale that he has lost his bet, and he should accept the result with good grace.

Complaint as to undergrade stock is also a stumbling block on the road along which pleasant relationship travels. Undergrade in some

items often gives the dealer something his market does not use. To move it, a much lower price than the sales-office can understand is justifiably made. With extra work in sorting amounts up, as well as counting all fair costs and the necessary cut in price to move the material, doesn't it look as if this were the fair basis for all settlements? These things could be fixed up every time so that no ill-feeling could result to either side if reasonablesness is used by both. And this ill-feeling profits neither at almost any financial gain. There are many ways and many instances in which the salesman can make money for the retailer, and courtesy and fair treatment on the part of one will not only be returned in like measure but will often result in good to both parties. All personalities are not made to work together and misunderstandings will result at times. All salesmen do not appeal equally to all of the retailers nor do all retailers appeal alike to all of the salesmen. A fair average is all any one may expect, and the higher the average of all concerned the more pleasant will this relationship be.

Assets of a Successful Retailer

By J. C. Dionne

The old time dealer had only two assets—a stock of building material, and a knowledge regarding that stock. To the successful retail lumberman of the future, those two assets will be considered of nothing more than secondary importance—rather than all important.

First—your yard. Is it a good advertisement for a professional builder? Is it well painted, in good order, and does it reflect well upon the material from which it is built? If it isn't, make it so.

You wouldn't buy hair restorer from a bald headed barber, would you? Then why should a prospective builder accept advice from a building material man who doesn't use it himself?

How about your office? Is it a place in which you are proud to bring a lady who wants a home, and wants to look over your plans, pictures, and suggestions for home building? Then make it so.

Is there anything in your office to catch the eye of the building prospect when he or she enters, and to create an idea at once of an attractive home? Does your office bring the thought of a home, like the interior of an automobile store brings the idea of an auto? Then make it so.

How about the house you live in? Is it an inspiration to your fellow townsmen to have better looking homes? Then make it so. This does not mean that every retail lumberman should live in a mansion. Far from it. But see that your house is well and tastily painted, that there is a look of neatness and freshness about your place—even thought it is a $1,500 bungalow. That speaks well for your taste as a building expert.

Have you in your equipment a hundred or more pictures, plans, etc., of attractive homes, so that you can furnish the incentive to the eye of the man or woman who is considering home building? Then equip yourself.

How about your advertising? Do you run a card in your local paper now and then calling attention to the fact that you are headquarters for building material, and "When in the market let us figure with you?" If so—change your system quick. You must advertise, but what you are doing is not advertising. Or do you run a picture of your yard and declare it has splendid facilities? If you do, cancel the contract and save your money. You are throwing it away. You must advertise—but that means use brains, energy, and money. Advertise something specific. A bungalow—showing the price you will sell the material including the plans for; a barn, showing the same thing; or a garage, or a shed, or a sleeping porch, or any one of a score of things that your trade may be interested in. Advertise something specific and put a price on it, and keep on advertising, and don't be surprised if the local newspaper man has nerve enough to charge you for the space. Pay the bill and keep on advertising, and you will find in the end that you have made a good investment, and that the returns are manifold and real.

Do you keep closely in touch with your trade? Do you force them to know what you have to sell, and what you have to offer them specially? Have you the good will of your townspeople? Have you their respect as a building specialist? Are you working for the development of your community? Are you working to improve your salesmanship? Do they look on you as a live merchant?

Then get busy and achieve all these things and you will find enjoyment and profit both in watching your returns come in.

Are you a dreamer? Then be one. Use your imagination. Let it work full time. Don't try to put brakes on it. Don't be ashamed to dream. There never was a big man in this or any other country who was not a dreamer.

Dream that your town and community is the most beautiful in this broad land—then work to make it so. Imagine how it ought to look; how each building might be, study how that result could be brought about; get busy and make your dream come true.

Take the houses in your town, the stores, the barns, the fences that you see every day; take the vacant lots; take all of these things and consider their building possibilities.

Take Smith's house, for instance. What could—what should—Smith do to make that house more attractive, more comfortable, more enjoyable to his family? Does it need paint? a new roof? a new fence? sleeping porch; screens or anything?

Decide what, and talk to Smith about it. Have your figures ready. Tell him what it will cost. Show him plans of other houses like his, and what their improvements are. Sell these things to Smith first in your own mind, and then go sell them to Smith himself.

Don't wait for the people of your town and district to decide that they want to build. Shoot the idea into their minds. Cultivate it. Mature it. Sell them the material. Furnish them the plans.

It doesn't take even a full witted man to be able to sell lumber that the other fellow knows he needs. Make him see that he needs something, and then you will be creating something. Use your advertising, your imagination, your plans and helps, and create these needs of your customers. When you do that you'll never need to bother about competition. There will be none.

List every man in your community. Look over his property, his house, his barn, or his lack of these things. Have a reference at your office to show what you consider the possibilities of every man in your district to be in a building line. Then keep in behind them all. That's the big story.

When you do these things and do them right, no mail order man will ever bother you; the bank won't ask you for an indorsement when you want a loan to care for your increased business; you will have become a real retail lumber merchant.

I have had men say to me, "Your advice is all right in a city or where conditions are flourishing, but in my section right now there is very little money and few possibilities to work on." To the man who takes that attitude, all things are difficult. To the man who starts in by saying, "I can't," I have no hope to offer. He says "I can't" because it is something new that he has never tried, and he immediately pleads guilty in his own mind to business incompetency, and sentences himself to the jail of business depression.

Dream, plan, advertise, and act, and you will make two houses stand where one stood before—and both of them will be freshly painted and in good repair.

There is no town so dead that live men can't awaken it. Remember that it isn't the houses, stores, and other buildings that make a town. It is the men who live there. If you say "My town is dead," you are saying "I'm a dead one," for you and your town.

Railways Building Many Cars in U. S.

The shortage of freight cars, due partially to the freight embargo in the eastern states, has caused a rush of carbuilding, with the purchase of enormous quantities of lumber for use in the new rolling stock. The American Car and Foundry company, for instance, has closed contracts for 2,500,000 feet of Douglas fir for 500 automobile cars for the Burlington road. This is only one of several big contracts, closed or prospective.

Orders for material for the construction of 500 freight cars have been placed with a Portland company by the Great Northern railroad. The order calls for approximately 3,000,000 feet of fir. The business will be distributed among mills in the west coast district.

Inquiries have been issued by the Pittsburgh, Shawmut and Northern Railroad for 250 gondola cars, which will require the consumption of approximately 750,000 feet of lumber, either yellow pine or Douglas fir. Calls for fifty freight cars have been issued by the Cumberland and Pennsylvania Railroad, while the Warner Sugar Refining Company of New York is in the market for 50 to 125 freight cars. An inquiry has been issued by the Carnegie Steel Company for sixty gondola and eighteen flat cars.

Expansion of a Progressive Lumber Firm

Robert Bury and Company, lumber merchants and selling agents for The Dominion Mahogany and Veneer Co., Limited, have recently moved from 79 Spadina Avenue, Toronto, to larger and more commodious premises at 455 King St. W., occupying the entire ground floor of this building. The offices are located at the front and the rest of the ground floor is devoted to warehouse space. This has been especially fitted up for the carrying in stock full lines of veneers, kiln dried mahogany and walnut lumber. Over half a million feet of mahogany is at present in stock besides full lines of all kinds of piano and furniture veneers. So that the company are in a position to fill all orders from stock at the shortest possible notice. In addition to this warehouse, large yards are maintained at the foot of Spadina Avenue, with direct railway connection on all lines. The company report business as splendid and are contemplating a big season's turn over.

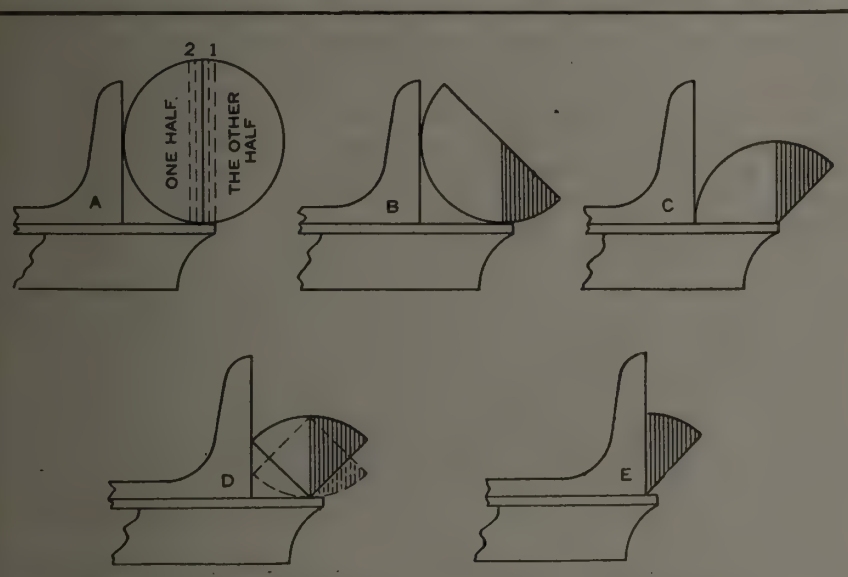
Quarter Sawing in a Nutshell

In a recent issue some one asked regarding the special difference between red and white quarter-cut oak, also red and white plain oak. There should be no difference in the method of cutting quarter-sawed lumber if the object is to display figure, as in sawing the oaks, sycamore, beech, etc., or any wood having the hard or horny medullary "rays"—which is the "figure." To display this figure the lines must necessarily be more or less parallel with these rays; the nearer this parallel, the larger the figure shows. Red gum is quarter-sawed primarily to prevent warping in seasoning, also to show the mottled or color figure. Yellow or hard pine is "rift" or edge-grain sawed, to make it more durable, as in flooring, and to prevent splintering or "scaling;" and it also places the structure of the wood in the strongest or stiffer position.

Methods of plain sawing are about the same for oak and all other hardwoods—that is, sawing the log with the growth rings. Special methods for producing lumber for special purposes vary according to the object sought to be attained.

The sketch herewith shows what I think is the best method of quarter-sawing oak. First split the log as at A, cut one-eighth into boards as at B, then one-eighth into boards as at C, and one-eighth into boards as at D. At E is shown one-half of the log finished; cut the other half the same way.

Some sawyers split the log at line 1, sketch A, and cut lines through the log to 2, but there is no advantage whatever in making these lines, either in width, quality or time; in fact, it wastes time, as these lines must necessarily be cut slowly, and with a chance of an untrue line occasionally. It is obvious that the widest quarter-sawed piece



This method of quarter-sawing will produce eight pieces full width from heart to bark.

can only be one-half the diameter of the log in width, and the unsound heart must come off in either case.

This method of quarter-sawing will produce eight pieces full width from heart to bark. No other method will do more and show good figure.—The Wood-Worker, Indianapolis.

The Commercial Uses of Willow

Willow ordinarily is not classed among the important commercial woods and it can hardly be said to take that rank. It is about the only wood whose marketable sizes range from the full grown tree down to the long, slender twigs or sprouts less than one-fourth inch in diameter.

Until about eight or ten years ago willow had not won a separate identity in the lumber markets, being sold almost entirely as cottonwood, coming as it does in the form of lumber chiefly from the cottonwood producing districts. Its first introduction in the North, was an experiment and these first shipments brought only $10 to $12. At the present time the price is about $16 a thousand, mill run, and clear lumber for furniture purposes brings $24 to $25.

While select logs of cottonwood will run 40 per cent. firsts and seconds, the average for that wood is about 18 per cent. The black willow of the southern Mississippi Valley runs more evenly, as its average in this grade is 20 per cent. and select logs produce 30 per cent.

The chief production of lumber is from the black willow of the district indicated. There are, however, several other varieties of willow native to the U. S. and one or two have been introduced from abroad.

High grade willow lumber is used mostly in the North for furniture drawers and backing, while the poorer grades of willow are used close to the place of manufacture in the South for box material. It is interesting to note that willow was once used for many purposes from which it was crowded out by the greater supply and the then relatively low cost of basswood, poplar and cottonwood. At the present time willow is back on the market at a lower price than these woods and bids fair again to gain favor.

Willow is a wood which may be dented and bruised without splintering and, as is well known, has been used to some extent along with ash in the manufacture of baseball bats. It is also suitable for boat building, for oars and paddles, the wooden parts of water wheels, etc., as well as for barrel bottoms. It is especially desirable for cutting boards and tables on account of its spongy softness. The wood is not warped or split by intense heat and is therefore suitable for ironing boards and for wheelbarrow bodies, for handling hot material such as ashes or for work around hot furnaces. With other softwoods it is a favorite for the manufacture of wooden toys and novelties, especially those which are not to be finished in white. It is also used to some extent for select cooperage, chiefly in the vicinity of North New Orleans, the No. 1 cooperage being used for sugar rice and asphalt and No. 2 for oysters, garden truck and vegetables. It is also used to considerable extent for the manufacture of excelsior at southern points, being confined, however, to the medium and coarse grades, the wood not being suitable for the finest comb, or wood wool. Willow excelsior is very largely used in mixture, of course, must be peeled and the trees are therefore largely cut in the growing season when the bark may be easily stripped.

The charcoal used for manufacturing certain kinds of gunpowder is willow charcoal, which produces a very pure carbon. The native willow has been largely cut out near such powder mills and they are going farther for the product and also inducing nearby farmers to set out willow plantations.

For paper making willow produces a rather short fibered pulp but this booklet states that it would be very useful for mixing with the longer pulp of longleaf pine.

One of the most important uses for willow is in the manufacture of artificial limbs, a large number of orders for export have been secured by American manufacturers as a result of the European war. The modern artificial limb as distinguished from the ordinary wooden peg is said to have been first made in London in the early part of the nineteenth century by a man named Cork, and derived the popular nickname of cork leg from this fact, although some people believe that cork is often used for this purpose. Willow, however, combines something of the lightness of cork with a superior strength.

Willow for this purpose, however, must meet certain rather rigid requirements. It will not do to manufacture an artificial limb block from a small tree containing the heart in the center of the piece, because of the greater liability to checking. A tree of twelve inches diameter or over is therefore required, although occasionally smaller trees are utilized. Only the straight clear portion of the trunk is usable, which often means less than ten feet of merchantable material from the ordinary tree. The logs are usually split into quarters as soon as cut in order to avoid possibility of checks in drying. Sometimes the ends of the sticks are painted to prevent too rapid seasoning or a hole is bored in the end of the piece, which tends to prevent end checking by distributing the seasoning process farther back into the piece from the end. Most manufacturers of artificial limbs believe that wood should be cut in the winter. Most of them consider it necessary to season the wood two or three years. One manufacturer, however, claims that willow blocks cut in July and properly handled were found as good as any which he had used.

Willow has been used to a considerable extent for fence posts; although not a particularly durable wood in untreated condition, in dry soil a well seasoned willow post will often last five to seven years, but in locations which are alternately dry and wet or where much freezing and thawing occurs their life is of course shorter. Willow is, however, a desirable wood for treatment and treated willow posts can well replace red cedar posts. Where the latter cost 40 cents or more, first class willow posts can be grown at a cost of 12 cents and second class posts for 8 cents. At a cost for treatment of 10 cents a post and a cost of 3 cents each for peeling (this author's figure, which appears to be somewhat high) the ultimate cost is 21 to 25 cents for a post that will last twelve to twenty years. Willow should be seasoned eight or ten weeks before being creosoted. Thorough seasoning greatly adds to the durability of untreated willow posts.

Willow is used abroad for the manufacture of tannin, the bark containing 12 to 14 percent of that substance. It has never been used for that purpose in this country, but the peelings from excelsior bolts and basket willows could well be utilized at a low cost. Willow tannin combined with birch tar or oil gives to Russia leather its well known scent, being used in Russia for the tanning of the finest product.

Bee keepers often plant out willows for the sake of the honey secured from the flowers, although the female or staminate tree should be used for this purpose. Willow is one of the few woods in which the staminate and pistillate varieties are represented by separate individuals.

Query and Comment

What Are Canadian "Good Sides"

Will you kindly send us a carefully worded description of the grade of white pine known as Canadian "good sides"? We wish to know particularly the following points:—

1. Will "Good Sides" allow No. 1 Dressing boards. If so, what percentage?
2. Will this grade allow No. 1 Cuts, if so what percentage?
3. Will this grade allow No. 2 Cuts, if so what percentage?
4. Will this grade allow Shaky Clear, if so what percentage?
5. What is the narrowest width that 4/4 "Good Sides" will allow?
6. What is the narrowest width that 5/4, 6/4 and 8/4 will allow?
7. In a representative grade of "Good Sides" what percentage of the stock would consist of Fine common, Selects and Uppers?—U. S. Reader.

Enquiry made by the Canada Lumberman from several well posted lumbermen in Toronto shows that the general conception of the term "Good Sides" in connection with Canadian white pine is that this grade is usually put up for export in thicknesses of 1¼in. and wider, and 8 in. and wider, usually 8 in. and wider. This grade is the cream of the log according to our information, and includes usually what are known as "selects", "picks", and "uppers" and some times "fine dressing." "Good Sides" will not include No. 1 dressing boards. As to whether No. 1 cuts may be included, this will depend upon the arrangement made at the time of the sale, frequently the No. 1 cuts are put in. No. 2 cuts are not allowed. "Shaky clear" is not allowed. As to the percentage of fine common, selects and uppers in "Good Sides,", this will depend upon the arrangement made at the time of the sale. If the arrangement is to include No. 1 cuts and better the further question will arise as to how much of the No. 1 cuts may be put in.

Logging Railroads in Eastern Operations

Editor Canada Lumberman:— Badger Brook, Nfld.

As the question of logging railroads has come up for discussion here I am writing you hoping that you may be able to give me some information as to the cost of equipment, conditions under which they will work, cost of operating, etc. Also I would be glad to know whether gasoline or kerosene can be used in place of wood or coal. In addition I would appreciate the names and addresses of some companies who manufactue the necessary equipment.

Enquiry which we have made of several users of logging railroads in eastern Canada has brought out information which is of a rather variable nature. Some firms are meeting with decided success in this method of logging, while others find various difficulties of a more or less serious nature. The situation is summed up in information sent us by a prominent operator in Quebec province, who says:—"Generally speaking our conclusion is that where there are drivable streams railroad operating should not be considered. In railroad operating, cars have to be loaded either by team or steam. To keep a mill of 75,000 feet per ten hour day capacity in operation will require two locomotives, depending on the distance of haul. This will hold good up to about 25 miles. Also one steam log loader will be required. In regard to the use of fuel oil, etc., the chief point to consider is the condition of the right of way in regard to fire possibilities. A 'safety first' policy would make the fuel oil the best to use, then coal and then wood, but when considering cost alone, the order would be exactly the reverse.

"Locomotive drivers, firemen and brakemen are a very important factor in logging by railroad. Incompetent men neglect the boilers and under their management the tubes and the fire box are short-lived. The same thing applies to a smaller extent in regard to the machinery of the locomotive. This all furnishes a source of inestimable expense.

"The type of locomotive is very important, as well as the type of logging cars. These matters will depend to a very great extent upon the locality. In regard to track construction there is only one thing necessary and that is to make the track as nearly standard as possible. The cheaply laid track is a source of heavy and continual expense for up-keep, and it causes great wear and tear to machinery. Moreover, it is a dangerous source of accidents. Roughly speaking, $5,000 per mile should be the cost for clearing, grading, ties, and tie and rail laying. To this must be added the current cost of rails.

"In districts where there is a considerable snowfall, a wind plough and flanger are necessary, and even with the best possible equipment it is a very difficult undertaking to keep things going.

"The writer has logged with almost every kind of equipment, both in the east and on the Pacific Coast, and has good reason for asserting that logging by rail is the court of last resort, in the east."

Navigation Opens on the Great Lakes

On May 1 navigation on the Great Lakes comes into full swing and it is now stated that the congestion of freight waiting to be moved at the opening of lake navigation has brought about a situation unparalleled in inland water history. According to a statement issued by the Lake Carriers' Association the volume of grain and iron ore freight under contract has now reached 100,000,000 tons. Ships that have been idle for years are being hurriedly made ready to enter trade again, giving employment to additional thousands of seamen. The lumber shipping interests on the Great Lakes are greatly agitated over present difficulties in chartering lumber cargoes. The sale of several boats recently has taken them out of the lumber-carrying trade and charter prices have increased considerably over a year ago. A freight rate increase from the head of Lake Superior to Lake Michigan and Lake Erie ports applies in both soft woods and hardwoods from 50 to 75 cents a thousand feet.

What per Cent. Are You Efficient?

By R. J. Tolson

In these days of efficiency the values of men, measures and materials are all determined by superlative tests of merit, from which the world adopts its standards.

With materials the standard represents the best, strongest or purest elements which can be combined into a finished article.

With measures, the standard is that principle which produces the greatest universal good.

With man, the standard is the climax of efficiency reached by him who has mastered and put into execution the component essentials of his chosen vocation; therefore, the rule to determine the value of man is nothing more than a simple analysis of the attributes of his character and mental efficiency; but, here we have a stumbling block, because none of us can analyze a man's brain until after he is dead, and we can only judge him by what we see and by the results he obtains; just as we cannot determine the character of work that a machine, which is new to us, will turn out until we have watched or seen it in operation.

But there is one thing we can do, and that is, we can, to some extent, analyze ourselves. We can by self analysis take an inventory of ourselves, so to speak, and determine to a reasonable degree of accuracy, provided we are honest in our values, our true measure of efficiency in the vocation which we follow.

The ideal man, in any line of business, is one hundred per cent. efficient. The hundred per cent. efficient man possesses every element which produces success, therefore every man's success or failure, in his chosen vocation, may be traced directly, or indirectly, to the degree or percentage of efficiency which he has acquired and put into execution.

To be "efficient" does not mean that a man must have the wisdom of Solomon, the genius of Edison, the poetic inspiration of Shakespeare, the financial insight and ability of Rockefeller, or the learning of Jefferson, but each of these were, perhaps, near one hundred per cent efficient in their respective vocations. A bootblack can be, as a bootblack, one hundred per cent. efficient in his particular trade, without being able to read or write. A peanut vender can be one hundred per cent. efficient in his line of business, and the chances are, if he is one hundred per cent. efficient, he will, in time, be the largest wholesale peanut merchant in the world. A mechanic may be one hundred per cent. efficient in the operation, construction or repair of certain kinds of machinery, but if he is, it will not be long before he either owns the business or has been delegated to the management of same. Likewise a retail yard man may be one hundred per cent. efficient in the capacity of assistant at a lumber yard, and if he is, somebody will be sure to know that fact, and he will not have to work in that capacity very long. On the other hand, if he is only fifty per cent. efficient he may work in his same old job until he is as gray as a bat and then wonder why Fate is against him and Fortune never came his way. The trouble with many men is they think they are the efficient when they are not. This is oftentimes due to self-conceit or egotism, which can only be cured by a series of failures and disappointments, or by an honest self analysis or inventory of their qualities of mind and store of knowledge pertaining to the particular line of business in which they are engaged.

Essential Qualifications in Lumber Business

This particular article being intended for those who are in the lumber business, it may be interesting to note some of those essential qualifications which are generally conceded to be necessary to acquire one hundred per cent. efficiency in that vocation.

Right here, let it be said, a retail lumberman cannot be efficient with the limited amount of general knowledge or mental requirements which might be sufficient for one hundred per cent. efficiency in individuals engaged in many other vocations. Retail lumbermen are in a class to themselves and must possess just a bit more general know-

ledge, a degree of higher intelligence than is required by many other ordinary mercantile pursuits.

In the judgment of the writer the essential qualifications for one hundred per cent. efficiency in a retail lumberman can be enumerated as follows:

1. Good health.
2. Honesty and integrity.
3. A thorough knowledge of the grades of lumber.
4. Estimating materials; that is, the ability to make up and figure the value and quantities of material used in the construction of all kinds of buildings.
5. Estimating costs; that is, the ability to estimate the costs of labor for the construction of all kinds of buildings.
6. Architecture; a reasonable amount of ability to draw plans and sketches of dwellings, barns, small store buildings, etc.
7. Salesmanship.
8. Law; that is, a general knowledge of the laws relating to liens, mortgages, judgments, executions, attachments, bankruptcy, exemptions, etc.
9. Industry and energy.
10. Sobriety.
11. Judgment; which relates especially to judgment in extending credits and methods of collection of accounts, etc., which also implies a good judgment of human nature and values.
12. Courtesy.
13. Tact; which includes the ability to handle doubtful or delicate business propositions with success, which faculty includes discretion.
14. —System; and sense of order, which implies a knowledge of the value of appearances.
15. A knowledge of bookeeping.
16. Economy; which pertains to expenses, investments, etc.

How to Arrive at Grade

From the above, it appears that there are sixteen essential qualifications or component parts to make up a first-class retail lumberman; therefore, to be one hundred per cent. efficient, as a retail lumberman, the man must grade one hundred per cent. perfect in each of the sixteen essentials above listed. In other words, if the lumberman is only ten per cent. efficient in one essential, twenty-five per cent. in another, and seventy-five per cent. good in another, and so on, through the entire list of essentials, the chances are that he will not grade out over fifty or sixty per cent. efficient on the general average test. If such is the case, this man is not a thoroughly first-class lumberman, even though he might grade one hundred per cent. efficient in his knowledge of lumber and several other essentials, because his shortcomings in the remaining essentials cuts down his average percentage of efficiency.

The question, therefore arises, what per cent. are you efficient as a retail lumberman? Are you only twenty-five per cent. a good lumberman? Or are you ninety-nine per cent. pure stuff? Let's see.

Now for the sake of determining whether or not you are worth the amount of salary you are drawing, and as to whether you are worthy of a bigger or better job, just try to be honest with yourself a few minutes and fill out the blank efficiency test which follows and show to yourself by a mathematical calculation how good a lumberman you are, and how far you fall below the one hundred per cent. mark.

In explanation, take essential No. 1, good health. If your health is perfect, then put 100 in the blank column under the word "Per Cent."

Essential No. 2 is honesty. If you know you are strictly honest, then put 100 in the same "Per cent" column, showing that your are 100 per cent. honest.

Essential No. 3 is knowledge of grades of lumber. If you consider you know all the grading rules, and can tell the difference between a No. 3 board and a piece of finish, then put another 100 in the "Per Cent" column.

Essential No. 4 is estimating materials necessary to construct any kind of building. Here is where you will doubtless have to discount yourself a little; any way, if you think you can get up a correct estimate of the material necessary to build seventy-five per cent. of all the buildings you sell material for, then you are entitled to 75 per cent. in the "Per Cent" column. Remember, this does not mean ability only to figure up the estimate itself, but the ability to make up the estimate of materials.

The next essential, No. 5, is a hard one for the average retail lumberman to get a high mark of efficiency, as very few know very much about estimating costs of construction, yet to eliminate losses on contracts, the knowledge is very essential. You are the best judge of what you know, therefore put down whatever per cent. will most nearly represent your knowledge of that essential. If you conclude that you know only about ten per cent. of what you ought to know about estimating construction labor costs, then put 10 in the "Per Cent" column, and so on down the line, making analysis of your knowledge and possession of each of the sixteen essentials and place your grade opposite each in the "Per Cent" column, after which add it up and divide the total by sixteen (16). The answer will be your percentage in efficiency as a retail lumberman. Try it on the table below.

The Sixteen Essentials for a One Hundred Per Cent. Efficient Retail Lumberman—Self-Analysis Test Table.

1.	Good health	.....
2.	Honesty and integrity	.....
3.	Knowledge of grades of lumber	.....
4.	Estimating materials	.....
5.	Estimating construction costs	.....
6.	Architecture	.....
7.	Salesmanship	.....
8.	Law	.....
9.	Industry and energy	.....
10.	Sobriety	.....
11.	Judgment	.....
12.	Courtesy	.....
13.	Tact	.....
14.	System	.....
15.	Bookkeeping	.....
16.	Economy	.....
	Total	.....

Now divide the total by "16"—the answer will show your percentage of efficiency, which is your proper grade as a retail lumberman.

A Good Word for Canadian Birch

Editor Canada Lumberman:—

Sometime ago I sent you an item on the desirability of Canadians using more of their native woods, and less of the imported woods, and at that time referred particularly to the many good qualities of Birch, not only for finishing purposes, but also for general purposes, where heavy oak and ash are used at the present time. I am enclosing you two newspaper clippings which refer particularly to the qualities of birch. One in reference to the fine finish which can be given it, and another to the fact that birch shrinks and swells very little under any conditions.

Birch makes beautiful furniture and beautiful interior finish for residences, offices and other public buildings, and it seems as though the attention of the architects should be called to this beautiful wood which they are overlooking and for which they specify substitutes that lack the good qualities of birch.

Not only is this doing an injustice to Canadian products, but it has a further effect of taking good money out of Canada to pay for these substitutes that should remain there to build up the country. At present this is a very important feature to be considered.—U. S. Wholesaler.

The first of the items referred to by the writer of the above letter is as follows:—

"A writer in the Furniture Manufacturer and Artisan discusses interestingly the finishing of birch as a high grade cabinet wood. He contends that it should be filled in order to secure the best finish, although very often in the past the filling coat has been omitted. Where used in conjunction with mahogany it should be treated in the finishing precisely as mahogany except that it requires a stronger stain. If the birch parts are first coated with a stain 50 per cent. darker than that used on the mahogany, and if when dry the whole case is then coated with a mahogany stain and the two woods are then treated alike in the finishing, the two will have much the same appearance. This writer, however, contends that birch finished natural or in a light brown shade deserves high rank as a cabinet wood and would receive it if it were an imported rather than a domestic wood."

The second item is as follows:—

"High prices and the increasing scarcity of black walnut lumber have resulted in attempts to substitute other species for the manufacture of gun stocks. The Forest Products Laboratory has received numerous requests for information on possible substitutes and many samples of rough stocks from other species have been submitted to the laboratory for testing. To be suitable for gun stocks the wood must be easily worked; it must be subject to very slight shrinkage and swelling under outdoor weather conditions, and it must be capable of taking a good finish. Of the substitutes being tried birch has probably received more attention and orders have already been placed for this material."

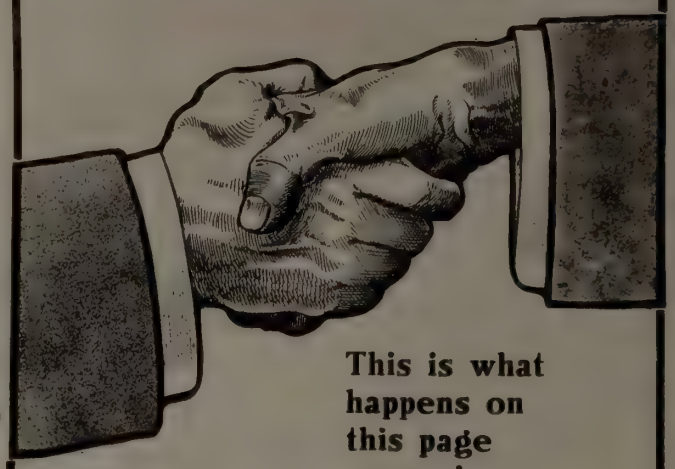
Death of Col. A. D. Davidson

Col. Andrew D. Davidson, who was closely associated with Messrs. MacKenzie & Mann in their C. N. R. enterprises, and in their various lumber manufacturing interests, died on April 22nd at Rochester, Minn., at the age of 63. The late Mr. Davidson held the offices of president of the Canadian Western Lumber Company, Fraser Mills, B. C.; president of the Columbia River Lumber Company Ltd., Golden, B.C., and president of the Big River Lumber Company, Prince Albert, Sask., as well as important positions in a number of other large manufacturing concerns in Western Canada.

The Master of Ceremonies

Mr. Buyer

Are you in the market for a special bill of lumber? Would you like to pick up a real good second-hand planer or perhaps some logging equipment? Have you a vacancy in your plant for a filer or other employee? If you answer "Yes" to any of these, advertise on this page. It is the "Master of Ceremonies" and will introduce you to the man you want.



This is what happens on this page every issue

Mr. Seller

You are looking for the man who is looking for you—you have for sale what he wants. All that is needed is an "Ad" on this page to bring you together. Appeal to this "Master of Ceremonies" and send us a small ad. today. What can we sell for you—or perhaps we can find you a job.

Send along your ad.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch. each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Sawdust Wanted

Wanted to contract for sawdust. Apply M. Brennen & Sons, Hamilton, Ont. 9-10

Maple and Hickory

Wanted, Maple and Hickory Axles, dry. Jackson Wagon Co., St. George, Ont. 8-11

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Cedar Wanted

Good cedar for boat building. Best prices paid for the right material. Write for particulars. The Peterborough Canoe Company, Limited, Peterborough, Ontario. 6-9

Wanted to Buy

750,000 ft. 2 in., 2½ in., 3 in. and 4 in. log run Birch. Terms 75 per cent. cash on shipment, balance on arrival. Apply P. O. Box 643, Montreal, Que. 9-12

Wanted

We are in the market for a large quantity of 2-in. Spruce Plank 4 in. and up wide, 8 feet and up long. Good merchantable stock. Kindly write us your lowest price. Box 334, Canada Lumberman, Toronto, Ont. 5-t.f.

Wanted

Several cars 16/4 Birch, No. 2 common and better grade. Must be dry and ready for immediate shipment. Write us your lowest price and full particulars. Box 333, Canada Lumberman, Toronto, Ont. 5-t.f.

For Sale-Lumber

Logs for Sale

500,000 Western Ontario White Pine Logs. Can be sawn to your order. Those interested please write Hall Brothers, 174 Mutual St., Toronto, Ont. 9-12

Hemlock Ties

FOR SALE—Considerable quantity of hemlock ties suitable for Electric Railways, Sidings, etc., ready for immediate shipment. Monteith Bros., Rosseau, Ont. 6-10

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal

GEO. C. GOODFELLOW,
Montreal, Que.

For Sale

65,000 Feet GOOD DRY B. C. FIR

2½ to 5 in. thick by 6 to 12 in. wide. 60 ft. to 78 ft. long. Immediate delivery. George Kersley, 224 St. James Street, Montreal. 7-10

For Sale-Machinery

Portable Sawmill

Portable Saw Mill for sale in first-class condition. Capacity 10 M. feet per day. Double edger and everything necessary. Box 388, Canada Lumberman, Toronto, Ont. 8-9

Producer Gas Engine

For sale, second hand 45 H.P. Producer Gas Engine with gas producer, air pump for starting, blower, and small gasoline engine complete and in good condition. Burns pea coal, could be operated at a cost of about $1 per day. Will be sold at a very low price. Canadian-Warren Axe & Tool Company, Ltd., 7-10 St. Catharines, Ont.

For Sale

About 200 9/16 in. Boom Chains, and about 600 ½ in. Boom Chains. 1 set Pine Storage Booms of about 100 pieces, with ¾ in. shackle chains, and 1 set Pine Storage Booms of about 100 pieces with ⅞ in. shackle chains. Also a quantity of White Pine and Hemlock Booms. Box 379, Canada Lumberman, Toronto, Ont. 9-9

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

Machine For Sale

Two second-hand McGregor-Gourlay O. Y. Planers and Matchers, one 9-in., one 15-in. wide; in good condition, ran every day till October, when fast feed Matcher was installed. Located in Saskatchewan. Box 384, Canada Lumberman, Toronto, Ont. 8-11

For Sale

Stationary Sawmill Machinery, including Engine and Boiler. Capacity 15,000 feet per day. Also Cowan Stroke Mortiser and Fisher Belt Sander. Must be sold at once to make room for extension to sash and door factory. Apply to P. W. Gardiner & Son, Box 209, Galt, Ont. 9-9

Machinery for Sale

Cowan No. 204 Planer and Matcher, 15 x 6 in.
Cowan No. 236 Chain Saw and Mortiser, ⅝-in., 5/16-in., 7/16-in.
Cowan No. 224 Tenoner.
Cowan No. 152 12-in. four side Moulder.
Ballantyne 8-in. three side Moulder.
Ballantyne End Matcher.
Ballantyne Door Cramp, 4 ft. by 8 ft.
McEachren Dry Kiln Heater, 1,000 ft. coil, 36-in. Fan.

Will consider 8-in. four side Moulder in an exchange. All machines are good, in first-class condition, recently new, and some have numerous extra attachments which will be thrown in. We are quitting planing mill business to engage in another line. These machines are in our way and no reasonable offer will be refused.

GALBRAITH & COMPANY, LTD.,
9-9 Owen Sound, Ont.

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

BAND SAWYER wants position, left hand mill. Good references. Box 335, Canada Lumberman, Toronto, Ont. 9-9

SAW FILER of 22 years' experience, wants position. Can do any kind of filing or hammering. Box 396, Canada Lumberman, Toronto, Ont. 9-9

Manager Complete Plant wants position, woods, railroad, saw mill. Big proposition wanted, no matter how difficult. Box 389, Canada Lumberman, Toronto, Ont. 8-9

BAND SAW FILER of long experience wants position. Box 398, Canada Lumberman, Toronto, Ont. 9-9

BAND, RESAW OR ROTARY SAWYER wants position. Six years' experience; sober and good references. Box 353, Canada Lumberman, Toronto, Ont. 6-9

BAND SAW FILER wants position, double or single cut. Twelve years' experience, first class references. Box 317, Canada Lumberman, Toronto, Ont. 4-9

DOUBLE BAND SAW FILER wants position, first-class references.

BAND MILL FOREMAN wants position, first-class millwright, and can handle men to good advantage. Box 359, Canada Lumberman, Toronto, Ont. 6-11

Experienced married man, fifteen years' experience, thorough knowledge shipping, inspecting, estimating, travelling, etc. Open for engagement, any time, best references; at present employed, desirous of change. Box 385, Canada Lumberman, Toronto, Ont. 8-9

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

INSPECTOR WANTED—A man capable of inspecting both hardwood and softwood, and shipping same. State references, experience and salary expected. Box 394, Canada Lumberman, Toronto, Ont. 9-12

SALESMAN WANTED—One with good connection amongst consumers of Canadian Hardwood Lumber through Ontario and the United States. Good opening for the right man. Must be experienced. Address Box 48, Canada Lumberman, 119 Board of Trade, Montreal, Que. 9-9

Business Chances

Sawing Contracts To Let

We are prepared to let contracts at once for two or three portable or semi-portable saw mills to cut hemlock, hardwood and some pine on McKenzie Township near Parry Sound. Jobs will run from one million feet up, amounting in all to about fifty million feet. Would like to include some manufacturing and lath and shingles. Write at once, giving full particulars and experience and references.

HOLT TIMBER COMPANY, LTD.,
8-9 c/o Canada Lumberman, Toronto, Ont.

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

Miscellaneous

Timber Limits For Sale

Berths No. 2 and No. 4 Nipissing, and Berth No. 4 Cook. Hemlock, Birch, Pine and Spruce. Would sell berths separately. Close to Lake Nipissing. Great opportunity for jobbers on Nipissing berths. For particulars address Box 381, Canada Lumberman, Toronto, Ont. 7-10

30 Replies

are often received to "Wanted" and "For Sale" ads. on this page. Even 50 replies are not an uncommon return from the investment of the small amount a condensed ad. costs. And isn't that good business—to get right into close touch with so many people interested in what you have to buy or sell? For you can be sure their transactions with you will not end when they have closed the business your single ad. announced.

Woods Used for Specialties

The making of toy furniture is a line that has been growing fast during the past few years. Some special machinery has been devised to turn this work out and it means much work to make the things which mean play for the children. Nail-driving machines are used and the articles are dipped in a vat and not hand painted. They are decorated by hand and thoroughly inspected. Most of these are made in the New England states.

Most of the bamboo broom handles used in the United States come from Amsterdam, N.Y., and are imported from Japan. When they were first brought here they proved unsatisfactory, as they cracked and split. The newer methods prevent this. George H. Maus, of Amsterdam, imports most of them and he has started a hardwood broom handle factory in Japan.

The writer has been through several of the pencil slat factories, used to make pencils and it is a big industry. Trade has been cut off from Germany and Austria and there is a good deal of secrecy about the work after it reaches the pencil slat condition. Most of the wood used is red cedar from the South, some incense cedar from California and for cheap pencils white pine and basswood. The United States exports more pencils than it imports. There are eleven pencil factories in the United States and a new one in Toledo to be built, to cost $200,000. About 200,000,000 lead pencils are made in the United States each year.

Apple wood has been used considerably in the making of briar wood pipes.

The making of sporting articles of wood is carried on to a large extent. Base ball bats are made of ash, maple and hickory. Elm goes into gymnasium goods and red oak into horizontal bars. White cedar and white pine are used for fish net floats, polo sticks and hockey sticks of white oak. ash and hickory. English beech was once used for the heads of golf sticks, but now they are made mostly of dogwood and persimmon. Yellow poplar and chestnut are used much for billiard and pool table tops. Hickory is used for ladder rungs and spring boards; sugar maple for tenpins, lignum vitae for bowling balls, and dogwood is sometimes used for the latter. The legs of billiard tables are made of red oak. The billiard and pool table racks are of white and red oak, cushion rails of oak and ash. Bowling alleys consume shortleaf pine, also a lot of sugar pine, hemlock and spruce.

The inside frame work of billiard and pool tables is elm, white pine, spruce, chestnut, yellow poplar and basswood. The billiard cues are made of sugar maple, rosewood, Circassion walnut, black walnut and ebony. In some sections beech, ironwood and willow are used for cheaper baseball bats. The triangle used to set pool balls is made of cherry. White ash is used for polo and hockey sticks and tennis racket frames and hammock frames of birch, and black walnut for gun stocks.

For woodbending the wood was once immersed in hot water vats, but now it is steamed under high pressure in retorts. It is used largely for rims, shafts, wheels, etc., and must reduce breakage to a minimum.

For bicycle rims maple is genenarally used, and it has advanced considerably in price. It is resilient and adds to the life of the tire.

Large quantities of canes, umbrella and parasol handles are made in Pennsylvania and New York. For the shanks sugar and soft maple are generally used, and beech for the handles. The crooked sticks are straightened by placing in hot sand. Many high priced canes are made of malacca wood, some selling as high as $100. Beech, mahogany and ebony are also used for the umbrella handles and many imported woods are used for these lines.

Woodenware such as pails, buckets, snow shovels, traps, etc., are getting to be quite a line of work. The mouse traps are made of beech, maple, red gum, white elm and yellow poplar. Bowls, dishes, butter cups, tubs, plates, rolling pins and spoons are made of red spruce, white pine, balsam fir and hemlock, also some mahogany, black walnut, cherry, sycamore, white ash and white oak. Sugar maple, beech and paper birch are used much for plates and dishes. Breadboards are made of basswood, cottonwood, white cedar, maple and birch. Elm is used in some of these lines.

FARNWORTH & JARDINE
Cable Address: Farnworth, Liverpool
WOOD BROKERS and MEASURERS
2 Dale Street, Liverpool, and Seaforth Road, Seaforth, Liverpool, England

We are Buyers of
Hardwood Lumber
Pine and Spruce
Veneers (3 or more ply) Handles (all descriptions)
Staves Hoops Headings
James Webster & Bro., Ltd.
Bootle, Liverpool, England
London Office
Dashwood House 9 Broad St. E.C.

Books For Sale
Special Prices
The Preservation of Structural Timber, by Howard F. Weiss. Published in 1915 by McGraw-Hill Book Company. 312 pages, illustrated. Price $3.00.
Scribner's Lumber & Log Book, 1915 Edition, Price 35c.
Baughman's Buyer & Seller, 75c.
Utilization of Wood-Waste (Second Revised Edition), by Ernst Hubbard. Published in 1915 by Scott, Greenwood & Sons. 192 pages, illustrated. Price $1.50.
Canada Lumberman
347 Adelaide St. West
Toronto, Ont.

Cant & Kemp
52 St. Enoch Square
GLASGOW
Timber Brokers
Cable Address, "Tectona," Glasgow
A1 and A B C Codes used

Try an advertisement in the "Wanted and For Sale Department" of this paper.

Union Lumber Co.
Limited

White Pine Cuts
MILNET (Sellwood Jct.)—1915 cut
100,000—2 x 4 and up 10/16—No. 3 cuts and better
50,000—6/4 x 4 " " " "
50,000—1 x 7 " " " "
SPANISH—Bone Dry
18,000—2 x 4 and up 10/16—No. 2 cuts and better
(80 per cent. No. 1 cuts and better)
17,000—5/4 x 4 and up 10/16—No. 2 cuts and better
(66⅔ per cent. No. 1 cuts and better)
Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

Review of Current Trade Conditions

Ontario

Weather conditions and holidays have been rather against trade activity in the lumber business during the past fortnight. The Easter holiday invariably creates something of a lull for a few days preceding and following the Easter season. This has been strongly marked during the present year. Weather conditions have been unfavorable in connection with the country demand for lumber. Backward weather has prevented the farmers from coming into the market with their lumber requirements and it is likely now, that farmers will be too busy at their ploughing and seeding to give much time to buying lumber or putting up buildings and improvements. Travellers who have been visiting Ontario districts report that this condition is pretty general and that most of the farmers are away behind in their work. There are no features of definite interest in connection with the trade in soft woods in Ontario. The demand from country retailers is quiet and in the cities there is practically nothing going on in the way of building operations. It is expected, however, that when fine weather has become permanent the city trade will show some improvement. At present, however, there is really not as much enquiry for stocks as there was a few weeks ago. A curious situation in connection with general trade conditions in Ontario today, is the fact that, although building operations are so greatly reduced, some other lines of trade are quite active, for instance the piano trade is enjoying an excellent volume of business. Apparently people are buying pianos now who would scarcely have been considered prospective purchasers a few months ago. Evidently there is a good deal of money in circulation, but it does not seem to be headed very strongly towards the lumber trade. A case of rather similar interest is that of the jewellery trade. We are told that retail jewellers are doing a very satisfactory business today. Possibly this situation may be accounted for by the fact that many wage earners who formerly were only employed for a portion of the year are now enjoying steady employment at increased wages and are spending money on such articles of luxury. A fair sized movement of stock is still in progress in connection with the shell box business, which is about the only active line in the softwood market in Ontario.

In the hardwood trade, conditions are very different from those in the softwood trade. Orders are somewhat mixed, but quite plentiful, and many hardwood firms find that they have had the best four months' trade this year that they have had since the commencement of the war. Piano factories are very busy and furniture factories are buying to a fair extent. The wagon factories generally seem to be quite busy. The trade in hardwoods on the other side of the boundary line is remarkably active. The greatest difficulty in connection with hardwoods today is in getting stocks. Dry stocks are almost out of existence. The cut of hardwoods in Ontario is expected to be about 25 per cent. less than formerly. One of the best lines on the market today is 2 in. and 3 in. soft elm which is used for a variety of purposes, an important use being for the uprights for piano frames. There is a very strong demand for this line and stocks are scarce. The demand for 1¼ in. birch is strong. These are the only features, but the rest of the hardwood market continues active and strong, with very light stocks. Much of the present buying movement in connection with hardwoods is accounted for by the fact that for some time the manufacturers using hardwoods have been allowing their stocks to run down. In fact there has not been such buying activity since before the war.

Eastern Canada

The St. John market shows very little change so far as Trans-Atlantic markets are concerned. Practically all of the trade now going on is with the Allies and their orders are much sought after. The shipping situation continues to show record prices for tonnage. Charters have been made at 360 shillings, which is an advance of 60 shillings during the past few weeks. English deal prices remain unchanged.

The American market continues to improve. Railway companies have recently raised their embargo and helped the trade greatly. A base price of $28 for spruce at Boston is now frequently quoted and $30 does not seem unlikely in the near future. Lath are also higher and selling at $3 to $3.25 on the wharf at St. John. Shingles are quiet. The driving situation is encouraging. Although a large jam of logs developed at Grand Falls on the St. John River about the middle of the month and subsequently broke, the St. John River Log Driving Company managed to gather them all in without any loss, as they floated down the river.

At Montreal, there is a good demand for U. S. account. Local trade is quiet, but the country trade is a little better. The export situation is still uncertain on account of vessel shortage and it is expected that the high freight rates will reduce the volume of shipments.

The market for spruce at Boston has been strengthened considerably by the removal of the last railroad embargo effective against lumber of the New England line. The base price of spruce frames has advanced and is firm, at $28. Many of the largest spruce mills are very busy. There are plenty of important enquiries in hand and the outlook generally is promising. Random also is firmer. Prices now range as follows:—2x3, $21.50 to $22; 2x4, $22.50 to $23; 2x5 and 2x6, $21.50 to $22; 2x8, $25 to $25.50; 2x10, $26.50 to $27; 2x12, $27.50 to $28. At New York, the spruce market continues strong in all sizes and grades. There is a fair demand for hemlock at Boston. The removal of the railroad embargo has also helped this wood. Some manufacturers are refusing anything under $23 for dry hemlock boards. The price, however, seems to be from $22 to $23. Warmer weather is bringing out the demand for shingles at Boston and prices are firmer. White cedar extras are bringing up to $3.50 for the best. Clears are selling at $3.10 to $3.20. Red cedars are at $3.68 for fair extras to $3.88 for the best. Lath are in good demand and the price tendency is upward. For 1 5/8 in. the price is $4.20, or perhaps a shade less, for some lines, but some manufacturers are asking $4.25. For 1½ in. the lowest price is $4.

Great Britain

A fairly active trade is reported on the spot market in London, in spite of all the difficulties attending it. Values continue to advance, as the cost of new arrivals is greater than was expected because of increased freight rates and the difference in exchange. Hand-to-mouth business is the only kind in progress. Statistics of the London dock stocks, showing conditions just before the opening of navigation, are interesting. European deals and battens, rough boards and prepared boards show increases as compared with last year. Decreases are shown in Canadian pine goods and increased in spruce battens. At Churchill & Sim's recent auction sale a lot of 3 x 8 in. second, red pine, from Montreal, 10/26 ft. brought £29 5 shillings. Red pine from St. John, 3 x 8 in., 11/19 ft., 2nd and 3rd brought £26 5 shillings.

At Liverpool, trade is characterized by absence of offerings, rather than lack of demand. The result, however, is comparative inactivity. During the past three months, the price of tonnage from Canadian ports to Liverpool has increased from 170 shillings to at least 330 shillings, with every possibility of 350 shillings in the near future. Steamer tonnage has been very short all along and it is feared that the large quantities of sailing vessels which assisted last season will not come forward to such a great extent this year. This idea is held in Liverpool, although there is apparently no very definite basis for it as yet. The tonnage question will be the crux of all future business, and still higher prices seem inevitable.

At Glasgow, trade has been quiet during the past fortnight, conditions being similar to those at Liverpool, with meagre imports and a good demand. One or two small parcels of spruce which arrived recently created fresh records in the way of prices. There is practically no possibility of a reduction in price so long as supplies come forward on the present modest scale. Birch planks have met with rather more enquiry. It is understood that a few contracts for Quebec birch logs have recently been completed.

United States

During the past fortnight, the lumber trade in the United States along with practically every other line of industrial activity has been in an uncertain state on account of the overhanging possibility of war with Germany. There has not been any noticeable change in the volume of trade, but business men have all been discussing freely the possibility of war being declared and the results which it will have upon business conditions. At present, however, the chief point of importance in connection with the whole business situation in the United States is the fact that since the commencement of the war in Europe its trade balance has been increasing rapidly in its favor, as a result of its great crops and of the assistance given by bankers in the United States, and by large financial corporations, in financing the production and shipment of goods required by foreign trade. Current trade of all kinds in the United States was never better than it is today and there is good prospect of the volume continuing on its enormous scale for months to come.

In the lumber industry, the indications are strong that during the

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

next few months there will be a heavy demand. The steel business which has been exceptionally prosperous, is even growing more so. Railroads never had heavier traffic to handle. Farmers generally are prosperous and are likely to be in funds for some time to come. Workmen throughout the country are receiving good wages. Money for building purposes can be obtained easily and reports from the large and small cities and communities show that extensive building will be done this year. The present material prosperity means an enormous demand for lumber. The Southern pine situation shows no important change. The outlook is for an extensive demand and continued difficulty in making shipments on account of car shortage. For the week ending April 22nd, 159 Southern pine mills reported orders on hand for 27,570 cars, or 550,848,600 feet. Shipments during the week amounted to 5,023 cars or 100,359,540 feet, leaving a balance of orders on hand of 22,547 cars or 450,898,060 feet.

The car situation continues to affect the hardwood trade considerably. A slight reduction in sales is reported of late, due almost entirely to difficulty in making delivery. Northern hardwoods have also been a little less active, but this is said to be the result of lack of mill stocks. Maple and basswood are strong.

The market for Northern pine is quiet. Buyers are reported to have good stocks on hand and are waiting for developments. Northern pine prices remain firm. A slight stiffening in price is reported for hemlock on some items and the difference between hemlock and yellow pine prices is narrower than it has been for some time.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Trade—American Market Improved

St. John, N. B., April 25th (Special to the Canada Lumberman) :—Very little change has taken place in the St. John market in respect to the shipment of lumber. It goes steadily onward, but if the price of lumber only advanced as do freights, the lumber manufacturers would become so wealthy they would not know where or how to invest their riches. But this is not the case. Prices remain the same, while today some charters have been made at 360 shillings, an advance of 60 shillings during the past two weeks, and though it is said that even higher rates will be paid, no one is capable of judging. English deal prices remain the same, about $18 to $19 per M., but it seems as if the buyers are afraid to venture, and parties having deals to sell today are unable to find purchasers. What the future months may bring forward remains to be seen. Really the only buyers today are the Allies, and their orders are much sought after by all the shippers.

The American market shows a further better tone during the last two weeks, especially since the lifting of the embargoes on the railways, which allows the purchaser to place his order and then feel reasonably sure of getting shipment. Twenty-eight dollars is now a much spoken of base at Boston and one would not be surprised if $30 were the base before long. All the widths have moved up in conjunction with the base price, if the embargoes on the railways should be kept off, a good market should prevail for American sizes.

Laths also have moved up, in keeping with long lumber prices, and are well sold here at $3.00 to $3.25 on the wharves.

The shingle market is not like the rest but still remains dull and dead, with evidently nothing ahead to show any improvement.

The river from Fredericton to Grand Falls is free of ice, having run out early last week. This makes a clear river for two hundred miles, from St. John up. The St. John River Log Driving Company have completed setting their booms and have been very fortunate in catching the many logs which were scattered from the Grand Falls to St. John, supposed to total three to four million feet. If these had escaped it would have meant a serious loss to everyone concerned. Bank logs are now beginning to come into St. John and are bringing about $14 per M. for spruce deal logs, $10 for spruce 8 in. to 10 in. butts, $8.00 for spruce pulp wood and fir. These are about last year's prices.

Montreal Reports Good U. S. Demand

Montreal, April 26th (Special to the Canada Lumberman) :—The most important feature in the Montreal trade today, is the good demand for United States account. Orders have substantially increased of late, and prices obtained are said to be satisfactory. Some shipments are delayed, owing to a shortage of cars. Local business is quiet, the building trade showing no signs of activity so far as the city is concerned. Reports from the country districts, however, are more favorable, although the work is not as a rule of individual importance.

Apart from the firms making shell boxes, trade in the box section is dull. The Dominion Box and Package Company has obtained an order for 30,000 shell boxes.

The outlook for export is still uncertain, with the chances in favor of a considerable reduction in the shipments. Shipping companies have no further space to offer, at present, and when the season opens it is likely that rates will advance further. It is probable that if the goods are urgently required on the other side the Government will have to arrange for boats, as the regular liners hold out no hope of any large amount of space being available for lumber.

The sulphite pulp market continues in a very strong position, with prices still higher. Indications point to a further shortage in European supplies, owing to difficulty in procuring coal and in shipping production. Enquiries from the United States are still numerous. The ground wood situation is better, due to the heavier consumption. Newsprint is also in good demand.

The Railway Companies recently gave notice of an increase in rates on wood pulp from certain Canadian pulp points to United States paper mill points. The average increase was 6½ per cent., the contention being that the railways were following a corresponding increase made over the border. The companies interested protested, and the Railway Commission have suspended the order from going into effect on May 1st, as proposed by the railway companies, and have promised a hearing to the pulp companies.

Glasgow Quarterly Report

Edmiston & Mitchells, Glasgow, Scotland, in their Quarterly Timber Circular, say in part:—The opening quarter of the year has witnessed considerable activity in the Timber Trade of the Clyde, though it is a matter for regret that it is mainly to be attributed to war requirements, and to that extent may be deemed unsatisfactory. The belief that there might be a shortage of supplies, and that in view of the scarcity and dearness of freights higher prices were almost inevitable, encouraged a certain amount of speculative buying, which helped to convey the impression that business was more active than was actually warranted by the ordinary legitimate trade requirements of the market. The outstanding feature, so far as the year has gone, is a steady inflation of values which embraced all varieties of timber, and is due more than anything else to constantly advancing freights, which in many instances represent two or three times the free-on-board value of the cargo. A further factor influencing values was the action of the Government in prohibiting imports from 1st March, except under special permit, of mahogany, black walnut, poplar, gum, basswood, maple, and from 31st March of oak, elm, birch and beach. Licenses will only be granted for these if a guarantee be produced that they are to be used in the execution of Government orders, but there will be the difficulty of securing guarantee, and even then it is to be feared that the giving out of permits will be a slow process, so that there is bound to be a serious restriction in such imports for the duration of the war.

Shipbuilders, who are still mostly engaged on Government work, have shown more disposition to buy of late, doubtless due to the fact that they are now able to devote some little attention to mercantile work, but it is improbable that the consumption in this direction will undergo any decided improvement over the duration of the war. Boxmakers have been very busy, chiefly on Government work, and there is a large consumption of white pine to record. Wagon-builders are well employed, although their endeavors at present are centered to a large extent on war work. There is no improvement in housebuilding, nor is there likely to be until the costs of labor and material return to a more normal level. Cabinetmakers have experienced moderate trade, but with the import of furniture woods now prohibited, the outlook for this industry has assumed a darkening aspect.

As regards the statistical statement, the imports are in excess of the same period last year by about 12 per cent., but are rather less than the first three months in 1914. The total consumption shows the remarkable increase of about 30 per cent. as compared with that for the corresponding period in either of the two preceding years, and is chiefly due to the large movement which has taken place in white pine; but notable increases are also recorded in the case of pitch pine, clear spruce, teak, and in whitewood, oak, and gum leather. With regard to the stocks remaining on hand at this date, while they are nearly 20 per cent. over the figures for this time last year, this is brought about by the great increase in the holding of white pine, nearly all other items showing a decrease. It is perhaps more interesting to note that

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Manufacturers of Lumber

Extensive New Brunswick and Quebec timber limits, abundant with Virgin Spruce, Pine and Hardwoods.

Twenty years' experience in Milling and Manufacturing, together with a practical knowledge of Building and Architecture, is why our Customers tell us that the Dressing, Grading, and Manufacture of our Stock is just a little better than they expected.

Large stocks of 1 in. Spruce Lumber always on hand.

Try a car of our Air-dried Dressed Spruce.

We also make a Specialty of Kiln Dried Stock.

Our personal attention given to every detail.

Write, wire or phone us for quotations.

Established 1894 ***Incorporated 1908***

Campbellton, New Brunswick

there has been a shrinkage in stocks since 31st December last of about 25,000 loads, or 25 per cent.

The output of tonnage on the Clyde for the first quarter of the year is only five vessels of 17,580 tons, against last year's figures for the same period of 104,000. This at first sight would appear to imply that local shipbuilders are not busy, which is far from being the case, the explanation being that no figures are allowed to be published of war vessels, which form the bulk of those launched.

Imports from British North America.

Yellow pine logs—A few sales of first quality wood, mostly of deckwood sizes, were reported from stocks at prices which have ruled rather firmer, but a good deal of the buying was of a speculative nature and has not affected the actual consumption. Shipbuilding requirements are still inextensive, and the stock on hand seems ample to meet all demands for a long time yet.

Oak logs—A good demand has been in evidence for 1st class timber, and the small stock carried over from last year has now been exhausted. A few sales of 2nd class wood were reported, and there is now little even of this quality available in the market. Values have shown considerable appreciation. This wood has been placed on the Government list of prohibited imports.

Elm logs—First class rock elm of large average has met with good request, and high prices have been obtained for parcels of this description, the stock of which is now very light. The movement in other qualities and specifications was quiet, but values have fuled very firm. This wood has been placed on the Government list of prohibited imports.

Birch—Logs: With no stock in first hands, selling was purely of a retail nature. Some little contracting business has been done on a c.i.f. basis at firm prices. Lumber: Planks have met with demand, and sales were reported from stocks at much enhanced prices. This wood has been placed on the Government list of prohibited imports.

Yellow pine deals and sidings—The lower grades have met with good demand, the stock in first hands having been cleared out, and values on same have shown very considerable appreciation. First and second qualities have, however, proved more difficult of sale. Contracting has been on a small scale this year, buyers being disinclined to enter into commitments at the present high prices, and especially on the f.o.b. basis.

Spruce deals—The import was on a restricted scale and quite inadequate to meet the active demands which have existed and which have been maintained despite the steady and extensive rise in values. While the stocks on hand are shown at 11,000 standards, they are held almost entirely on account of merchants and consumers. A fair amount of contracting business has been transacted, chiefly on the f.o.b. basis, at high prices.

Liverpool Market Report

Smith & Tyrer Ltd., Liverpool, Eng., in their monthly market report say:—"The question of tonnage is still the dominating factor of the situation. Government action, which has embraced an extension of the list of prohibited wood goods, has not so far had any appreciable effect upon the problem of overseas space. It seems certain that we shall be faced by a shortage of tonnage throughout the coming season. Spruce deals have appreciated in value, and, owing to the difficulty in obtaining tonnage, and the meagre liner space allotted to the shippers, the quantity offering is small and it is readily sold. There is nothing in sight to presage any weakening in prices. Hemlock is readily placed. Birch, owing to the prohibition of the import, has risen rapidly in value. Pine is firmly held and sellers are having their own way. Pacific Coast woods are still hampered by the difficulties in getting stock forward."

London Market Report

Churchill & Sim in their Wood Circular, under date of London, April 5th, say: "The total deliveries for March from the Port of London correspond closely to the aggregate recorded in March, 1915, the returns being swelled owing to the heavier importation from the Southern Swedish ports, from which buyers for overside delivery have preferred to draw their supplies, coupled as the quotations have been with a definite rate of freight, and prompt delivery, rather than to commit themselves to what they consider to be the more uncertain conditions governing f.o.w. business from the Northern districts. The London market for available sawn stock has shown increased firmness, especially for deals of the lower grades of White Sea and Swedish productions, and for the thinner rough boards. Whitewood has been in good request, and the demand appears to be running upon stock suitable for case making than upon building timber. The heavy demand for floorings and scantlings which emanated from special requirements caused primarily by the war has been satisfied for the time being, and buyers have not been forced by any shortness of stock to look far ahead for their supplies up to the present, so that they are still disinclined to modify the terms upon which they are prepared to enter into wholesale transactions ahead.

"From the St. Lawrence there has been imported—Pine Deals, 2,000 pieces against nil pieces in 1915; Spruce Deals, 3,000 pieces against nil pieces in 1915; and from New Brunswick, etc.—Pine Deals, 2,000 pieces against nil pieces in 1915; Spruce Deals, 109,000 pieces against 543,000 pieces in 1915; Birch Planks 25,000 pieces against 1,000 pieces in 1915.

"Importations of spruce from the Lower Ports dropped off considerably during March owing to the great scarcity of freight room. The demand in the London district has run largely on white-wood, which has reduced the spruce stock at the docks, and for most sizes higher prices have been realised.

"The demand for pine deals has been intermittent, but third and fourth qualities in regular sizes are stronger, in sympathy with the current values of North of Europe stock. The demand for birch planks continued during March and prices were again higher."

B. C.'s Trade Diminishing for Lack of Vessels

In a special despatch to the Toronto Globe, from its correspondent Mr. Norman Lambert, under date of April 17th, mention is made of the great necessity for increased shipping facilities on the Pacific Coast. "The life of this port, before the declaration of the war in Europe," Mr. Lambert says, "was sustained mainly by the transpacific C. P. R. boats and by the many foreign freighters which used to call here on their voyages from one continent to another, or en route around the world. Nearly all the C. P. R. boats have been commandeered by the British Admiralty, and the foreign ships evidently have found more business elsewhere. Only four ships have visited Vancouver from Europe in the last six months. The trade in lumber, which British Columbia might be developing with such countries as France, is going to rival ports owing to the lack of ships. While there is idleness here, the business man in Vancouver can look across to Seattle, and see the harbor of that city bustling with commercial activity. At this moment, so the report states, in Vancouver, a French Government order for 200 million feet of lumber is being filled from the mills of the Puget Sound territory, just across the line. The Government of British Columbia, in conjunction with the Boards of Trade of New Westminster, Vancouver and Victoria, recently sent a man to the West Indies and to South America as a special commissioner to blaze new paths of trade for the products of this Province. This agent's work was found to be quite abortive at the present time through the absence of any adequate means of transporting goods from this port to those countries which he had visited."

The report concludes with a plea for the appointment of a Canadian Custom's officer at New York, so that the haul on shipments between western and eastern Canada by way of the Panama Canal may be shortened by entering the goods in bond at New York and shipping them over land.

Large Bond Issue Underwritten

The James D. Lacey Timber Company of Chicago has underwritten the entire Arkansas shortleaf yellow pine timber bond issue of the Ozan Graysonia Lumber Company, amounting to $675,000. The issue is of first and refunding mortgage 6 per cent. gold bonds in denominations of $1,000, $500 and $100, and these are selling at par and accrued interest.

The Ozan-Graysonia Lumber Company is a consolidation of the Ozan Lumber Company, of Prescott, Ark., and the Graysonia-Nashville Lumber Company, of Graysonia, Ark. Its president and general manager is W. N. Bemis, who has a long successful experience as shortleaf yellow pine operator in the South. Previous to the consolidation Mr. Bemis was president of the Ozan Lumber Company. The Graysonia-Nashville Lumber Company, a subsidiary of the Grayson-McLeod Lumber Company, is owned by the heirs of the late William Grayson and by N. W. McLeod, president of the German Savings Institution, of St. Louis, Mo.

The following are the officers of the company making the bond issue: W. N. Bemis, president and general manager; W. E. Grayson, vice-president; T. W. Rosborough, vice president and assistant general manager; Inghram Grayson, secretary and treasurer; directors—Henry S. Priest, St. Louis; W. N. Bemis, Prescott, Ark.; J. W. Bemis, St. Louis; W. E. Grayson, St. Louis; William Grayson, St. Louis; George H. Grayson, Graysonia, Ark,, and Duncan McRae, Prescott, Ark.

The security for the loan consists of 67,391.60 acres of timber lands of Clark, Pine, Howard and Montgomery Counties, Arkansas, (61,052.74 acres owned in fee—6,338.86 acres timber only), which it is estimated will cut 292,997,000 feet of Arkansas shortleaf yellow pine and 6,850,000 feet of white and red oak timber. Other details of the bond issue are being furnished the timber bond buying public by the James D. Lacey Timber Company, which has its office in the McCormick Building, Chicago.

The trustees of the bond issues are the Mississippi Valley Trust Company, St. Louis, Mo., and the Michigan Trust Company, of Grand Rapids, Mich.

SUPPLIES

Everything in the Grocery line that's needed for the Camps—we are ever on the look out for goods that will meet your requirements and now have on hand a number of splendid lines which you can without doubt use to good advantage in these times of rapidly advancing prices for all food products. Here's a little list. If you notice anything that you can use we shall be glad to hear from you.

Greek Valencia Raisins, 50 lb. Boxes	6½
California " " "	7¾
Fine Filiatra Currants, Cleaned	11¾
California Evaporated Peaches 50s	3¾
California Standard Apricots 25s	9½
Choice Natural Figs 28s	7½
Gallon Rhubarb	1.75
" Apples	2.75
" Lombard Plums, Heavy Syrup	3.25
" Pie Peaches	2.25

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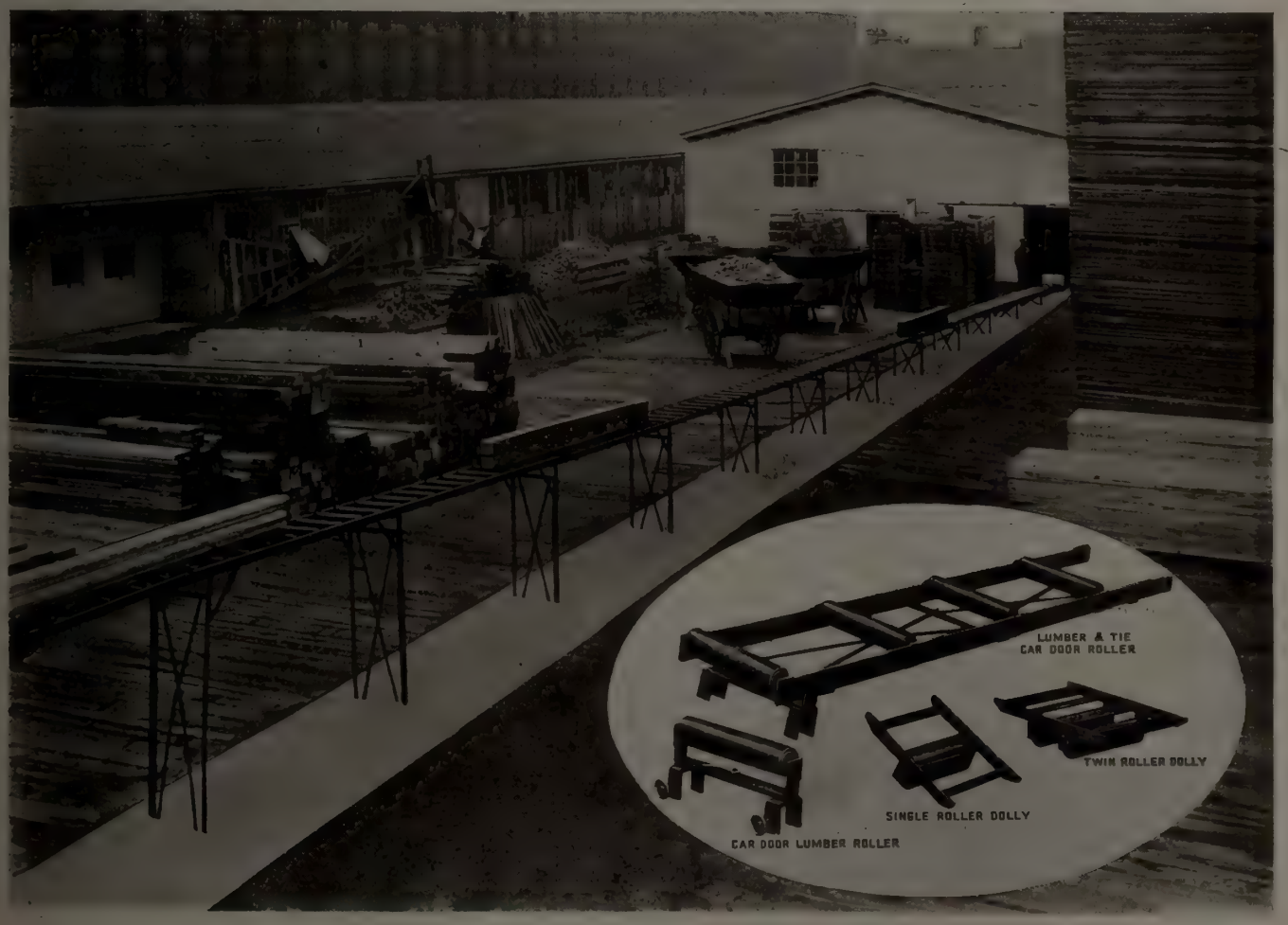

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Our Steel Ball Bearing Gravity Lumber Carrier conveys boards, siding, flooring in bundles, timbers, etc., upon a grade of 4% (4 ft. fall in 100 ft.) The sensitive bearing moves the lumber.

Write us

Canadian Mathews Gravity Carrier Company, Limited

484 Richmond Street, West, TORONTO

Liverpool and Manchester Stocks

The following report upon Liverpool and Manchester stocks for the month ending March 31st, 1916, is furnished by H. W. Lightburne & Company, Liverpool, and their St. John, N. B., representatives John E. Moore & Company, Limited.

Spruce and Birch
Month Ending, 31st March, 1916

	Import			Consumption			Stock		
Liverpool									
N.B. & N.S. Spruce	1914.	1915.	1916.	1914.	1915.	1916.	1914.	1915.	1916
& Pine, Stds. ..	3,850	1,550	530	3,490	1,540	920	6,090	3,590	6,790
Birch Logs, Loads	480	0	0	60	0	140	540	20	500
Birch Planks, Stds.	200	0	0	261	91	79	461	212	400
Manchester									
Spruce, Stds	1,530	690	610	2,400	2,260	3,210	11,560	1,910	8,490
Birch Logs, Loads	100	0	0	200	180	200	140	200	580
Birch Planks, Stds	24	0	67	91	103	127	370	261	443

Stocks in Manchester and Liverpool Combined

	1912	1913	1914	1915	1916	
Spruce						
Manchester	5,260	6,840	11,560	1,910	8,490	
Liverpool	3,580	2,900	6,090	3,590	6,790	
	8,840	9,740	17,650	5,500	15,280	Stds.
Birch Logs						
Manchester	40	300	140	200	580	
Liverpool	340	400	540	20	500	
	380	700	680	220	1,080	Loads
Birch Planks						
Manchester	55	424	370	261	443	
Liverpool	352	473	461	212	400	
	407	897	831	473	843	Stds.

Forest Products Exports Still Increasing

Canada's exports of forest products for 12 months ending January were valued as follows:—1916, $51,211,820; 1915, $41,523,344; 1914, $42,707,781; 1913, $42,873,710. Imports of wood and manufactures of wood for the 12 months ending January 1916 amounted in value to $8,406,841 which is only a little more than one half the total for the corresponding 12 months ending January, 1915, when the total was $16,373,044.

Details of the exports of wood and manufactures of wood for the 12 months ending January are as follows:—

Articles	1915 $	Total $	1916 To United Kingdom $	To United States $
Logs	949,635	1,292,507	54,390	1,237,777
Lumber—Deals, pine	1,176,248	1,292,442	1,213,368	48,704
Spruce and other ..	6,172,094	9,988,654	9,150,162	259,418
Laths, palings and pickets.	1,840,546	2,460,900	11,268	2,434,152
Planks and boards..	18,551,984	22,976,623	2,155,093	19,097,831
Shingles..	2,860,596	3,722,197	.....	3,704,319
Timber, square	545,958	479,844	467,881	11,963
Wood blocks for pulp....	6,705,201	6,160,779	.....	6,160,779
Wood-pulp....	8,976,028	9,846,554	324,032	8,841,303
Wood and manufactures of— Total	51,245,865	62,053,391	15,279,924	43,189,731

Logging and Market Conditions in the West

The Pacific Coast Timber Bulletin, issued by James D. Lacey & Co., at Portland, Ore., under recent date, says in part:—Following a prolonged season of weather that made logging impracticable, lumbering operations are opening up very actively throughout the entire West. Orders and shipments exceed production and prices are holding steady or advancing. Many mills and factories have all the business they are willing to take on in the face of other conditions which make against the fullest activity. A log shortage has existed but it will be overcome as soon as the loggers have recovered from the damage done by severe and continued storms. At Portland there has been an excess of ten inches of railfall. Along the entire coast weather conditions have been so bad that woods operations are impossible in some localities and difficult everywhere. There is much speculation as to what the log situation will be a few weeks hence. Many camps are starting up and an over-supply may follow; but the demand will be determined by the ability of manufacturers to ship their output. Logs were advanced to $7, $10 and $13, but on Columbia River prices have now returned to $6, $9 and $12. On the Sound it is said that as high as $14 is bid for No. 1 fir logs. The car shortage is very serious, particularly on Puget Sound, where the side-tracks are filled with loaded cars awaiting vessels. On Columbia River lumber production is curtailed by car shortage at the terminals. Manufacturers and dealers are compelled to pass orders on account of uncertainty regarding shipments. The average selling price of lumber is now around $13.50 as against about $9.50 a few months ago. It may now be said that the cost of production is returned, plus a fair margin to apply against stumpage and plant depreciation. A very important part of the business received is coming from railroads as formerly. All kinds of supplies are sold at advanced prices. Donkey engines formerly sold for $4,800 now cost $6,000. Wire rope is high and scarce. Difficulty in securing steel products, and the high prices demanded, is turning builders back to wood construction.

In this connection it is very gratifying to note that the situation is shaping itself very favorably for wood. Unquestionably much wood has been displaced by steel and concrete because of apathy upon the part of lumber manufacturers and disregard for proper attention to the requirements of structural engineers. Through the helpful efforts of the lumbermen's associations co-operating with technical experts the possibilities of wood are being shown and developed and if the industry shall now apply itself to intelligent adaptation of its products to their best uses the business now offered through force of circumstances may be retained under all conditions. West Coast Lumbermen's Association is forcefully demonstrating the effectiveness of organized expert effort. Given the support of all who are concerned with the future of the forests of its territory it will pull the Douglas fir industry out of the hole into which it fell. It deserves the earnest support of every timber owner and operator. Although the highest degree of efficiency cannot be attained in the industry until it has been organized as other great industries are organized, association work is a long step in the direction of stable business.

Redwood operators in California have organized an association for the purpose of making known the merits of redwood. It should aid greatly in stabilizing the redwood industry. The shingle branch of West Coast Lumbermen's Association has inaugurated a forceful campaign in behalf of Western Red Cedar shingles. All of the faults of earlier manufacturing will be avoided in the association's branded "Rite-Grade" product and the displacement of shingles by inferior "patent" roofings will be halted.

British Columbia proposes to enact legislation by which 25 per cent. of all net profits of business over and above 7 per cent. interest will go to the Government. If enacted into law this measure will retard industrial development, particularly in lumbering which at best is a hazardous investment that is justly entitled to more than 7 per cent.

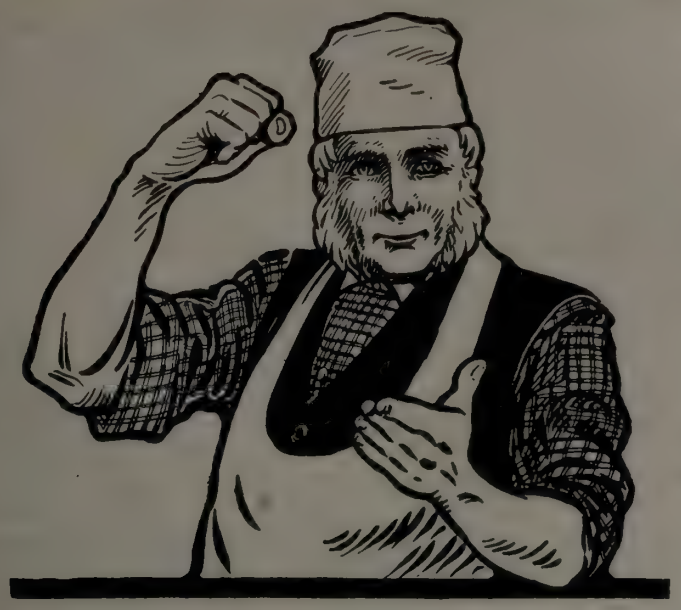
Shipbuilding Boom in Full Swing

Press reports which have recently appeared in many daily papers state that a shipbuilding boom is in progress throughout Canada and the United States, and that probably more vessels will be built during 1916 than in any year during the past 25 years. United States yards are said to have sufficient contracts on hand to keep them busy for three years. There are under construction in the United States at present 252 vessels of more than 1,000 tons each, exclusive of war ships. Shipbuilding activity on the Great Lakes is very pronounced. Cleveland claims 46 vessels under construction costing over $8,000,000, and 30 others under negotiation. Toledo has contracts for an aggregate tonnage of 30,000. Michigan yards will launch 100,000 tonnage during 1916. Chicago has a number of large freighters under construction. Eighty vessels of 500,000 tons have been sold on the Great Lakes this year. Cleveland at present is negotiating for the construction of twenty-eight 3,000 ton freighters. The excessive freight rates prevailing on the Atlantic have caused a revival in ship-building in the State of Maine.

Heavy Freight Movements to Prairie Points

W. B. Lanigan, assistant freight traffic manager for the Canadian Pacific Railway lines, west of the Great Lakes, who was recently in Nelson, B.C., stated that the records of his office showed a decided and steady increase in the quantity of freight being handled by the railway company. Apart from the great wheat crop, more freight was moving now than at the corresponding time previous to the war. The enormous increase in the movement of lumber, he said, was due to the large crops on the prairie provinces, and to the excellent work of the B. C. Forest Branch in advocating the use of B. C. lumber on the prairies. Yards on the prairies had depleted their stocks greatly, and he expected that B. C. manufacturers would be hard pressed to keep up with the demand. The C. P. R., he said, was making arrangements to supply many extra cars for the transportation of lumber to prairie points.

The late Donald Fraser Sr., Fredericton, N.B., made provision in his will for the construction of a modern new building to take the place of the Auld Kirke, which is now utilized as a Sunday School and Auditorium for church purposes by St. Paul's Presbyterian church at Fredericton. It is estimated that the new building will cost between $25,000 and $30,000. The late Mr. Fraser is also reported to have provided for the construction of an annex for Victoria hospital, Fredericton, at a cost of about $30,000.



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says ye olde miller

This is not a lesson in anatomy, but a truism. To earn the good-will of the men; to induce them to produce more and better work, give them good wholesome food. Let their bread be made of

Cream of the West Flour

the hard wheat flour that is guaranteed for bread

It will build them, nourish them as no other food possibly can.

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Canada's Largest Lumber Manufacturing Plant

Mixed Car Shipments
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Doors, Mouldings, 3 Ply Panels and guaranteed quality X X X B.C. Red Cedar Shingles

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Fir Timbers
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Dimension Flooring, Ceiling, Finish, Casing, Base and Interior Trimmings

GUARANTEED QUALITIES

The 1916 model is a ***FIR*** Door made with 3 Ply Rotary Cut beautifully Grained Veneer Panels and Edge Grain Stiles and Rails.

Eastern Sales Offices

Toronto—H. A. Rose, L. D. Barclay

Montreal—R. H. Underhill

Personal and Trade Notes

It is reported that the Chicoutimi Pulp Company contemplate the erection of a sulphite plant.

Mr. J. E. Levie of W. and J. Sharples, Quebec, sailed from England on April 22 to return to Canada via New York.

Hon. Jules Allard, Minister of Lands and Forests in the Quebec Government, has been appointed a member of the provincial Legislative Council.

Geo. H. Millen, president and manager of the E. B. Eddy Company Ltd., Hull, P. Q., completed fifty years of service with the company on April 14th.

Mr. John S. Bates, Ph.D., Director of the Forests Products Laboratories, Montreal, was recently married in New York to Miss Jeannette Ingraham, daughter of Mr. and Mrs. J. W. Ingraham, North Sydney, N. S.

The B. Jahn Shingle Mill recently started by a company composed of Hindus at Langley, B.C., is operating on a night and day shift and cutting an average of 75,000 shingles every 24 hours, with a good demand for its output.

Lieut. H. W. Racey, who was in charge of the Montreal section of the 224th Overseas Forestry Battalion, has been promoted to a captaincy. He was formerly connected with the St. Lawrence Pulp and Paper Corporation, Chandler, P. Q.

Specifications for several million feet of Douglas fir required by the South African Government have been received in British Columbia by officials of the Forest Branch. Owing to the scarcity of ships, however, it is difficult for B. C. lumbermen to effect delivery.

S. H. White & Co., Limited, of Sussex, N.B., will cut over 10,000,000 feet of spruce, with a small percentage of pine and hemlock this season. Their five mills will all be operated, located at Pollett River, Colis Island, Rockwell, Jeffries Corners, and New River, all in New Brunswick.

According to an amendment to the Forest Act which has been placed before the B. C. Legislature by the Government, power is to be given to the Lieut.-Governor-in-Council, under certain conditions, to permit the export of unmanufactured timber from the province, during the continuation of the war.

The 83rd Battalion, Canadian Expeditionary Force, which has headquartered at Toronto during the winter, left for overseas on April 25th. Major R. S. Wilson, of the Wilson Lumber Company, Toronto, is second in command of this Battalion. They expect to go into camp upon their arrival in Great Britain.

The River Ouelle Pulp & Lumber Co., St. Pacome, Que., will cut 20,000,000 ft. of spruce and 6,000 cords of pulpwood this season. They finished hauling to their River Manie mill with their gasoline tractor on April 5. With the gasoline tractor in operation this year they were able to run their mill all winter without shutting down.

The Gloucester Lumber and Trading Co., Limited, Bathurst, N.B., have recently made additions to their sawmill which will increase the capacity to over 70,000 ft. per day. A new Waterous 36 in. Opening Carriage was installed as well as a Slab Resaw made by the McLennan Foundry and Machine Works Limited, of Campbellton, N.B.

An interesting indication of the high price of wood goods in Great Britain is afforded by the fact that a Toronto importer of cotton goods from Manchester has received notice that in future he will be charged 11s. 6d. for each box. Formerly these boxes, which are about 3 ft. 6 in. square and made of a good grade of lumber, were furnished free by the exporters in Manchester.

Mills in the State of Washington have been asked to bid on furnishing 8 million feet of lumber of miscellaneous sizes for the Panama Canal Commission. The enquiry also includes 3,375,000 feet of rough fir lumber and flooring for the Phillipine Islands, to be delivered on Puget Sound, and 250,000 cedar ties for the Alaska Engineering Commission, to be delivered in Alaska.

A deputation of the Montreal Builders' Exchange recently inspected the Forests Products Laboratories, University Street, Montreal. They were particularly interested in the testing of lumber for strength and in the experimental plant for creosoting lumber. This visit and the lecture before the Chambre de Commerce are indications of a wider public appreciation of the work of the laboratories.

A report from Ogdensburg, N. Y., states that on account of the shortage of print paper and the great demand for the product from which it is made, many more cords of pulpwood will be handled at the Ogdensburg terminal this summer than ever before. Preparations are being made to take care of additional shipments by boat from Quebec ports and for the unloading of the vessels at the terminal west of the city.

The report of the West Coast Lumbermen's Association, Seattle, Wash., for the week ending April 15th, 1916, shows that shipments exceeded cut by 3,787,000 feet B. M., or 11.56 per cent.; orders exceeded cut by 2,762,000 feet B. M. or 9.13 per cent.; shipments exceeded orders by 1,025,000 feet B. M. or 3.13 per cent. These figures are compiled from reports received by 67 mills with a six day capacity of 44,630,000 feet B. M.

The Southwest Boom Company, operating on the southwest branch of the Miramichi River, N. B., recently applied to the Provincial Legislature for permission to increase their tolls for rafting from 55c to 65c per thousand feet. There was a spirited debate upon the application when the bill came up in committee, but it was finally agreed to by the committee without amendment and was expected to be passed by the Legislature.

Mr. C. D. McNabb, manager of the Baker Lumber Company, at Waldo, B. C., reports that his company has taken out a very large cut of logs, sufficient to keep the mill running during the whole of the 1916 season. One logging camp is being operated at present and a second will be opened early in the summer. Orders are coming in plentifully from the Prairie Provinces and the company's planing mill is running steadily on material to fill these orders.

The first of several auxiliary powered schooners constructed for Chas. R. McCormick & Company, has been launched at Portland, Ore., for the lumber carrying trade. This is said to be the largest vessel on the Pacific Coast and the largest single decker under the American flag. The length of the schooner is 290 feet and the beam 44 feet. She will have five masts. Two engines of 320 h. p. each will drive her twin screws. She will have a capacity for carrying 2,000,000 feet of lumber.

The Saw is King in the World of Tools

Do you know how a saw is made, or why it cuts? Have you ever given it any thought? Being so universally and extensively used for many years, the saw has become such a well known object that its very familiarity seems to have dulled the sense of its true value and importance.

As a matter of fact, the saw has ever been man's greatest helper in the march of civilization, his most powerful and efficient assistant in the making of progress, in providing comfort and conveniences. It is the agency by which the scope of achievement has been immeasurably widened, permitting the accomplishment of greater and more difficult tasks with a corresponding lessening of human effort and toil. It is king in the world of tools. The results of its work are seen on every hand, wherever you may go. Think of what the conditions would have been without the aid of the saw, and only then, will you begin to realize some degree of its real importance and the wonderful part it has played in the world's up-building.

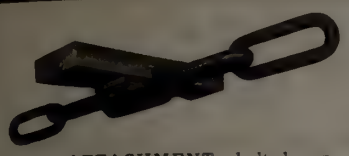
Though a hand-saw consists of but few parts, and its making appears to be a simple matter, yet this is far from the actual fact. A full understanding and appreciation of the work involved in its manufacture can be gained only by a personal trip through the works, where, step by step, in gradual development from crude, raw material, changed and refined in furnaces, transformed under monster rolls, shaped and formed by expert mechanics of long experience, aided by many machines, there finally emerges a beautifully finished, efficient article.

To furnish a proper conception of the true value of the saw, the principal operations are explained at length in a booklet entitled "How a Disston Handsaw is Made," and in a recent production, a finely printed twelve page pamphlet, on "Why a Saw Cuts," this particular subject is specially illustrated and described, demonstrating that the cutting action of a saw is based on scientific principles, bringing out new and astounding facts which few ever before realized.

Both the above publications, well worth reading, will be sent free, on request, by Henry Disston & Sons, Incorporated, Keystone Saw, Tool & File Works, Philadelphia, Pa.

Arkansas Soft Pine Beautifully Described

The Arkansas Soft Pine Bureau, Little Rock, Ark., have issued a unique and very attractive home-builders book entitled "Not a House, but a Home," regarding their product. In addition to being an attractive example of the printers' art, the book contains many practical suggestions and formulae for securing fine finishes of Arkansas soft pine. An extensive section of the book is devoted to a number of designs for bungalows and houses which have been prepared by architects specially commissioned by the Bureau. This work represents a cost of well over a thousand dollars, but is sure to be money well spent as the book will unquestionably convince many readers of the advantages to be obtained by the use of Arkansas soft pine. The cover of the book is a very fine example of color work, representing an old Colonial house, set in an attractive landscape. The printing of the cover is done in several colors.



K-5 ATTACHMENT bolted up under wood cross bars.

S-1½ Log Spur

"RELIANCE" RIVETED CHAIN. All Malleable link chain with steel pins without rollers; has extra long wearing surface to pin.

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Jeffrey Chains are developed to withstand the most exacting tests required in heavy Engineering Service. They combine Highest Tensile Strength with all the other qualities that go to make for Dependability, Durability and Lasting Service.

We carry a big stock of Saw Mill Chains, Sprockets, Gears, Elevator Casings, Boots, Malleable and Steel Elevator Buckets, Bearings, Hangers, etc., for prompt delivery.

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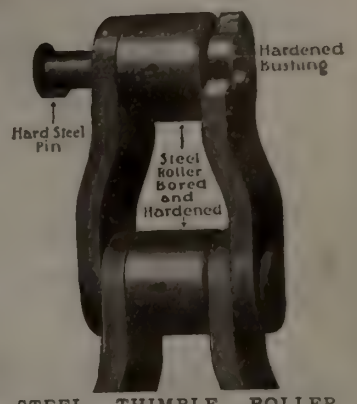
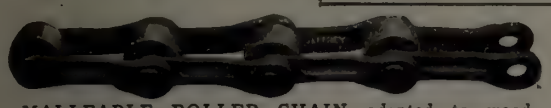


STEEL THIMBLE ROLLER CHAIN — also made without thimbles. Especially adapted to Aprons, Elevators and Conveyors for Heavy Duty.



MALLEABLE ROLLER CHAIN—adapted to wood and steel apron conveyors; also elevators and conveyors handling non-adhesive, non-gritty bulk materials.

FLAT AND ROUND STEEL LINK CHAIN—fitted to general elevator and conveyor service in non-gritty or semi-gritty conditions.

STYLE A STEEL BAR DRAG CHAIN—for short conveyors handling Sawdust, Shavings, etc.

DETACHABLE LINK CHAIN for general elevator and conveyor service in non-gritty conditions.

VULCAN CHAIN, STYLE "C"—fitted to ordinary single and double strand conveyors in non-gritty or semi-gritty conditions.

VULCAN CHAIN, STYLE "B"

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We make a Specialty of

Horizontal Tubular Boilers

for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

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WHOLESALE LUMBER
SANS DIEU RIEN
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SPRUCE rough or dressed

1" No. 2 and Better Birch, 1914 cut
also Basswood, Hemlock and Pine

Saw Mills at MONT LAURIER.
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EXCELLENT PLANING MILL FACILITIES

Special Attention Given to Prompt Delivery

CEDAR
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Pine, Spruce
Hemlock
Hardwoods, Lath

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C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber. Lath and Shingles
Offices—McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

Alex. Kippen, sash and door monufacturer, Perth, Ont., has been succeded by P. W. Clement.

The Pembroke Lumber Company Ltd., Pembroke Ont., expect to commence operations at their mill about May 10th.

H. H. Green is constructing a small sawmill at Fort Frances, Ont., which will be in operation during the coming summer.

The Colonial Lumber Company Ltd., Pembroke, Ont., expected to start their mill about May 1st and to operate day and night.

The Petawawa Lumber Company Ltd., Pembroke, Ont., expected to start their mill about May 1st and to operate day and night.

The Keewatin Lumber Company, Kenora, Ont., started operations for the present season on April 17th with a large stock of logs on hand. The company expect to operate steadily throughout the season.

The Rainy River Company have sold their boom on the American side, about four miles up the river from Rainy River to the E. A. Engler Lumber Company of Baudette, Minn., who will operate it in future.

G. A. Oldrieve is moving his sawmill from Wallacetown, Ont., to St. Thomas, Ont., as the timber in the former district has become exhausted. The mill was erected nearly 60 years ago and is the oldest sawmill in Elgin County.

Reeve Alfred Tier's planing mill at Fenelon Falls, Ont., was destroyed by fire on April 18th. There was no insurance. Since the outbreak of the war this factory has been continually working on extensive contracts for ammunition boxes.

Hodgson Bros. Chemical Company Ltd., has been incorporated with head office at Lindsay, Ont., and capital stock of $20,000 to carry on business as manufacturers of lumber, pulpwood and chemicals. Those interested are T. Hodgson, H. Lowry, I. Hartt and others.

The Mattagami Pulp & Paper Co. Ltd., Traders Bank Bldg., Toronto, have given the contract for the construction of their dam, power house and railway, at Smooth Rock Falls, Ont., to Morrow & Beatty Ltd., 415½ George Street, Peterboro, Ont. The contract for the mill building will probably be awarded shortly.

The Canada Box Board Company Ltd., have been incorporated with head office at Toronto and capital stock of $100,000 to carry on business as manufacturers of and dealers in paper and pulp, strawboard, wood, etc. Those interested are G. MacBeth, G. R. Sproat, F. M. McDowell, C. H. Kemp, and R. Sheppard, all of Toronto.

The Wilson Lumber Company, 1 Spadina Avenue, Toronto, who operate extensively in southern hardwoods, have recently added to their holdings by the purchase of a block of standing timber situated at Finney, Virginia. The timber consists chiefly of oak and poplar, and amounts to about 6,000,000 feet. They are putting in a circular mill to saw it out.

The Peterboro Lumber Company opened their sawmills at Burnham Point, Ont., for the present season on April 17th. They will give employment to between 90 and 100 men and are looking forward to a busy season. They are having good luck with their drives and count upon a continual supply of logs. The mill has been thoroughly overhauled and its equipment improved.

The Crowley Mfg. Company Ltd., have been granted letters patent with head office at Toronto, Ont., and capital stock of $100,000 to carry on business as manufacturers of and dealers in all kinds of wood products, lumber, furniture, wood novelties and a general woodworking business. Those interested are J. F. Coughlin, T. W. Pinnell, A. W. Gilmour, F. P. O'Hearn and J. L. Waggoner, all of Toronto.

Eastern Canada

J. P. Vincent, lumberman, Montreal, P. Q., has been registered.

Wm. M. Sullivan, Nelson, N.B., will build a new sawmill this summer. The plant will have a capacity of about 100,000 feet per day.

The Ha Ha Bay Sulphite Company Ltd., Chicoutimi, P. Q., has obtained a charter.

Isidore St. Onge, St. Edouard de Lotbiniere, P. Q., recently lost his sawmill by fire. The amount of the loss and insurance has not yet been stated.

P. H. Renaud, Agnes, P. Q., will build a new mill at Cookshire, P. Q., to prepare the large quantities of pulpwood which he will cut on his Emberton limits.

The Edward Partington Pulp & Paper Company, St. John, N. B., will erect a new mill this summer. They have not yet decided definitely as to the equipment of the mill, but it is expected that it will include a band mill.

Price Bros. & Co. Ltd., Kenogomi & 56 St. Peter Street, Quebec, P. Q., are contemplating an extension to their lumber mills at a cost of $200,000. Tenders will be called about June 1st. The building will probably be of concrete construction.

J. R. Walker & Company, 35 Common Street, Montreal, P.Q., will rebuild their paper mill at Sault au Recollet, P. Q., which was destroyed by fire last October. Work is about to start and will be done by the owners. The machinery is being purchased in the United States.

The Rosemont Lumber Company Ltd., have secured letters patent to carry on business in the province of Quebec as dealers in lumber, timber and other forest products, with head office at Montreal, P. Q., and capital stock of $15,000. Those interested are A. Sarrasin, E. Sarrasin, and J. A. Laferte, all of Montreal.

The General Lumber Company Ltd., has been incorporated with head

office at Sherbrooke, P. Q., and capital stock of $49,000 to carry on business as manufacturers of lumber, logs, etc., and to operate lumber mills. Those interested are J. D. Bush, R. H. Bartlett, W. R. Lacey, C. K. Bartlett, and T. J. Harrison, all of Sherbrooke, P. Q.

The Laurentide Sand & Gravel Limited have secured letters patent, with power among other things, to carry on business as manufacturers of timber, lumber, logs, pulp wood or any articles made of wood. The capital stock of the company is $49,500 and the head office is at Quebec, P. Q. Those interested are S. N. Parent, O. Lefebvre, of Montreal, and P. A. Galarneou of Quebec.

J. & A. Culligan, Benjamin River, N. B., advise us that they have purchased the property of the Prescott Lumber Company at that point. The purchase includes about 90 square miles of timber land, together with the stock of logs cut during the past winter, the freehold to the land, mills, buildings and movable property. They are making no changes to the equipment this spring, but intend, during next fall, to remodel the mill and extend the boomage. They expect to cut betwee 4 and 5 million feet annually from this property.

Western Canada

F. T. McDougall, lumberman, Nokomis, Sask., has been succeeded by the Dutton Wall Lumber Co. Ltd.

The Ladder Lake Lumber Company, Big River, Sask., expect to operate their mill day and night during the present season.

J. P. Carnduff, Napinka, Man., recently suffered a loss of about $6,000 by fire at his lumber yard. The loss is practically covered by insurance.

Thos. Leslie & Wm. Gardiner have purchased the stock of the Eburne Sawmills Lumber yards at Steveston, B. C., and have organized the Leslie Lumber Company.

The Elkhorn Trading Co., Elkhorn, Man., has been incorporated with capital stock of $45,000, to carry on business as manufacturers of sash and doors and to sell shingles.

The Prince Albert Lumber Company, Prince Albert, Sask., expect to be operating at full capacity early in May. They are looking for one of the busiest seasons they have ever had.

The B. C. Sulphite Fibre Company, Standard Bank Bldg., Vancouver, B. C., recently lost their shipping shed and drying kiln at Mill Creek, B. C. by fire. The amount of the loss was about $40,000, which is covered by insurance.

The Coquitlam Lumber Company at Como Lake, B. C., who suspended operations three years ago, have sold their mill and timber to Messrs. J. C. Wilson and G. H. Sterriker of Royal Oak, B. C. The mill has a capacity of 20,000 feet per day.

The Union Cedar Mills Ltd., have been incorporated with head office at Vancouver, B.C., and capital stock of $10,000 to carry on business as lumber and timber merchants, sawmill proprietors, and dealers in timber, lumber, shingles and wood of all kinds, etc.

The City Box Company Ltd., Winnipeg, Man., have been incorporated with capital stock of $5,000 to carry on business as manufacturers, buyers and sellers of all kinds of boxes, etc. The incorporators include W. Lane, A. Charette, M. Bryer, F. Parks and A. Monroe, all of Winnipeg.

The Brunette Saw Mills Company Ltd., New Westminster, B. C., recently lost their dry kiln by fire, the loss being estimated at over $10,000. The kiln was worth $5,000 and it contained 1,500,000 shingles. The storage sheds between the kiln and the tracks and platform were also practically destroyed.

The Direct Manufacturing Company Ltd., has been incorporated with head office at Vancouver, B. C. and capital stock of $25,000 to carry on the business of manufacturers and dealers in lumber of all kinds, including wood pulp paper, refuse from mills and cutting and getting out logs and timber.

Sealed tenders are being received by the Minister of Lands for B. C. until May 17, 1916, for the purchase of License X586, to cut 1,616,190 feet of Douglas fir, cedar and hemlock on an area adjoining lot 779, Forbes Bay, New Westminster District. Two years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for B. C. until May 17, 1916, for the purchase of License X590, to cut 4,959,600 feet of yellow pine, Douglas fir, and spruce on an area adjoining Sub-lot 2, of Lot 2711, Okanagan Lake, Similkameen District. Two years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for B. C. until May 17th, 1916, for the purchase of License X601, to cut 1,090,000 feet of cedar, hemlock, and balsam, and 360 cedar poles on an area adjoining lot 808, Drury Inlet Range 1, Coast District. Two years will be allowed for the removal of the timber.

M. M. Wall of the Buffalo Hardwood Lumber Company, Buffalo, N. Y., reports that he and a group of Buffalo business men who recently purchased three good tracts of timber in Lillooet, Yale and Cariboo districts, B. C., are contemplating the erection of a mill. They are now actively examining their B. C. timber with a view to starting an operation there soon.

J. Hanbury Company's dry kiln, at Vancouver, B. C. was recently damaged by fire to the extent of several hundred dollars. The flames were confined to the dry kiln, but it is estimated that between 100,000 and 150,000 shingles were also burnt. The loss was covered by insurance. The operation of the mill was not interfered with by the fire.

Among the recent victims of the submarine warfare was a tramp steamer which sailed from Halifax, and was carrying large quantities of Canadian ground wood and sulphite pulp. To replace a portion of this, other pulp will be shipped to England.

According to reports prepared by the Crown Lands Department of Nova Scotia, forest fires during 1915 burnt over a total of approximately 13,000 acres. On a considerable portion of this area no merchantable timber was destroyed.

Blair & Rolland, Limited

Lumber & Pulpwood

20 St. Nicholas Street, Montreal, Que.

Spruce and Pine, 1916 Cut

Mill Run, First and Clear left in

1 in. x 4 in., 5 in., 6 in., 7 in., 8 in., 9 in., 10 in. up x 6/9 ft.
1 " " " " " x 10 ft.
1 " " " " " x 11 ft.
1 " " " " " x 12 ft.
1 " " " " " x 13 ft.

Same specifications in 2 in. and 3 in. thick.

Box

1 in. x 4 in., 5 in., 6 in., 7 in., 8 in., 9 in., 10 in. up x 6/9 ft.
1 " " " " " x 10 ft.
1 " " " " " x 11 ft.
1 " " " " " x 12 ft.
1 " " " " " x 13 ft.

Same specifications in 2 and 3 in. thick.

Mill Cull Spruce 1 in. x 4 in. up x 8/13 ft.
" " Red Pine 1 in. "
M. Cull Spruce 2 in. x 4 in. up x 8/13 ft.
" " 3 " " "
" Red Pine 2 " " "
" " 3 " " "
4,000,000 Pcs. Mill Run Spruce Lath 1½ in. x ⅜ in. x 4 ft.
1,000,000 Pcs. No. 3 " " "
2,000,000 Pcs. Mill Run White Pine " "
500,000 Pcs. No. 3 " " "
2,000,000 Pcs. Mill Run Red Pine " "
500,000 Pcs. No. 3 " " "

Write us for our Stock List balance of 1914 and 1915 Cuts

We are booking orders Now for our 1916 cut.

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Wholesale Lumber and Timber

SHELL BOX STOCK

White and Red Pine, Spruce

Hemlock, Birch, Maple

Railway Ties, Fence Posts, Etc.

Prompt shipment. Satisfactory stock. Good service Write for Prices.

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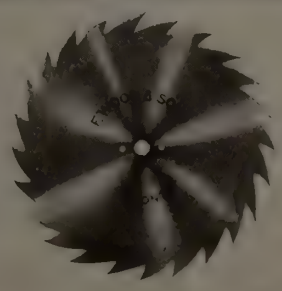

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We make a Specialty of Repairs and can give your orders prompt attention

35 years' practical experience in making saws in Canada

China's Import of Softwood Lumber

Imports of softwood lumber into China are extensive and promise to increase rapidly. Unfortunately, Canada's share in this trade is practically nil. Figures for three years are as follows:—

	1912 Square feet	1913 Square feet	1914 Square feet
Total imports of softwood timber ..	78,912,408	161,375,117	199,703,533

In addition to the above recorded imports of lumber, which consisted of heavy timber, beams, planks, scantling and boards, it is now possible from recent returns received, to give the figures of railway sleepers furnished to China by other countries within recent years.

1912	842,529 pieces, valued at taels	721,068
1913	1,539,836 pieces, valued at taels	1,447,414
1914	2,933,897 pieces, valued at taels	2,998,300

Countries of Origin

Classification—	1912 Pieces	1913 Pieces	1914 Pieces
Japan	812,574	1,444,540	2,583,864
United States	3,500	14,621	190,559
Russia	862	25,372	5,733
All other countries	25,593	55,303	153,741
Total	842,529	1,539,836	2,933,897

From this it will be seen that the comparatively cheap Japanese wood is mostly drawn upon to furnish ties for Chinese railways. Comparing also the figures of cost with the quantities furnished it will be observed that this represents about tael 1 per piece. This would be approximately 60 to 67½ cents Canadian currency per piece in the different years.

Paper and Cardboard

The consumption of paper in China is very great. This country has been manufacturing paper for many hundreds of years, but the mills only produce the classes of paper which have been peculiar to the country for many generations. As yet they have not established paper mills having modern equipment, nor have they produced paper suitable for the present-day requirements of newspapers and books.

The figures of imports for three years follow, but these do not represent the limits of the trade. Many inquiries have been made in respect to paper during the year, but unfortunately possible orders could not be executed.

	1912	1913	1914
Total imports of paper ... ... Tls.	4,351,713	7,212,982	6,525,268

The increase of newspapers throughout the country has been phenomenal within the past few years, and now every town of much importance has one or more newspapers.

New Method of Creosoting Douglas Fir

At a meeting of the Forest Club, held at Vancouver, B. C., recently, Mr. O. P. M. Goss, of Seattle, Wash., described an important new method of creosoting Douglas fir, by means of which the timber is preserved without any loss of strength. It is believed that this process will result in a much increased demand for Douglas fir as a bridge material, also for ties, wharf construction, etc. Mr. Goss, who is consulting engineer for the West Coast Lumbermen's Association, Seattle, Wash., spoke extensively also of the work done by the Association in the way of developing the coast lumber trade. Formerly Mr. Goss was engaged in the timber testing laboratories of the United States Forest Service, and is a recognized authority on this subject. The creosote is injected into the timber, under the new system, at a low temperature and under a low vacuum. This is a slower process than the old one, but Mr. Goss states that the wood retains 99.7 per cent. of its original strength. In some of the individual tests the creosoted timber was stronger than the uncreosoted. In no case had it less than 95 per cent. of the strength of the original timber.

Washington Red Cedar

An attractive booklet entitled "Washington Red Cedar—America's Overcoat Lumber" has been published by the West Coast Lumber Manufacturers' Association of Tacoma, Wash. The booklet contains an interesting discussion of red cedar and its various uses, laying particular stress on the fact that it is one of the longest lived timbers known.

A new issue of the "Consumers' Register" of the National Hardwood Lumber Association has just been published. This register contains details of the lumber requirements per annum of approximately 500 responsible factory consumers of hardwoods in the United States and Canada; freshly collected, revised and tabulated, and representing a total yearly movement of over 1 billion feet of hardwood lumber.

John Kerr, a prominent contractor and lumber dealer of Petrolia, Ont., died recently, after a long illness, in his 74th year.

A Large Cypress Transaction

Announcement has been made at New Orleans, La., of the completion of one of the largest timber deals in recent Louisiana history, whereby the Lutcher & Moore Cypress Lumber Company, of Lutcher, La., acquires a large tract of virgin cypress timber, together with some cutover land, from the Ruddock-Orleans Cypress Company, of New Orleans. The price paid was $2,150,000, constituting what is said to be the highest price ever paid for standing timber in that state. The tract involved is situated in St. John the Baptist Parish and is described as one of the finest cypress tracts remaining in Louisiana.

The deal was handled by James D. Lacey & Co., of Chicago and New Orleans, and has been under negotiation for some time. The Lutcher & Moore company's directors decided upon the purchase during the early part of February.

The transfer does not involve the erection of a new plant, nor affect the present output of either of the companies. The purchasing company will manufacture the timber from its newly acquired tract at its big Lutcher plant, giving it a larger supply and correspondingly longer term of operation, while the Ruddock-Orleans company will log its huge New Orleans plant from other timber holdings. The latter company had begun logging operations in the tract, but will transfer its logging crews and outfit to other timber which it holds in St. John Parish.

British Columbia Western Larch

Timber Series Bulletin No. 16, entitled "British Columbia Western Larch," has been issued by the B. C. Forest Branch. Known variously as tamrack, red American larch, larch, Western tamarack and hackmatack, and much more durable than Eastern larch, the sterling qualities of this species are described in the bulletin for the information of lumber dealers and wood-users. The annual cut in British Columbia, of late years, has averaged sixty-two million feet board measure, the range of Western larch being between the Rockies and the Cascades, south of the main line of the C. P. R. Suitable for many uses, and in some unsurpassed, Western larch supplies material for dimension, poles, piles and posts, ties, framing, outside and interior finish, tanks, troughs, grain elevators, refrigerators, silo stock, wood-paving, telephone cross arms, fencing, etc. Copies will be mailed upon application to the Forest Branch, Victoria, B. C.

5000 Facts About Canada

The public will welcome the new issue for 1916 of "5,000 Facts About Canada," the popular and valuable cyclopedia of Canadian dates, compiled by Frank Yeigh of Toronto, the well-known writer and lecturer on the Dominion. No up-to-date and intelligent Canadian can afford to be without this "hardy annual," which is a revelation in concrete form of the wonderful growth of our country in a single year, despite war conditions; indeed, it circulates all over the world, and as such is a splendid advertisement. The chapter of "War Facts" is, by the way, both timely and illuminating. Fifty other chapters are devoted alphabetically to every phase of our national life, from Agriculture to the Yukon, while several sketch maps are of high value. Copies may be had from newsdealers or by sending 25c to the Canadian Facts Pub. Co., 588 Huron Street, Toronto, Canada.

California Redwood Described

"California Redwood" is the title of a splendidly gotten up booklet, describing this attractive wood, which has been issued by the Service Bureau of the California Redwood Association, San Francisco, Cal. The booklet is one of the finest that has ever come to our notice. It contains ten four-color reproductions, picturing redwood in its natural state, also a few colored illustrations giving an excellent conception of the appearance of redwood when finished in various colors. The illustrations and general press work of the booklet are very striking and will carry conviction to any reader who is at all interested in securing good results in wood. The booklet also contains directions for securing a number of fine and rare finishes on redwood.

Market for Douglas Fir in India

Lieut.-Col. Clarence Smith, secretary of the Montreal branch of the Patriotic Fund, states that it has been decided that the 224th Battalion, or the Forestry Battalion, will not be placed on the lists of the Patriotic Fund. As the men will cut lumber in England or Scotland, it is held they do not come under the same category as those who have volunteered for the front.

An initial dividend of 1½ per cent. on the common stocks has been declared by the directors of the Riordon Pulp and Paper Company—a significant indication of the revival in the pulp industry.

If It's a Tent

No matter how large or how small our facilities are equal to the emergency. Try us.

Smart-Woods Stable, Storage and Circus Marquee.

Smart-Woods Mosquito or Black Fly Proof Fronts.

Keeps tents free from flies, mosquitoes and other insects. End of tent may be left open even in the worst periods of the year and with careful attention this insect proof end will keep the inside habitable and a welcome place to sleep in. A necessity to every woodsman, lumberman or railroad contractor during the warm months. Write for quotations.

Smart-Woods Refreshment or Military Marquee.

SEND FOR OUR "CATALOGUE DE LUXE"

Smart-Woods LIMITED

Ottawa Montreal Toronto Winnipeg

RUBBER GOODS FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable.

Hose for Steam, Water, etc., in various grades, made especially to give satisfactory and economical service under different conditions.

Fire Hose One or more of our twenty brands of Fire Hose will be found, not only in the best equipped Factories, Mills, etc., but in almost every Fire Department in the Dominion.

Gutta Percha & Rubber, Limited

TORONTO MONTREAL WINNIPEG REGINA SASKATOON CALGARY EDMONTON VANCOUVER

Ask the man who owns one

YOUR HAULING RADIUS
is the MEASURE *of Your* SALES

PACKARD Chainless Motor Trucks increase your business because they extend the limits of the area you can serve. They enable you to make deliveries to the suburbs and the neighboring towns which are now beyond your reach.

Their speed, stamina and low up-keep cost will modernize your transportation. Seven sizes: 1—1¼ to 6—6½ tons' capacity. A wide range of roller, demountable and nest bodies for rapid loading and unloading. *Write for catalog.*

THE ONTARIO MOTOR CAR COMPANY, LIMITED
18 Bloor St., East, Toronto 41 Queen St., Ottawa

Packard

Ready Sale for this Fine Footwear

Palmer oil-tanned waterproof footwear has undergone a testing-time of almost forty years.

We now have them well advertised all over Canada, so that they find a ready sale wherever men want the best in special footwear. When you carry the famous

"Moose Head Brand" and Palmer's Oil Tan's

you handle a line that gives you a good margin of profit, plus a reputation for quality footwear, plus well satisfied customers.
Our lines made with drawstring or regular sewing are sold by leading jobbers of footwear in every part of Canada. See our samples and prices before placing your orders.

Booklet L. Free on Request

John Palmer Co., Limited, FREDERICTON, N.B.

(Canada's largest manufacturers of Oil-Tanned Footwear.)

The Lumberman's Milk
IN POWDER FORM

KLIM

READ BACKWARD

Klim is pure—cheaper than fresh liquid milk. One-third the cost of condensed milk. No freights on useless water—keeps in any temperature—no waste.
Packed for camp use especially in 10 pound tins $2.00 each, the pound makes one gallon. Case lots, special price.

Write for samples, etc.

Canadian Milk Products Ltd., Toronto

Plants:—Belmont, Ont., Brownsville, Ont. Head Office:—Mail Building
Montreal Office—508 New Birks Building

"PETERBOROUGH"

Peterborough is the home of the first board canoe. It is also the home of the best canoes that can be bought today—"PETERBOROUGH."
We recommend the above 16-ft. canvas covered model for lumbermen.

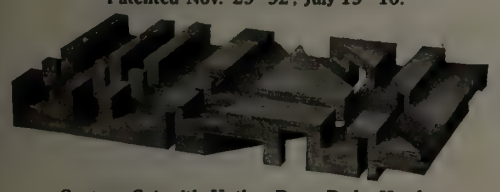
We Build Boats for Every Purpose

GET OUR CATALOGUE

Peterborough Canoe Co., Limited

Peterborough, Ont.

Patented Nov. 29 '92; July 19 '10.



Grooves Cut with Huther Bros. Dado Heads

Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

Write for New Illustrated Catalog.

HUTHER BROS. SAW MFG. COMPANY, Inc.

1103 University Ave.
ROCHESTER, N. Y.

Do You Want a Salesman?

¶ Every live lumber salesman in Canada reads the Canada Lumberman and Woodworker.

¶ You can get the man you want through a small advertisement in the "Wanted and For Sale" department of this paper.

Canada Lumberman & Woodworker

Toronto, Ontario
Montreal Office, 119 Board of Trade Bldg.

New **RAILS** Relaying

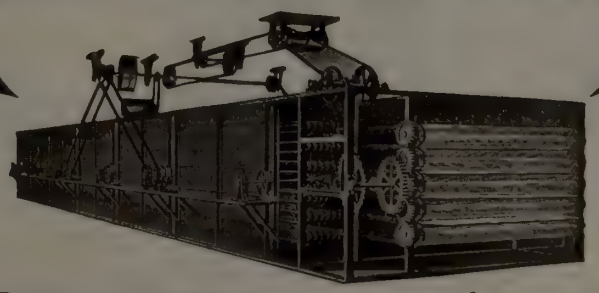
12 to 80 pounds per yard.

LOGGING CARS

Jno. J. Gartshore

58 Front St. West, Toronto

PROCTOR VENEER DRYER



Dries enormous amount of veneer perfectly flat and pliable at minimum cost, without checks or splits

Send for catalog and list of users

The Philadelphia Textile Machinery Co., Philadelphia

HOE

Chisel Tooth Saws

The Choice of Lumbermen in two Hemispheres

More than 80,000 of these saws are now in use in all parts of the world. Hoe Chisel Tooth Saws are backed by 86 years' experience in the manufacture of saws. They are made from the finest steel, evenly tempered throughout. Special Flanged Shanks and Superior Bits are supplied for sawing hardwood.

We are the oldest Saw manufacturers in America

R. HOE & CO. 504-520 Grand Street, NEW YORK CITY

Three boilers fitted with Jones Underfeed Stokers at Dells Paper & Pulp Mills, Eau Claire, Wis.

Jones Stokers Cut Your Coal Bill 99%

A saving of 99% in the coal bill of a pulp mill is the result of an installation of Jones Underfeed Stokers. They are used in conjunction with Dutch ovens for utilizing as fuel the mill's refuse. This is not a theoretical result but an actual reality which is taking place daily in the plant of the Minnesota and Ontario Power Company's mills.

Substantial savings can be made in your saw, planing or pulp mill.

Write us about your conditions and let us tell you of the economy that can be brought about by the installation of Jones Stokers.

Literature and full particulars gladly furnished upon request.

Jones Underfeed Stoker Company, Limited

National Trust Building, TORONTO

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Deputy Minister.

Department of the Interior, Ottawa,
December 20th, 1912.

Original Ewart Detachable Link-Belt

In Stock for Immediate Delivery

Write today for Revised Price Book No. 247—which lists our entire line of Ewart Detachable LINK BELT

This Trademark Designates Quality

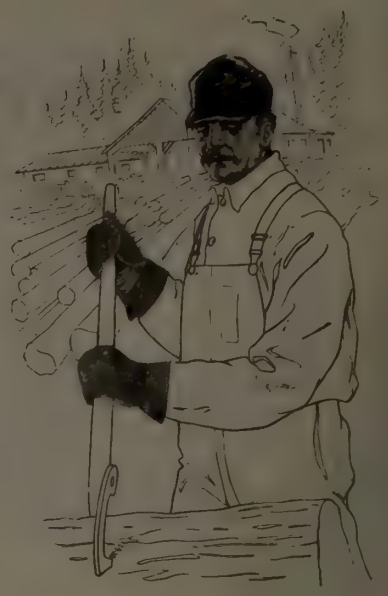
CANADIAN LINK-BELT CO., LTD.

1189 King Street West, TORONTO

A. R. Williams Machinery Company, Limited, Vancouver, B. C.
Waterous Engine Works Company, Limited, Brantford, Ont.

Easy as Falling Off a Log

to pull on a pair of "ASBESTOL" Chopper Mittens and pitch in.



ASBESTOL
REG. IN U.S PAT. OFF.
EISENDRATH'S CELEBRATED HORSE HIDE

Gloves and Mittens

are made for hard service. They wear like iron. Look for the diamond-shaped trade-mark on the next pair you buy.

DEALERS—There's a liberal profit on "ASBESTOL" sales. Ask your wholesaler to send you copy of our new catalogue.

Eisendrath Glove Company

2001 Elston Ave. **CHICAGO, ILL.**

Garlock Packings

Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

Style No. 777

Style No. 150

The Garlock Packing Co.

Hamilton, Ontario

Branches: Calgary - Montreal

Branches: Toronto Winnipeg

Are your horses of use to you?

This seems an absurd question—and the answer is always **"Of course they are"**—In which case provide your stables with:

Johnson's Reliable Veterinary Remedies

Johnson's Horse Liniment, No. 1 (Alcoholic)

1 gal. jugs (Imperial)	$4.50 gal.
1 lb. bottles	8.00 doz.
2 lb. bottles	15.00 doz.

Johnson's Horse Liniment, No. 2 (an oil liniment)

1 gal. jugs (Imperial)	3.00 gal.
1 lb. bottles	6.00 doz.
2 lb. bottles	11.00 doz.

Johnson's Horse Colic Remedy
A sure and speedy cure for all kinds of Colic

1 gal. jugs (Imperial) 40 doses	5.00 gal.
1 lb. bottles 4 doses	8.00 doz.
2 lb. bottles 8 doses	15.00 doz,

Johnson's Veterinary Healing Ointment (Gall Cure)

2 lb. tins	2.00 per tin
4 oz. tins	3.50 doz.

Johnson's Condition Powders (Concentrated)

1 lb. Packages	3.60 per doz.

Johnson's Camp and Household Remedies, such as Cough Syrup, Healing Ointment, Headache Powders, Big 4 Liniment, Stomach Bitters, Cathartic Pills, etc., etc., have stood the test of twenty-five years and are in use all over Canada, from the Atlantic to the Pacific. Prices are lower than those of all other manufacturers. Letter orders receive prompt attention.

A. H. Johnson, Wholesale Druggist, Collingwood, Ont.

This Will Announce!

WE can make no more important announcement than to advise our readers that the **1916 Annual Number** of the "Canada Lumberman and Woodworker" will be published on May 15th.

The **1916 Annual Number** will be of exceptional interest because we are entering a new era of increasing consumption at home, and increased exportation of Canadian lumber and wood products.

The "Canada Lumberman and Woodworker" has proved its value to Canadian lumbermen and manufacturers of wood products by ably assisting them to improve their manufacturing efficiency and to increase their markets.

The "Canada Lumberman and Woodworker" has shown remarkable growth of circulation in recent years.

There is a tremendous buying power among the readers of this publication for any high grade product suitable for saw mills and lumber consuming factories. The excellent circulation of the paper among lumber dealers and factories, both at home and abroad, also makes it an excellent medium through which to reach lumber buyers.

The **Annual Number** of the "Canada Lumberman and Woodworker" is an established institution. Exceptional care has always been taken to select contributors with a specialized knowledge. This year's special contributors—over 25 in number—will furnish articles of real practical value for lumber dealers, factory superintendents and managers of saw mills.

There is business for you among the subscribers of the "Canada Lumberman and Woodworker," in Canada, the United States, Great Britain, France and other countries.

A page announcement in this **Annual Number** will appeal very directly to the buyers of your product. Let us have your order for a page.

Canada Lumberman and Woodworker

347 Adelaide Street W., Toronto

Sold Their Season's Cut

"We have your favor of the 21st inst. re advertisement in "Canada Lumberman"—In reply, we beg to state that we have been able to sell our 1916 cut of White Pine, and we are pleased to add that the advertisement in your paper has helped us materially in disposing of our lumber.

We are enclosing herewith Post Office Money Order to cover cost of two insertions."

Field Lumber Co., Ltd.,
Field, Ont.

ADVERTISING ORDER

.....

Publishers Canada Lumberman and Woodworker
347 Adelaide Street West, Toronto

Please reserve ..... page in your 1916 ANNUAL NUMBER, to be charged at the price quoted on this contract.

One page - - $35.00
Half page - - - 20.00
Quarter page - - 12.00

NAME .....

ADDRESS .....

Kept Their Plant Going

"We were very fortunate to receive sufficient orders to keep our plant running full capacity during the winter months.

While our success is greatly due to the satisfactory operations of machines already in service, we also feel that the advertisement in the "Canada Lumberman & Woodworker" has been instrumental in leading up to these orders, as we received inquiries daily from this source."

RUSSEL BROS.,
Fort Frances, Ont.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing ...	27 00	29 00
1 x 8 common and dressing ...	27 00	29 00
1 x 10 common and dressing ..	31 00	32 00
1 x 12 common and dressing ..	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ...		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft. ...		16 00
2 x 4 to 12, 10 and 16 ft. ..		20 00
2 x 4 to 12-in., 12 and 14 ft. ...		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain..		31 50
Fir flooring, 1 x 4, edge grain..		35 00
Fir flooring, 1 x 4, flat grain ..		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 25
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	40 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1st and 2nds, 4/4	42 00
Birch, No. 1 com. and bet., 4/4	35 00
Birch, 1st and 2nds, 6/4 and 8/4	45 00
Birch, 1st and 2nds, 10/4 and 12/4..	52 00
Birch, 1st and 2nds, 16/4	55 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4..	34 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet...	28 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	32 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1st and 2nds, 4/4	40 00
Hard Maple, common and better, 4/4	30 00
Hard maple, 12/4 & 16/4, 1sts and 2nds.	46 00
Red oak, plain 1st and 2nds, 4/4....	66 00
Red oak, plain, No. 1 com., 4/4.....	40 00
Red oak, plain No. 2 com. 4/4.....	32 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain 1sts and 2nds, 4/4.	68 00
White oak, plain, No. 1 com., 4/4....	40 00
White oak, plain, No. 2 com., 4/4....	32 00
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	66 00
Red and White oak, plain, No. 1 com. 5/4 and 6/4	43 00
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00
Red and White oak, plain, 1sts and 2nds, 8/4	72 00
Red and White oak, plain, No. 1 com. 8/4	48 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00
White oak, ¼ cut No. 1 common	57 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up $52 00		54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings.	25 00	27 00
Pine, No. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ...	29 00	30 00
Pine, No. 1 dressing shorts ...	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ...	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips ...	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips ...	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips ...	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	25 00	26 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11' ...	17 50	18 00
1"x 3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12 ..	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16' ...	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles:		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	70	75
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Quebec Spruce Deals		
12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00
Cuts and Better	
4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00
No. 1 Cuts	
1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00
No. 2 Cuts	
1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00
No. 3 Cuts	
1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00
Common and Dressing Mill Run	
1-in. x 4-in.	25 00
1-in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00
No. 1 Barn	
1 inch	31 00 45 00
1¼, 1½ and 2-in.	36 00 45 00
2½ and 3-in.	45 00
4 inch	50 00
No. 2 Barn	
1 inch	28 00 36 00
1¼, 1½ and 2-in.	30 00 36 00
2½ and 3-in.	38 00
No. 3 Barn	
1 inch	21 00 28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00 25 00
Box	
No. 1, 1, 1¼, 1½, 2-in.	22 00 25 00
No. 2, 1¼, 1½, 2-in.	19 00 23 00
Mill Culls	
Mill run culls, 1-in.	19 00
1, 1¼, 1½ and 2-in.	20 00
No. 2	17 00 18 00
Lath	
No. 1, 32-in. pine	1 80
No. 2, 48-in. pine	4 35
No. 1, 48-in. pine	4 85
No. 3, 48-in. pine	3 85
Hemlock Lath 48 in.	3 80

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1. E.			
	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8..	14 00	17 00	20 50	21 50
2 x 10	18 00	18 50	21 50	22 50
2 x 12	18 00	19 00	23 50	23 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	21 50
2 x 4, 10, 18, 20	23 50
2 x 6, 8 to 16	21 50
2 x 8, 8 to 16	21 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	29 50
2 x 10 and 2 x 12; 8-16 ft.	26 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	28 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	30 50
No. 1 Common Boards	
4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50
Flooring	
4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00
Shiplap—Finished	
6 inch	22 50
8, 10 and 12 inch	23 50
Siding	
6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	24 50
Lath	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	27 10
3 x 8 in.; 8 to 16 ft.	24 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	27 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	29 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	20 50
2 x 4 in.; 12 and 14 ft.	21 50
2 x 4 in.; 10 and 16 ft.	22 50
2 x 4 in.; 18 and 24 ft.	23 50
2 x 4 in.; 22 and 24 ft.	24 50
2 x 4 in.; 26 to 32 ft.	26 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	23 00
2 x 10 and 2 x 12 in.; 18 and 20 ft. ..	25 00
2 x 10 and 2 x 12 in.; 22 and 24 ft. ..	26 00
2 x 10 and 2 x 12 in.; 26 to 32 ft. ...	28 00
2 x 14 in.; 10 to 16 ft.	28 00
2 x 14 in.; 18 and 20 ft.	30 00
2 x 14 in.; 22 and 24 ft.	31 00
2 x 14 in.; 26 to 32 ft.	33 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	24 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	25 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	26 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	27 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft. ...	27 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	27 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	28 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	28 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ..	23 00
No. 2 Shiplap, 6 in.	22 00
No. 2 Shiplap, 8, 10 and 12 in.	23 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 75

LATH

Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ⅜ x 1⅜ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$94 00
Uppers 5/4 to 8/4	92 00
Uppers 10/4 to 12/4	97 00
Selects 4/4	84 00
Selects 5/4 to 8/4	82 00
Selects 10/4 to 12/4	92 00
Fine common 4/4	61 00
Fine common 5/4	65 00
Fine common 6/4	65 00
Fine common 8/4	67 00
No. 1 Cuts 4/4	51 00
No. 1 Cuts 5/4	57 00
No. 1 Cuts 6/4	59 00
No. 1 Cuts 8/4	61 00
No. 2 Cuts 4/4	32 00
No. 2 Cuts 5/4	43 00
No. 2 Cuts 6/4	45 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	33 00
No. 3 Cuts 6/4	34 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	46 00
Dressing 5/4 x 10	51 00
Dressing 5/4 x 12	52 00
No. 1 Moulding 5/4	58 00
No. 1 Moulding 6/4	58 00

Continued on page 64)

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CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	58 00
No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	37 - 39	24 - 26	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in.	96 00	98 00
Selects, 1 to 2 in.	85 00	88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	70 00	74 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	37 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 00	34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	28 00	29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		23 50
Spruce, 8 in. and under dimen.		27 00
10 and 12 in. random lengths, 10 ft. and up	25 00	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	23 00
All other random lengths, 7 in. and under, 10 ft. and up	21 00	23 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	20 00	21 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	21 00	22 00
1⅝-in. spruce laths	4 15	4 25
1½-in. spruce laths	3 85	4 00

New Brunswick Cedar Shingles

Extras	3 40	3 50
Clears	2 90	3 00
Second clears	2 40	2 60
Clear whites	2 25	2 30
Extra 1s (Clear whites in)		1 00
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.	3 60	3 75
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear	3 50	3 60

Conveyed More Than 700 ft. by Sturtevant Fans

Photograph shows part of a dust collecting and conveying system at the B. & M. R. R. Shops at North Billerica, Mass. At the right is the carpenter shop with collector on roof, and at left is the power house where storage bins and furnace feeders are installed. This system serves a large number of machines in the wood-working shops and a large number of Sturtevant Planing Mill Fans of different sizes handle the material.

The two great features of Sturtevant Planing Mill Fans are—(1) low power consumption, (2) dependability. In fact we have planing mill fans which have been running for thirty and thirty-five years, and the fans we make to-day are built with the same merit and with the same care as characterized our early product.

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200 Rooms, Private Bath, $2.00 Single, $3.00 Up Double.
100 Rooms, Private Bath, $2.50 Single, $4.00 Up Double.
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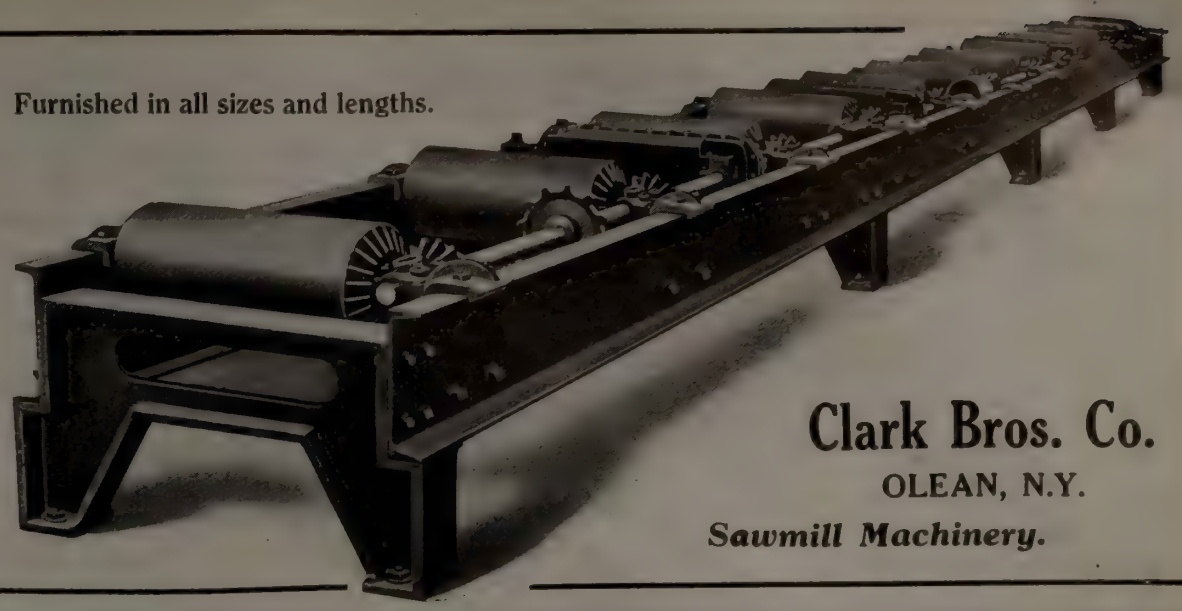

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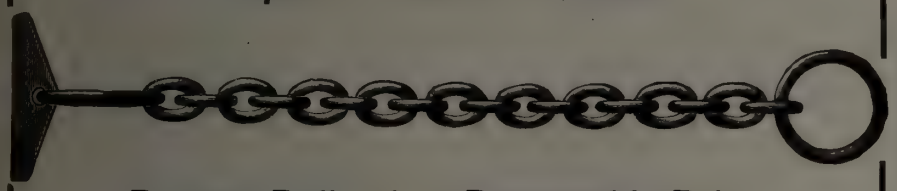

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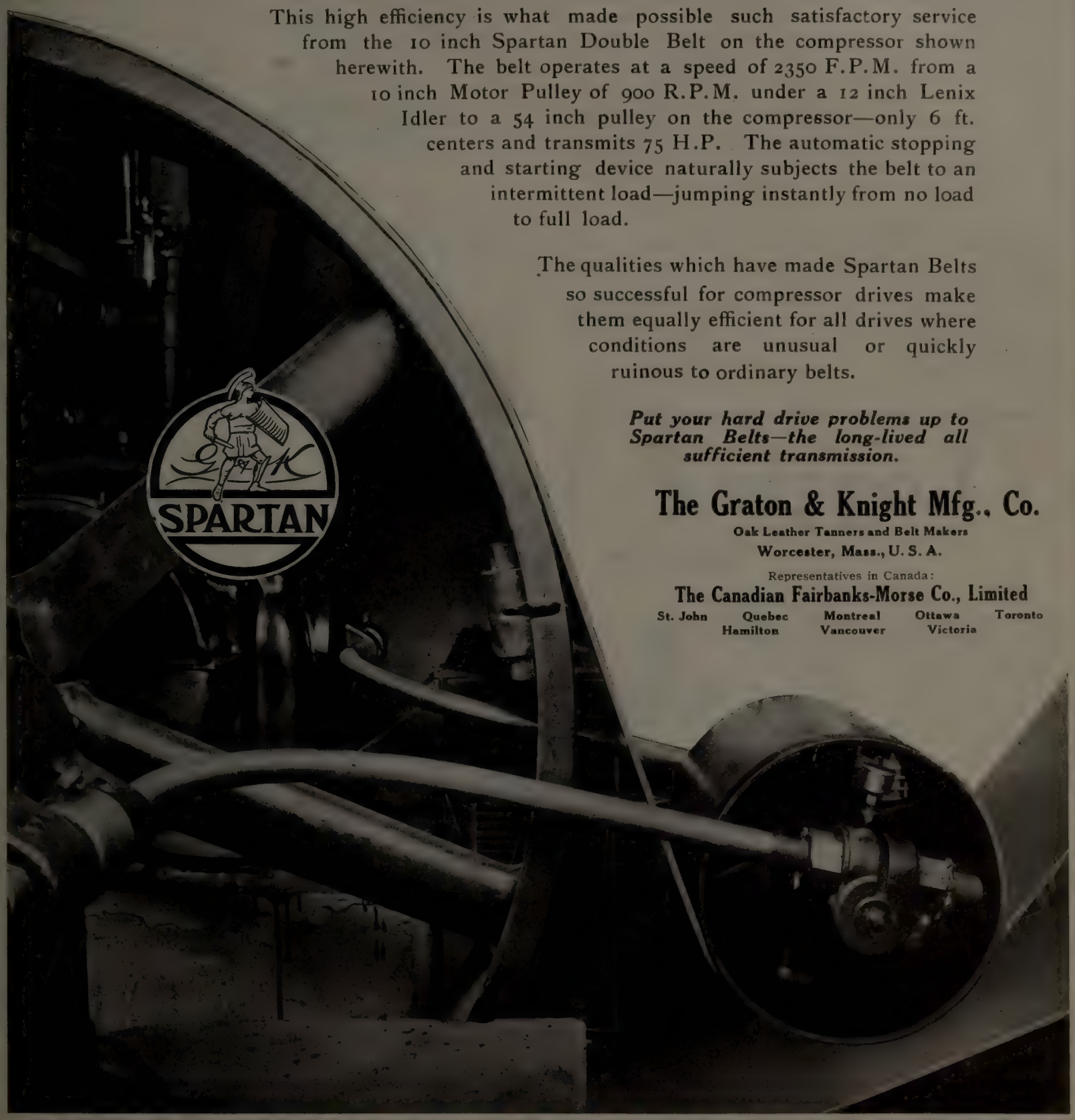

This high efficiency is what made possible such satisfactory service from the 10 inch Spartan Double Belt on the compressor shown herewith. The belt operates at a speed of 2350 F.P.M. from a 10 inch Motor Pulley of 900 R.P.M. under a 12 inch Lenix Idler to a 54 inch pulley on the compressor—only 6 ft. centers and transmits 75 H.P. The automatic stopping and starting device naturally subjects the belt to an intermittent load—jumping instantly from no load to full load.

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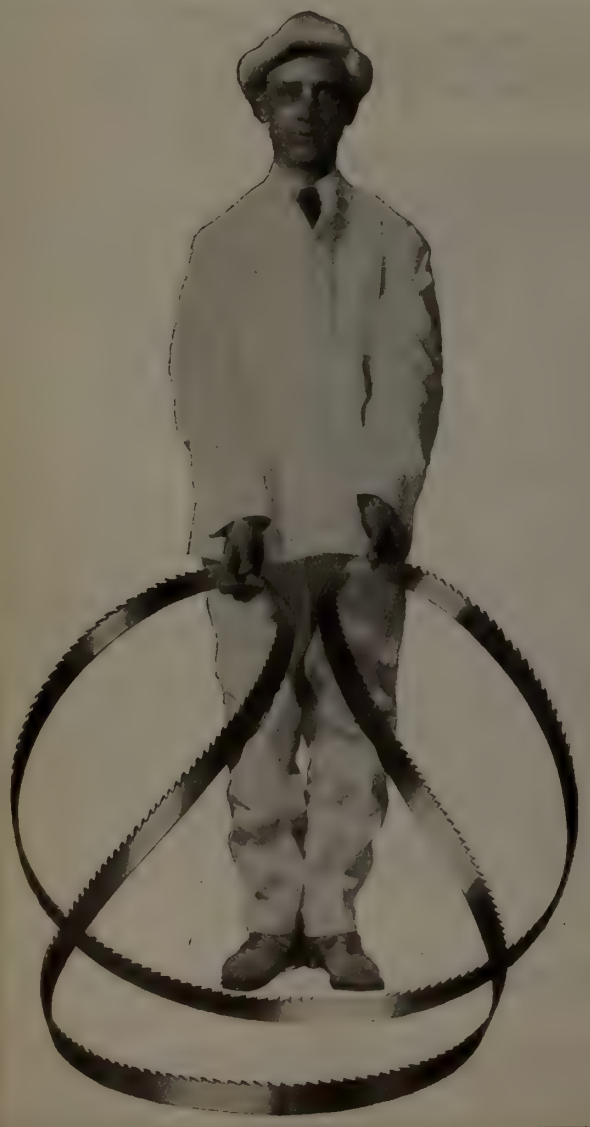

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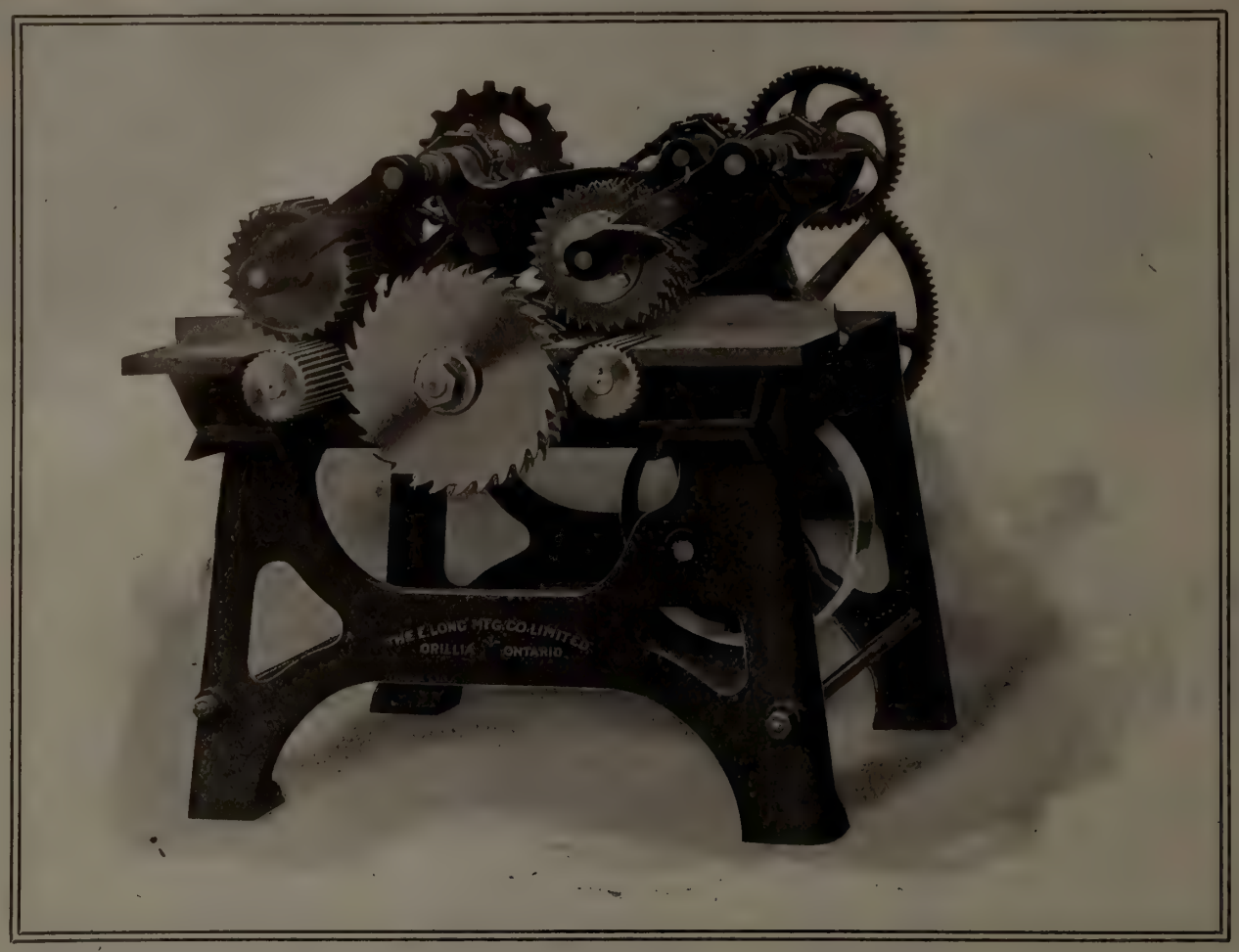

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The frame is of unit construction, the three saws are of 16 inches diameter adjustable for lath, pickets or slats and the feed rolls are power driven.

For a solid substantial machine of ample capacity you cannot beat our No. 2 Bolter.

Ask us for catalogue.

The E. Long Manufacturing Company, Limited

Orillia, - - - Ontario

A Steam Nigger for Medium Mills

One drawback of the ordinary Steam Nigger is the fact that it requires an expert to handle it. Only a slight skip on the part of the operator is sufficient to cause disastrous results.

Where the carriage is of medium weight, unless in the hands of an experienced man, the danger of wrecking the carriage is especially great.

The **Waterous Kendall Nigger** is practically *accident-proof.* While it possesses both the speed and power of the ordinary Steam Nigger, it is so designed that a green operator can do quick and effective work without endangering the carriage in any way.

WATEROUS KENDALL NIGGER

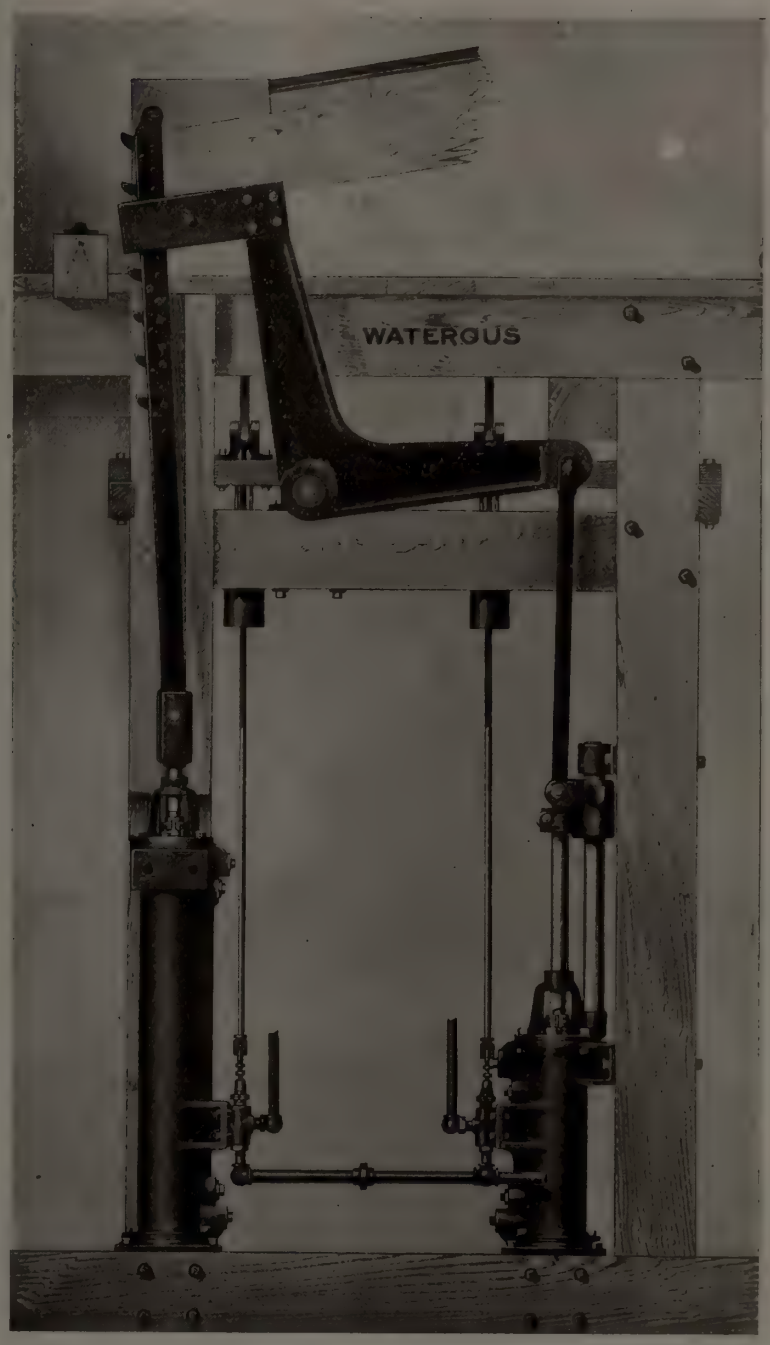
By attaching the Nigger Bar to *one* cylinder only, one motion of the operating lever turns the log and *a quite distinct and separate motion* is required to load it.

The stroke of the cylinder controlling the loading motion is made very short and thus further precludes the possibility of a serious mishap.

The **Kendall Nigger** is constructed to be powerful and rapid in action. The cylinders are 10 in. and 8 in. in diameter, pistons are steam cushioned at both ends of stroke, valves are adjustable to permit increase or decrease of operating speed without affecting the power of the machine.

Nigger Bar is of wrought iron, dogs are extra wide, top dog is winged, a steel roller is supplied. No Floor plate is necessary. All lever and crank connections are made short and direct, so that the machine gives instant response to the movements of the sawyer's lever.

A great many of these Niggers are already in use in mills, where speed and accuracy on the log deck are essential, but where a medium weight carriage is operated. If your conditions are similar the **Waterous Kendall Nigger** will give you unequalled satisfaction. ***Ask for details and descriptive catalogue No. 123.***



OUR LOG DECK EQUIPMENT INCLUDES:

Log Loaders	Oscillating Niggers
Kickers	Cant Trips
Flippers	Board Lifters
Stationary Niggers	Log Turners

The Waterous Engine Works Co., Ltd.

H. B. Gilmour, Vancouver, B.C. BRANTFORD, CANADA Branch—Winnipeg, Man.

"FROST KING" METAL

$5,000,000.00
worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price **30c per lb.**, Fort William and East; West of Fort William **35c per lb.**, delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

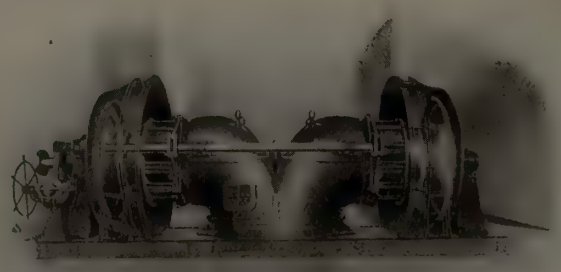
For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

The Low Head Plant
with
SMITH HYDRAULIC TURBINES



has established a reputation for real service that is second to none in the field of water power utilization. It is the result of all-round efficiency, hydraulic as well as mechanical, and has been attained by the careful consideration of every feature entering into the design of turbine equipment.

Our thorough investigation of the conditions peculiar to any proposition assures a practical and economical solution of the problem.

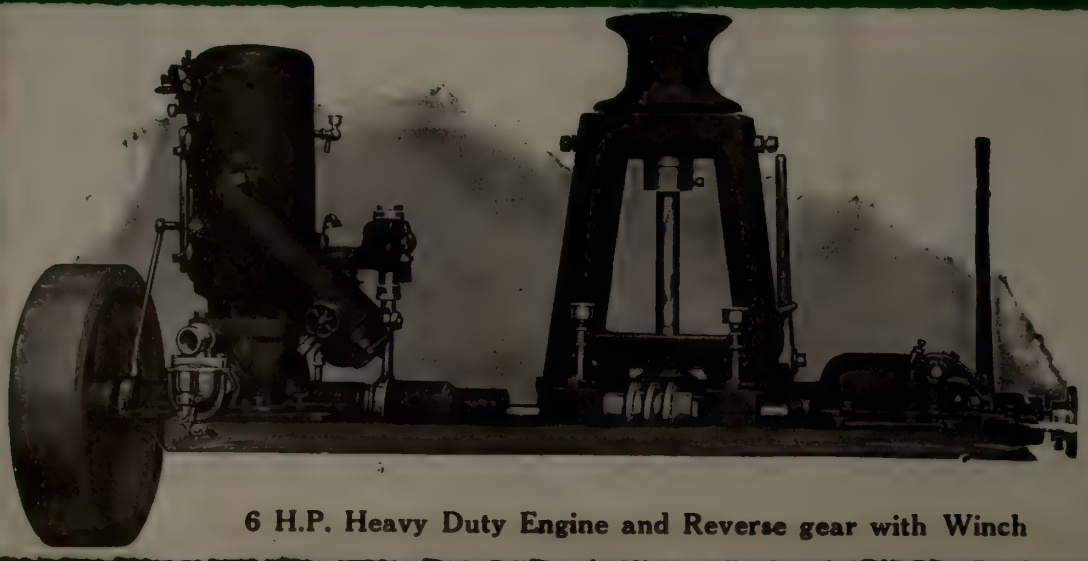
Write for Bulletin F

S. Morgan Smith Co., York, Pa.

H. B. VanEvery—CANADIAN REPRESENTATIVE
405 Power Bldg. - - - Montreal, Can.

Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.
Limited
General Mill Supplies MONTREAL



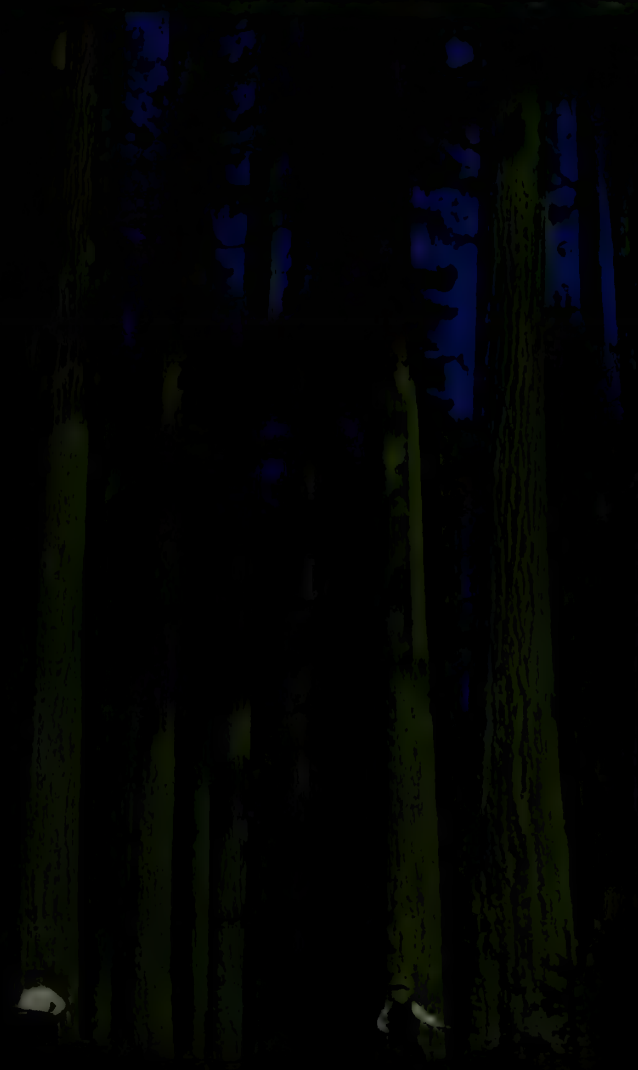
6 H.P. Heavy Duty Engine and Reverse gear with Winch

River Driving Costs

will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

Adams Launch & Engine Co.
Penetang, Ont.

Canada Lumberman
& Wood-Worker



Annual Number 1916

Hugh C. MacLean Limited, Publishers
Toronto, May 15, 1916

Vol. 36 No. 10

This Cover is a Reproduction of B.C. Douglas Fir

COSTS LESS PER DAY

AMPHIBIA BELTING

COSTS LESS PER DAY

Put Good Belting

on your

Good Machines

Your machines are expensive, and naturally you expect them to turn out the quality and quantity of work commensurate with their cost.

Then why harness them with belting which cannot begin to do them justice?

Use

"AMPHIBIA"

Planer Belting

and get the most work from your machines, in the quickest time, at the lowest cost per day of service.

Try a sample run of "AMPHIBIA" Planer and prove its merits.

"Leather like gold has no substitute."

Sadler & Haworth

Established 1876

Tanners and Manufacturers

For 40 Years Tanners and Manufacturers of the Best Leather Belts

MONTREAL, 511 William Street

TORONTO	ST. JOHN	WINNIPEG	VANCOUVER
38 Wellington St. E.	149 Prince William St.	Galt Building	107-111 Water St

The FLEXIBLE WATERPROOF BELT

GEO. GORDON & CO.

LIMITED

Cache Bay, Ontario

Manufacturers of

White and Norway Pine

Excellent Facilities for

Cutting to Order All Sizes of Dimension Timber

Planing Mill and Dry Kiln

Send us your inquiries

View of Mills at Victoria Harbor, Ont.

The Victoria Harbor Lumber Company

Limited

MANUFACTURERS OF

LUMBER LATH and SHINGLES

HEAD OFFICE:

12-14 Wellington St. E., TORONTO, ONT.

F. N. WALDIE, President R. S. WALDIE, Vice Pres. W. E. HARPER, Secretary

SPRUCE

50,000	-	2 x 4—10/16	-	No. 1 Spruce
45,000	-	2 x 8—12/16	-	"
25,000	-	2 x 10—12/16	-	"
13,000	-	2 x 12—12/16	-	"

HEMLOCK

100,000	-	1 x 4 and up 6/16	-	No. 2 Hemlock
150,000	-	2 x 6 " "	-	"
50,000	-	2 x 4 "	-	"
20,000	-	1 x 4 and up 10/16	-	No. 1 Hemlock
20,000	-	2 x 6 " 10/16	-	"
50,000	-	2 x 8 14	-	"

PINE

1 Car	-	1 x 4 12/16	-	Mill Run White Pine
1 "	-	1 x 5 "	-	" "
1 "	-	1 x 6 "	-	" "

The Long Lumber Company

HAMILTON, ONT.

Nothing Spooky

About

Hocken's Hemlock

It is just genuine good lumber, strictly up to grade. It's price is always right and it is shipped on time every time. Write us.

Hocken Lumber Company, Limited

Otter Lake Station, Ontario

HIGH GRADE

BRITISH COLUMBIA WOOD PRODUCTS
FIR, CEDAR, SPRUCE and WHITE PINE

Fir and Spruce Ladder Stock. Fir and Larch Flooring, Ceiling, V Match, Siding, Trim and Mouldings. Fir Tank Stock. Fir and Cedar Silo Stock, Barn Boards, etc. Red Cedar Shingles. Dimension Timbers of all kinds.

SOFT BRITISH COLUMBIA MOUNTAIN WHITE PINE
THE KING OF ALL SOFT PINES

This stock is particularly suitable for Sash and Door Work, Pattern Lumber, Piano Keys, and all work requiring a soft, straight, close grained Pine. Free from shake and should not be confused with the Coast and Hard Pine

Let Us Quote You The Price and Grades Are Right

Ontario White Pine. Norway and Jack Pine, Spruce and Hemlock Lumber and Bill Stuff, Lath, Shingles, Posts, Ties and Hardwoods

Western Office
1007 Dominion Bldg.,
VANCOUVER, B. C.
GEO. R. POTTER.
Manager

MUIR, KIRKPATRICK & SHARPE

Eastern Office
1123-4 Traders Bank
Bldg., TORONTO, Can.

LUMBER

COMPLETE STOCKS

The fact that our stocks are complete and well assorted assures you of SATISFACTORY SERVICE, GOOD GRADES and RIGHT PRICES. We want your inquiries and orders when in the market for

Rough and Dressed Lumber and Lath
Railway Ties and Pulpwood

We specialize on cutting to order all sizes of

Dimension Timber

Also in Dressing in car or mixed lots 1″, 2″ and 3″ to customers' specifications.
Complete stocks always ready for prompt shipment.
We are the largest producers of railway ties in the Dominion.

AUSTIN & NICHOLSON
CHAPLEAU, ONTARIO

Bartram Brothers

Cable Address, "Bartram"
Code, ABC 5th edition.

Ottawa, Canada

Limited

Red Pine

Spruce

"SPECIAL"
Mill Run Spruce, Bone Dry

1 x 3 x 8/16	-	-	*85,000*
1 x 4 x "	-	-	*200.000*
1 x 5 x "	-	-	*255,000*
1 x 6 x "	-	-	*390,000*

White Pine

Shingles——————Lath

EXPORTERS OF DEALS TO U. K. AND EUROPE

W. B. MacLean, President G. A. MacLean, Sec-Treas.

THE

Conger Lumber Company

Limited

Mills at Parry Sound, Ontario

View of Mills at Parry Sound

Manufacturers of all kinds of

Pine and Hemlock Lumber, Timber and Lath

HEAD OFFICE:

622 Confederation Life Chambers
TORONTO, ONTARIO

"We aim to serve you with the best; and save you the most."

White and Norway PINE

Highest Grade Woods—Right Prices—Quick Service

A FEW OF OUR SPECIALTIES:

Laths, Boxes, Box Shooks, Wooden Pails and Tubs

Send Us Your Orders and Inquiries.

C. Beck Mfg. Co., Ltd.

PENETANGUISHENE, ONT.

THE EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS·DIEU·RIEN
MONTREAL - Canada

Basswood
Spruce
Birch

Stock at our Mont Laurier Mill

2x4″	10/13′	Spruce	325,000 ft.
2x5″	”	”	75,000 ft.
2x6″	”	”	60,000 ft.
2x7″	”	”	20,000 ft.
2x8″	”	”	30,000 ft.
2x9″	”	”	200,000 ft.
2x10″	”	”	15,000 ft.
3x4″/up to 3x11″		”	500,000 ft.
4x4″		”	200,000 ft.
1x4″/ up to 1x10″		”	750,000 ft.

1″, 2″ and 3″ Hemlock, all widths and lengths.
1″ and 1¼″ Basswood
1″, 1¼″, 1½″, 2″, 3″ and 4″ Birch

Cedar Posts and Poles **Railway Ties**
Lath and Shingles
Cheap Lumber for Boxes and Crating, all sizes

Saw Mills at Mont Laurier and Ste. Marguerite
Dressing Mills at Mont Laurier and St. Jerome

The Eagle Lumber
Company, Limited
Montreal

THE EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS·DIEU·RIEN
MONTREAL - Canada

An Attractive List
For Immediate Shipment

The following list of sizes should be interesting to you if you are looking for immediate shipments of

Birch Basswood Soft Elm Hard Maple
Black Ash Norway Pine

Long Spruce in the round 25 ft. and up, or sawn to order.

1 x 6 & 7″ Birch
1 x 8 1/4 Birch
1 x 9″ and wider Birch
} Shell Box Stock

5/4, 6/4, 8/4, 10/4, 12/4, 16/4 Birch No. 1 C. & Better
1″ 6/4, 8/4, 12/4 Soft Elm No. 1 C. & B.
1″ 6/4, 5/4 Basswood
1′ & 6/4 Black Ash
1′ 6/4, 8/4, 12/4 Hard Maple
1″ & 2″ Norway
1″ & 2″ Spruce

HART & McDONAGH
513 Continental Life Building - - TORONTO

PHONE MAIN 2262

QUALITY LUMBER

HEMLOCK

Mills will commence cutting about May 1st.

Send along your Special Bills and let us figure with you.

Cutting at Bala on C. P. R. - - Cutting at Bracebridge on G. T. R.

SPECIAL OFFER THIS WEEK
250,000 4 x 5-10/16" Mill Run Spruce

Have You Tried a Sample Car of T & G QUALITY BRAND B. C. SHINGLES?

Branch Office
852 Cambie Street
Vancouver

Terry & Gordon
Wholesale Lumber Merchants

Head Office
704 Confederation Life Bldg.
Toronto

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

Fassett Facilities

Plant of Fassett Lumber Company, Fassett, P. Q.

The accompanying illustrations show something of the extent of "Fassett Facilities."

Our modern equipment and splendid logs enable us to produce the highest grade lumber. All our logs are taken out of our own limits and conveyed direct to the mills by our logging railroad. Our plant runs the year around.

WE WILL BE PLEASED TO FURNISH PRICES

We Specialize in

Timber — Hemlock, Spruce and Hardwood

Fassett Lumber Co., Limited

Fassett, P. Q.

The Filing Room—Fassett Lumber Company, Fassett, P. Q.

General Interior view—Fasset Lumber Company's Plant, Fassett, P. Q.

Everything in Lumber

Our Shipping Facilities Are Excellent—Rail or Water

Stock List

Ash	Soft Maple
Basswood	Mahogany
Butternut	Plain and Qtd. Oak
Birch	Poplar
Cypress	Pine
Cherry	Rosewood
Chestnut	Sycamore
Elm	Shingles
Gumwood	Spruce
Hemlock	Walnut
Hickory	Railway Ties and
Lignum Vitae	Dimensions
Hard Maple	

All kinds of Hardwood Flooring, also Veneers and Mouldings

If it's Lumber—Phone, Write or Wire Us For Prices

The McLennan Lumber Co.

Limited

Montreal

Manufacturers of

WOOD PRODUCTS

of Every Description

From Tree to Finished Product

From the time the tree is felled, until it reaches you in the definite form of a finished product, every care is taken to see that no inferior goods leave our factory You can rest assured that anything you get from us is the best that man and machinery can possibly produce.

Lumber, Box Shooks, Building Material, Sash, Doors, Windows, Hardwood Flooring, House Trim in Pine and Hardwoods.

Portable Houses

LET US QUOTE YOU

Georgian Bay Shook Mills

Limited

Midland : Ontario

Dressed and Rough Spruce, White Pine and Banksian Pine

ALL WELL MANUFACTURED AND AIR DRIED

Our mills at La Tuque, P.Q. have first-class equipment for all sorts of dressing, also for resawing.

Let us send you our stock list with prices

BROWN CORPORATION

Sales Office: PORTLAND, MAINE

Plant of The Stearns Salt and Lumber Co.

Stearns Quality

Michigan Forest Products

Hardwood, Hemlock, White Pine

LUMBER and TIMBER

40 Million Feet Dry Stock in pile containing a complete assortment for rush shipment.

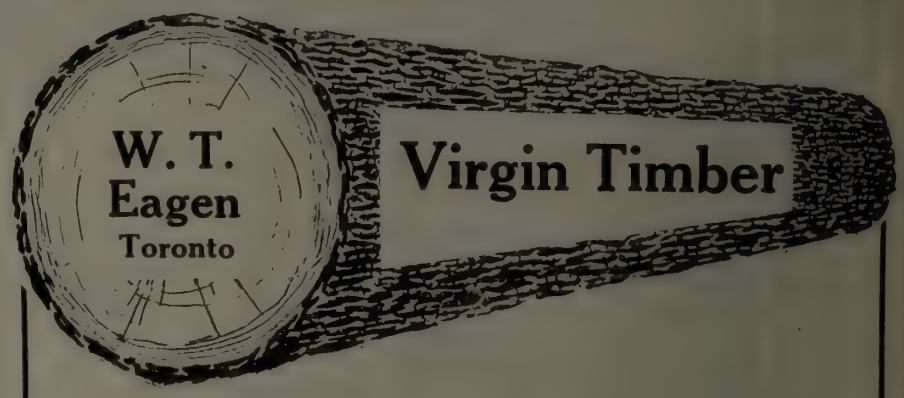
Grades— GUARANTEED —Quality

Hardwood Specialists

The

Stearns Salt & Lumber Co.

Ludington, Mich.



Manufactured Lumber

White and Norway

PINE

Hemlock and Spruce

CELEBRATED MUSKOKA BIRCH,

ONTARIO MAPLE, ASH,

BASSWOOD and ELM

Export Lumber in Car and Cargo Shipments.

W. T. EAGEN, Toronto, Canada

Head Office—2 Toronto Street

Hoffman Brothers Company

Fort Wayne, Indiana

Manufacturers of Hardwoods—Any Thickness From

1/30″ SLICE CUT VENEER

1/20″ SAWED VENEER

to

2″ BAND SAWED LUMBER

Specialty:

QUARTERED WHITE OAK

LOUISIANA RED CYPRESS

QUARTERED OAK PLAIN OAK

POPLAR ASH

Yards at—Nashville, Tenn. Basic, Va.

Mills at—Sumter, S.C. Winchester, Idaho

We can ship you promptly any of the above Stock, Carefully Inspected

WE WOULD LIKE TO HEAR FROM YOU

WISTAR, UNDERHILL & NIXON

Real Estate Trust Bldg., Philadelphia, Pa.

FOY, MORGAN & CO.

AGENTS FOR SHIPPERS OF
CANADIAN SOFT and HARDWOODS

for the United Kingdom
and the Continent

Head Office 11 BISHOPSGATE, LONDON, E.C.
BRANCH OFFICE 20 CHAPEL STREET, LIVERPOOL
Cable Address "FOY, LONDON"

JOHN DONOGH & CO.

1205 Traders Bank Building, TORONTO

White Pine
Spruce
Hardwood
Red Pine
Hemlock

LUMBER
WHOLESALE

Lath
Shingles
Cedar Posts
Piles

The Rideau Lumber Co., Limited

Trafalgar Building, OTTAWA, Ont.

BOX LUMBER

We Have Moved

From 540 Confederation Life Building

To

24 and 25 Lawlor Building

Northwest Corner of King and Yonge Streets

The Oliver Lumber Co.

of Toronto, Limited

Manufacturers and Wholesalers of Pine and Hardwoods

TORONTO

Office Phone, Main 358

The Shawnigan Lake Lumber Co., Ltd.

Head Office: VICTORIA, B. C.
Mills: SHAWNIGAN LAKE, B. C.

Manufacturers of All Grades and sizes of

Fir and Cedar Lumber

Our Specialty is ***Long Timbers and Prompt Shipment***

P. O. BOX 298 - - - VICTORIA, B. C.

DOORS
That Stand Hard Knocks

MADE IN CANADA

In Canada's Largest Sash and Door Factory

Let your patriotism be a practical display in the things you do. When you need doors, sash or trim come to us and you will get millwork that is "Made in Canada."

Ours is Canada's largest sash and door factory and we want to deserve your orders.

Send us a trial order for sash, doors and trim. Our prices are right and our shipping facilities unexcelled.

Capacity One Door per Minute

Estate James Davidson
Ottawa, Ontario

NEW ZEBRA, WOOD, WESTERN UNION, and PRIVATE CODES USED.

Telephones:
1391 Long Distance.
400 Private Branch Exchange.

Cables:
"HILLAS," HULL

W. N. HILLAS & COMPANY

WOOD BROKERS

FOR EVERY CLASS OF TIMBER

Head Office: **HULL, England**

To the Lumber Companies of Canada:

You have the Goods. Place your Lists with full particulars in our hands. We are in daily touch with all the Buyers in the United Kingdom.

PLEASE NOTE.—We pay cash against all documents, and take the whole of the Delcredere risk on Buyers.

CHEW BROTHERS

Midland - Ontario

Manufacturers of

Lumber, Lath and Pickets

STOCK FOR SALE

All we have in stock remaining unsold is about two cars 1" and 4 x 4 Cedar, and one car 1" Mill Run Whitewood, but have started mill and for greater part of season will manufacture our own log sconsisting of a choice stock of White Pine, Norway, Spruce and Cedar. Principally White Pine and Norway, prefer to sell full product of logs in block.

Have excellent facilities for both rail and water shipments.

Inquiries solicited.

LUMBER!

The very Best of it

Car and Cargo Lots only

For the convenience of our Ontario Customers we have opened up an Office at

608 Lumsden Building,

Toronto

Mr. H. A. Rose

who has represented the Canadian Western Lumber Co. for many years in this District, but who has recently joined our forces, will be pleased to see or hear from all in need of any and every kind of lumber and timber.

Douglas Fir
Yellow Pine
Hemlock
Spruce
Pine
Oak

Mason, Gordon & Co.

Montreal, Que. **Toronto, Ont.**

Vancouver, B.C.

Blair & Rolland, Limited

LUMBER and PULPWOOD

20 St. Nicholas Street - - - Montreal, Que.

DRESSED TO ANY STYLE

Spruce and Pine, 1916 Cut

Mill Run, First and Clear left in

1	in. x	4 in.,	5 in.,	6 in.,	7 in.,	8 in.,	9 in.,	10 in. up x 6/9 ft.
1	"	4 "	5 "	6 "	7 "	8 "	9 "	10 " " x 10 ft.
1	"	4 "	5 "	6 "	7 "	8 "	9 "	10 " " x 11 ft.
1	"	4 "	5 "	6 "	7 "	8 "	9 "	10 " " x 12 ft.
1	"	4 "	5 "	6 "	7 "	8 "	9 "	10 " " x 13 ft.

Same specifications in 2 in. and 3 in. thick.

Box

1	in. x	4 in.,	5 in.,	6 in.,	7 in.,	8 in.,	9 in.,	10 in. up x 6/9 ft.
1	"	4 "	5 "	6 "	7 "	8 "	9 "	10 " " x 10 ft.
1	"	4 "	5 "	6 "	7 "	8 "	9 "	10 " " x 11 ft.
1	"	4 "	5 "	6 "	7 "	8 "	9 "	10 " " x 12 ft.
1	"	4 "	5 "	6 "	7 "	8 "	9 "	10 " " x 13 ft.

Same specifications in 2 and 3 in. thick.

Mill Cull Spruce 1 in. x 4 in. up x 8/13 ft.
" " Red Pine 1 in. x 4 in. up x 8/13 ft.

Mill Cull Spruce 2 in. x 4 in. up x 8/13 ft.
" " " 3 " 4 " " x 8/13 ft.
" " Red Pine 2 in. x 4 in. up x 8/13 ft.
" " " " 3 " 4 " " x 8/13 ft.

4,000,000	Pcs.	Mill Run Spruce Lath	1½	in. x ⅜	in. x	4 ft.
1,000,000	"	No. 3 " "	1½	⅜		4
2,000,000	"	Mill Run White Pine	1½	⅜		4
500,000	"	No. 3 " "	1½	⅜		4
2,000,000	"	Mill Run Red Pine	1½	⅜		4
500,000	"	No. 3 " "	1½	⅜		4

All widths and lengths separate.

Write us for our Stock List balance of 1914 and 1915 cuts

We are booking orders Now for our 1916 cut

ROBT. BURY & CO.

TORONTO,
CANADA

Lumber and Mahogany Merchants

Selling Agents in Ontario for

**The Dominion Mahogany & Veneer Co., Ltd.
of Montreal, Que.**

We carry in Toronto a good selection of
following Dry Stocks:

LUMBER		VENEERS
Mahogany	1″ to 4″ thick	Sliced Mahogany
Walnut	1″ to 2″ thick	Sawn Mahogany
Birch		Walnut
Maple		Circassian Walnut
S. Elm		Figured Gum Sliced
Basswood		Figured Gum Sawn
Cherry		Sawn Quartered Oak
B. Ash		Sliced Quartered Oak
W. Ash		Rotary Cut
Oak		Oak, Ash, Birch,
Beech		Selected Gum, Poplar,
R. Elm		Unselected Gum,
		Georgia Pine

Come to our warehouse and pick out your own Veneers

Veneer Warehouse & Offices—455 King St. W. Adel. 1467
Lumber Yard—Foot Spadina Avenue Adel. 3594

JOHN MCKERGOW, President
W. K. GRAFFTEY, Managing-Director

The Montreal Lumber Co. Limited

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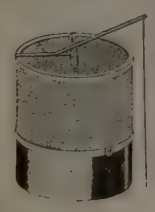

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1 car 2" No. 1 Common and Better Hard Maple
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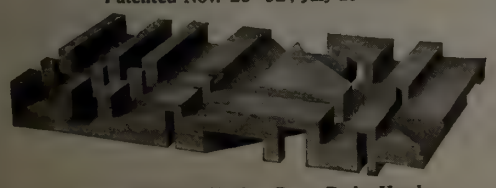

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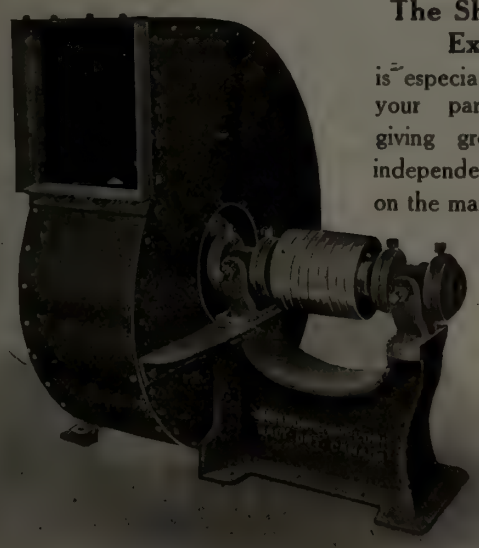

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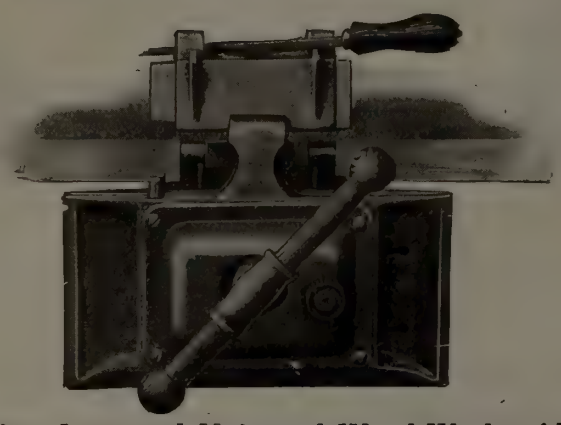

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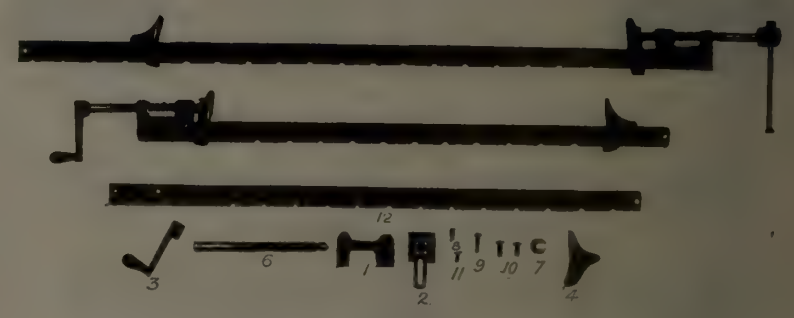

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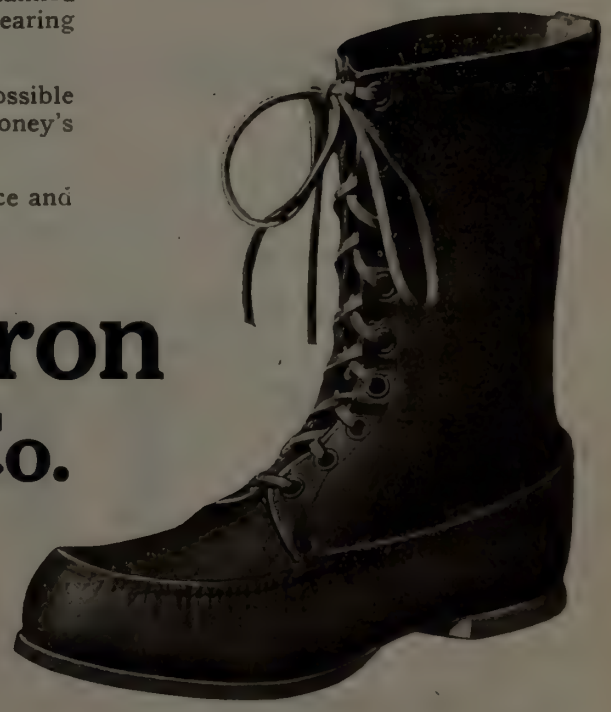

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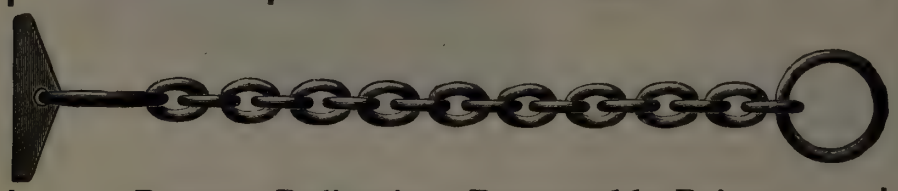

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Spruce and Birch Lumber,
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It is unexcelled for the most exacting requirements of modern engineering practice, and the highest class of interior finish.

The combination of STRENGTH and LIGHTNESS which Douglas Fir possesses gives it a superiority shown by official tests here quoted:

Average Strength Values for Structural Timbers
Grade I. Tentative Grading Rules, U. S. Forest Service

GREEN

SPECIES.	Fiber Stress at Elastic Limit, lbs. per sq. in.	Modulus of Rupture, lbs. per sq. in.	Modulus of Elasticity, 1000 lbs. per sq. in.	Relative Strength Based on Modulus of Rupture, Douglas Fir, 100 p. c.
DOUGLAS FIR	4402	6919	1643	100.0
Longleaf Pine	3734	6140	1463	88.7
Loblolly Pine	3513	5898	1535	85.3
Shortleaf Pine	3318	5849	1525	84.5
Western Hemlock	3689	5615	1481	81.1
Tamarack	3151	5469	1276	79.0
Redwood	4031	4932	1097	71.3
Norway Pine	3082	4821	1373	69.6

Timbers of different species, in the above table, were graded by the same grading rule. Due to this fact, it is possible to get a fair comparison of the strength of each species.

For full information on British Columbia Forest Products apply to

British Columbia Lumber Commissioner

Excelsior Life Bldg., Toronto and Adelaide Sts.,

Toronto

Douglas Fir Tree.

Are You Prepared to Supply the Inevitable Demands of Your Customers For This *Unsurpassed Canadian Product*?

Announcement!

Vancouver Lumber Co., Limited

Mills and General Offices

Vancouver, British Columbia

We wish to announce the opening of an

EASTERN SALES OFFICE

LOCATED AT

701 EXCELSIOR LIFE BUILDING

TORONTO, ONT.

This office is in charge of Mr. Charles Plant, who is in a position to accept orders for all Pacific Coast timber products in straight or mixed cars.

Fir, Cedar, Spruce and Hemlock

Our Specialties: Fir timbers up to 94 feet. Extra good No. 1 Common Cedar Boards, Cedar Shingles, Silo Stock, Siding, Finish, Boat Lumber.

Fir Mills— South End Connaught Bridge, Vancouver, B. C.
Cedar Mills—Roche Point B. C. (Burrard Inlet)

OK'd for NO SAP SELECTION DRYING GRAIN and SIZE

Order Of Your Wholesaler or From These Mills

ALOHA LUMBER COMPANY,
Aloha, Wash.

THE ATLAS LUMBER COMPANY,
Alaska Building, Seattle, Wash.

BAKER RIVER LUMBER COMPANY,
Concrete, Wash.

C. A. BLACKMAN & COMPANY,
Everett, Wash.

BLOEDEL DONOVAN LUMBER MILLS,
White Building, Seattle, Wash.
Eastern Office: No. 17 Battery Place, New York.

CASCADE LUMBER & SHINGLE COMPANY,
Snohomish, Wash.
Eastern Offices: Britt Craven, Room L McKnight Building, Minneapolis, Minn.; Sturm & Yaw, First National Bank Building, Great Falls, Montana.

C. B. LUMBER & SHINGLE COMPANY,
Everett, Wash.
Sales Agents: Pacific Timber Company, Everett, Wash.

CHERRY VALLEY SHINGLE COMPANY
Duvall, Wash.

CLEAR LAKE LUMBER COMPANY,
Clear Lake, Wash.

COPALIS LUMBER COMPANY,
Carlisle, Wash.

CORY SHINGLE COMPANY,
Sedro-Woolley, Wash.

CRAFT SHINGLE COMPANY,
McCleary, Wash.

DAY LUMBER COMPANY,
Big Lake, Wash.

DOTY LUMBER & SHINGLE COMPANY,
Doty, Wash.

EAST HOQUIAM SHINGLE COMPANY,
Hoquiam, Wash.

EUREKA CEDAR LUMBER & SHINGLE COMPANY,
Hoquiam, Wash.

GARNER SHINGLE COMPANY,
Everett, Wash.

GLOBE LUMBER COMPANY, INC.
Globe, Wash.

GRAYS HARBOR SHINGLE COMPANY,
Aberdeen, Wash.

HILLVIEW SHINGLE COMPANY,
Montesano, Wash.

HUNTTING MERRITT LUMBER CO., LTD.,
Vancouver, B. C.
Eastern Offices: MacGillis & Gibbs Co., 1302-8 Wells Bldg., Milwaukee, Wis. Frank S. Thomas, 100 Ellwanger & Barry Building, Rochester, N. Y.

JAMISON COMPANY,
Everett, Wash.
Eastern Offices: Jamison Co., R. A. Long Bldg., Kansas City, Mo.; Jamison Co., Lumber Exchange Bldg., Minneapolis, Minn.

JOHN McMASTER SHINGLE COMPANY,
755 Stuart Building, Seattle, Wash.

L. B. MENEFEE LUMBER COMPANY,
1406 Northwestern Bank Building, Portland, Ore.

J. N. MOORE,
Kelso, Wash.

O'NEIL, GOWAN LUMBER COMPANY,
203 Savage-Scofield Building, Tacoma, Wash.

M. R. SMITH SHINGLE COMPANY,
1307-08 R. A. Long Building, Kansas City, Mo.
Toledo, Ohio.
Western Office: Tacoma, Wash.

MUKILTEO SHINGLE COMPANY,
Everett, Wash.
Sales Agents: Pacific Timber Company, Everett, Wash.

ST. PAUL & TACOMA LUMBER CO.,
Tacoma, Wash.

STEARNS LUMBER & SHINGLE CO.,
Sternsville, Wash.

SUNSET SHINGLE COMPANY,
Montesano, Wash.

THREE LAKES LUMBER COMPANY,
Three Lakes, Wash.
Eastern Office: 1401 Long Bldg., Kansas City, Mo.

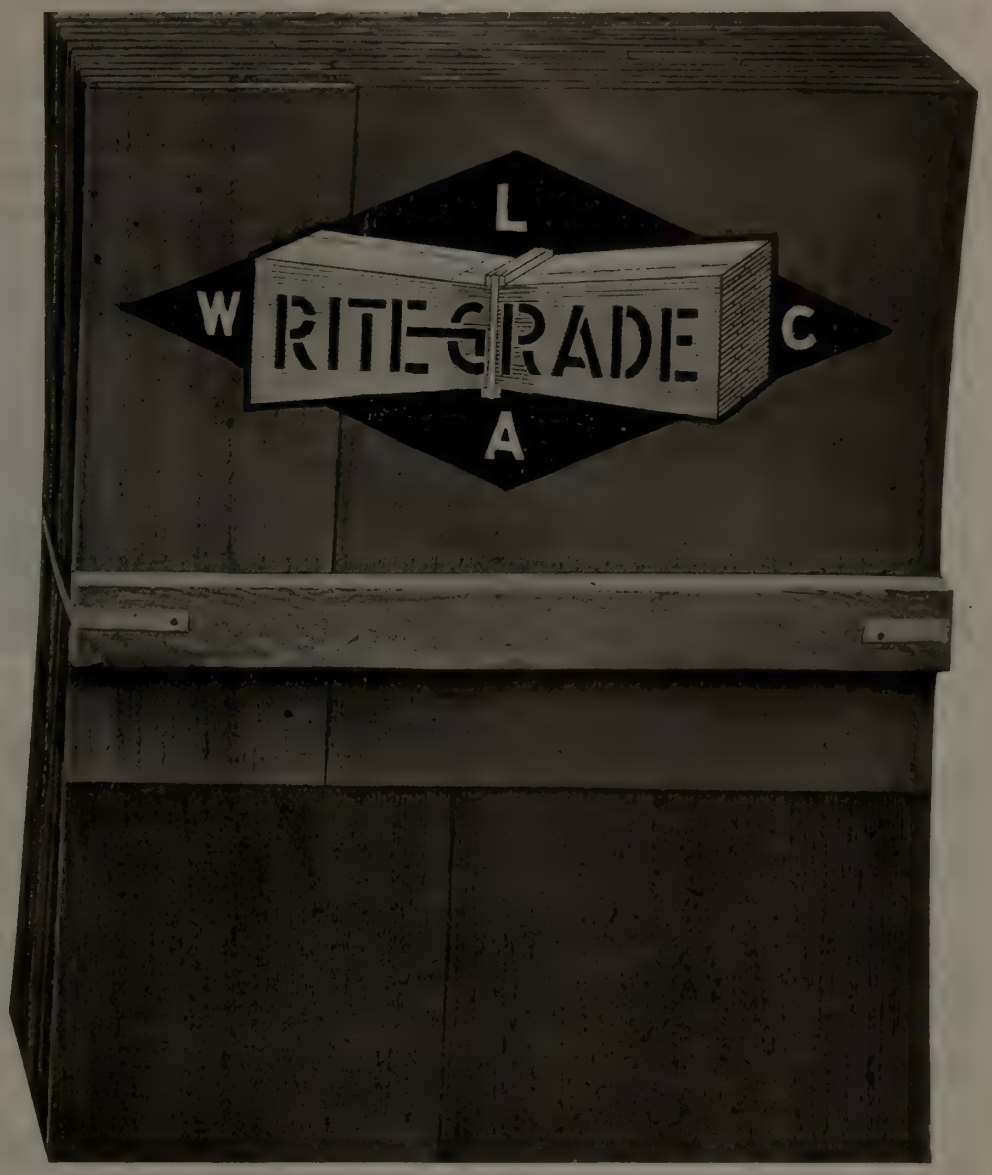
THURSTON-FLAVELLE LUMBER CO.,
Port Moody, B. C.

VANCOUVER CEDAR MILLS, LTD.,
Vancouver, B. C.
Eastern Offices: Chas. Plant, 701 Excelsior Life Bldg., Toronto. Minn.; R. L. Andres, 343 So. Dearborn Street, Chicago, Ill.

WESTMINSTER MILL COMPANY, LIMITED,
New Westminster, B. C.
Sales Office: Coast Central Mill Co., New Westminster, B. C.

THE WILCOX SHINGLE COMPANY,
Aberdeen, Wash.

WOOD & IVERSON, INC.
Hobart, Wash.



OUR DEALER SERVICE

includes large outdoor waterproof sign six feet by three feet; shingle sign; office sign; newspaper electrotypes and the Big Four Building Library. All free to Rite-Grade Dealers.

Address all communications for Dealer Service to

SHINGLE BRANCH

West Coast Lumbermen's Association,

Seattle Office: White Building, Seattle, Wash.

British Columbia Office: 441 Seymour Street, Vancouver, B.C.

FIR TIMBERS

Fir Flooring, Ceiling and Siding.
Clear Fir Finish, rough and dressed.
Fir Turning Squares in 4 x 4 to 10 x 10″

B. C. Red Cedar Bevel Siding.
B. C. Red Cedar Shingles in all varieties.
Cedar, Fir and Spruce Factory Lumber.

TIMMS, PHILLIPS & CO., LTD.
Yorkshire Building, VANCOUVER, B. C.

Lumber - Poles - Shingles

Clear Spruce
Big Timbers
Tank Stock
Moulding Stock
Cedar Poles
Fir Piling
Red Cedar
"Federal" Shingles
Hemlock

WE can supply immediately high grade lumber suitable for every purpose. A trial cargo or parcel lot will convince you of the quality of our lumber.

Do you wish the best Red Cedar Shingles? The jointing of our Federal Brand Cedar Shingles, the "Best Ever", cut from live timber, saves much of the contractor's money in laying.

We shall be glad to quote you interesting prices on whatever you may need in our line.

WRITE US

Federal Lumber Company
470 Granville St., Vancouver, B. C.

Heavy Fir Dimension

Is Our Particular Specialty

The Heavier it is the Better we like it

We Dress from 1 to 4 Sides up to 16-in. x 20-in., 60-ft.

Our grade is positively right, and prices will please

Timberland Lumber Co., Limited
Head Office, Westminster Trust Bldg., NEW WESTMINSTER, B.C.
Mills at Craigs on the B.C.E.R.
Shipments by C. P. R., C. N. R., G. N. R., and N. P. R.

Thurston-Flavelle Lumber Company

MANUFACTURERS OF

British Columbia Red Cedar Exclusively

4, 5 and 6 inch "CLEAR A" Cedar Bevel Siding.
8, 10 and 12 inch CLEAR CEDAR FINISH.
RITE-GRADE PERFECTS 5/2 and 6/2 RED CEDAR SHINGLES.

Eastern Agents, Gull River Lumber Co., Ltd., Lindsay, Ont.

Head Office and Mills, Port Moody, B.C.

Chicago Lumber & Coal Co.

Capital $6,500,000 MANUFACTURERS Established 1866

General Offices: EAST ST. LOUIS, ILLS.

OUR REPUTATION is your guarantee of satisfactory service and responsible attention.

WE UNDERSTAND the select structural specifications of the Southern Pine Association and also Associated Factory Mutual Fire Insurance Companies specifications, and can make prompt deliveries of long leaf yellow pine in accordance therewith.

SOUTHERN YELLOW PINE
LOUISIANA RED GULF CYPRESS

Big Profits in Trimmings!

You Sell Shingles, Why Not Trimmings!

Our Galvanized Ridge Cap, Valley and Flashings will put many dollars extra profits in your pocket. No trouble to sell,—simply take the order along with the shingles. Write for booklet C. L. and price list.

The Metallic Roofing Co., Limited

Manufacturers of
Corrugated Iron, Metallic Shingles and Siding, Metallic Ceilings, Ventilators etc.
Winnipeg and Toronto

Mainland Lumber & Shingle Co.

Head Office: Dominion Building, Vancouver, B.C.

Notify the Retail Trade that they have begun operating their new mill at

WESTHOLME, British Columbia

Fir, Cedar, Spruce, Hemlock B. C. Red Cedar Shingles

Heavy Timbers a Specialty With Us

WE PARTICULARLY SOLICIT ONTARIO TRADE

To the Owner of Timber Lands

Far sighted owners of timber lands should take advantage of the times incident to the European wars, and prepare themselves for the day when the demand for timber is suddenly thrust upon them. This is certain to come at no distant day. Therefore cultivate a closer acquaintance with your holdings, and the best method of marketing them. Let us prepare the way for you. Remember, we not only report on the property, but assist in marketing the bond issue when necessary. Send for our booklet.

L. E. Campbell Lumber Company

Cruising and Engineering Department
2234 Dime Bank Bldg. - - DETROIT, MICH.

Wanted - White Pine

We are at all times in the market for dry White Pine all grades and sizes, also will Contract for your this Season's Cut.

Write us and we will call on you.

South Coast and Northern Lumber Co., Inc.

Saranac Lake, New York

Announcement

Murray & Gregory, Limited, have been established at St. John, N. B., since 1866, manufacturing Lumber principally for the British, West India and Home markets.

In connection with their business there, they have a Woodworking Factory and Glass Works and supply all wood and glass materials used in building.

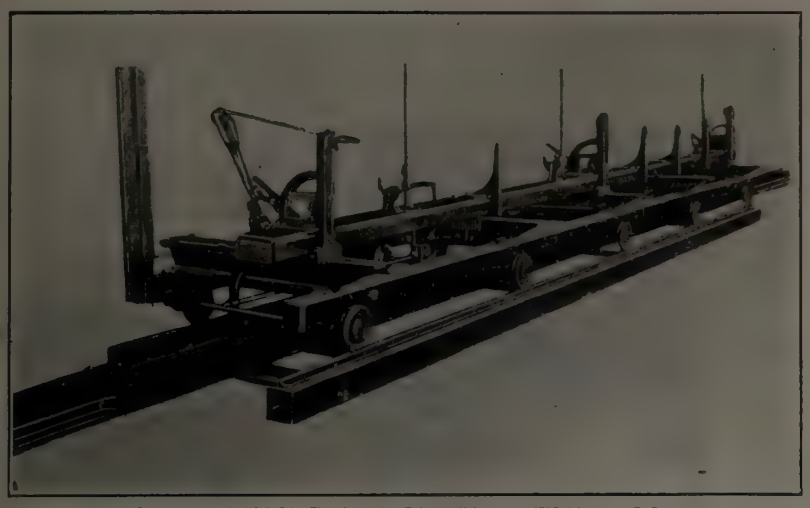
With the extension of the Chaudiere Branch of the Quebec Central Railway, during the past two years, into their Timber Limits in Quebec, they have built mills at St. Camille, Bellechasse Co., and Lake Frontier, Montmagny Co., where they are now manufacturing Spruce and Pine Lumber for the British and United States markets.

In Quebec, they are manufacturing and dealing in both Peeled and Rossed Pulpwood.

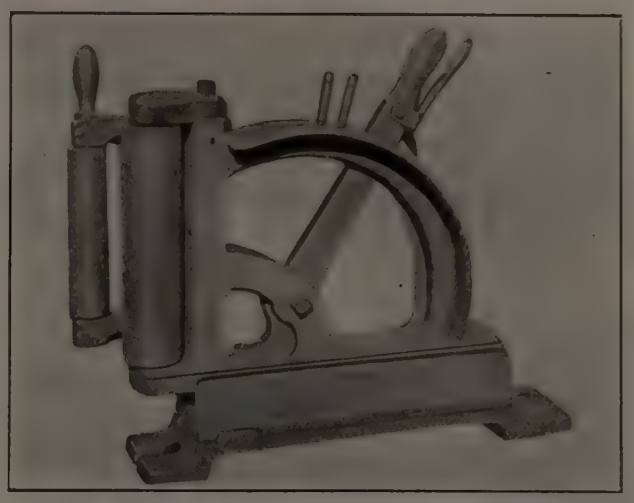
To individualize their Quebec products, they have adopted as their trade mark on Lumber, Logs and Pulpwood, a Trident which will stand always for "the best."

The Head Office of the Company is at St. John, N. B.
The Quebec Office at St. Camille, Bellechasse Co., P. Q.

The OXFORD Line
of Sawmill Machinery



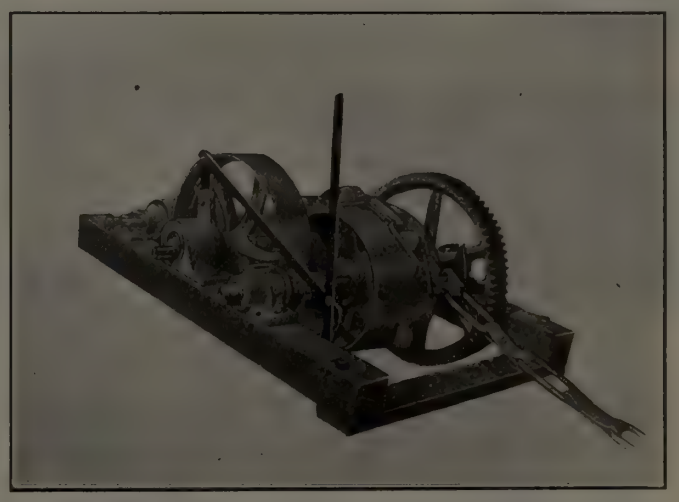
20 FOOT ORDINARY FRAME CARRIAGE, WITH 5 LOG SEATS, WITH 3 SLIDES—Built in many sizes to suit purchasers.



OXFORD BOARD AND DEAL GAUGE (RIGHT HAND)—We also make left hand for left hand carriages. Notice extra roll—when this is set to saw a board, to set for deal simply swing this roll back, so large roll comes in contact with deal, then with the lever you can set roller to saw any thickness in ¼-in. from 0 to 6 in. These gauges supplied on all our portable mills.

OXFORD TRAM ROAD ENGINE—Runs on sawn wood rail 4 x 4 Hardwood or 4 x 6 Softwood. In winter, put a set of creepers on wheels, these are furnished. Steamer is under the control of driver, gasoline has to be stopped to reverse. In steamer the reversing lever will almost instantly stop or reverse motion of car, no troublesome gearing. Customer who used both says: "Cost of fuel for the gasoline was over four times as much as for steamer."

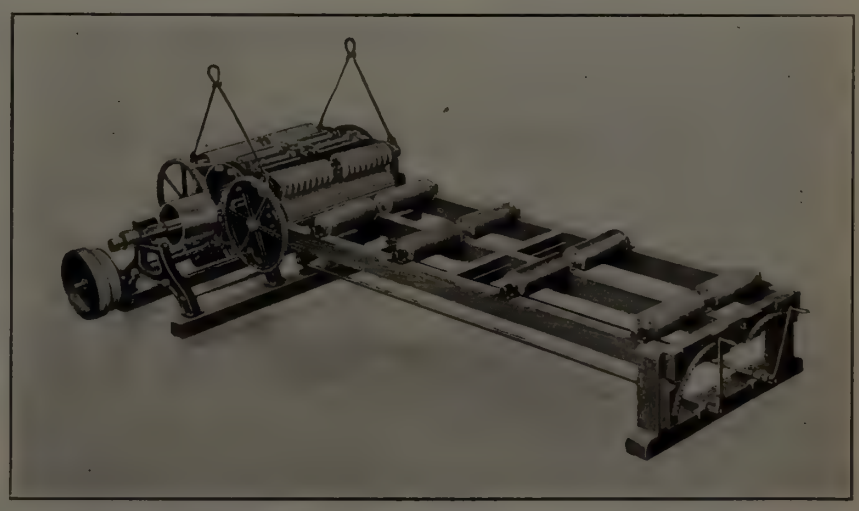
Machine weighs about eight tons. A machine of this kind has hauled 20 thousand sup. feet of lumber up 5 per cent. grade. 20 M. feet of lumber with eight trolleys would weigh about 35 tons.



ENDLESS HAUL UP; geared and friction with 30 inch by 4 inch face gear, 6 inch by 4 inch face pinion, 30 inch by 6 inch face cast iron friction, 6 inch leatherboard friction, pulley sprocket 21 inch by 14 inch with forged lugs, eccentric, box and iron lever, for use with our forged chain with steel or cast iron carriers.

Oxford New Model Horizontal Engine

Advantages:—Main bearing sets nearer vertical which brings adjustment now in line with the wear. Main bearings adjusted with taper key, and screws can be adjusted while engine is running. Balanced crank which permits of high speed without vibration. Main pulley has split hub, rim of wheel sits over bearing about 4 inches which brings strain of belt direct on bearing. Shaft and bearings are heavy enough to put trimmer pulley on with large pulley, thus getting trimmer belt out of fireman's way.



HEAVY DOUBLE EDGER—This Edger will edge for a gang on one side and rotary on the other, cutting any different thickness of stock on either side, and going through Edger at same time. Built with variable friction feed if required. Also resawing attachment.

WRITE US FOR PARTICULARS

Oxford Foundry & Machine Co., Limited, Oxford, N.S.

MARITIME PROVINCES

Blenkhorn's Chief

The essential quality of a good axe is its ability to take and hold a keen cutting edge. By using the finest grades of steel properly tempered we have won a just reputation for marketing a perfect axe. Every "Blenkhorn Chief" is carefully inspected before shipment.

BUY THE BLENKHORN AXE

Get Our Prices

Blenkhorn & Sons

Canning, N. S.

A Typical New Brunswick Winter Scene

Hewn Birch Timbers awaiting shipment

Cables—BRAND, St. John, N.B.

Codes—Western Union, A B C Fifth Edition

J. B. BRAND

Export Agent

Canada Life Building

ST. JOHN

NEW BRUNSWICK

P.O. Box 376 CANADA

HARDWOODS & SPRUCE

BIRCH— Logs and Timbers, Round and Hewn Selected Butts for Veneers.

Specialty—Dimension Hardwoods

Seasoned Stocks Spruce Dimension awaiting shipment

John S. Eagles & Company

140 Union St., St. John, N. B.

Manufacturers and dealers in

LUMBER

Yellow Birch, Spruce and Cedar. Railway Track Ties, Switch Ties, Telegraph Poles

Campbell's Axes

Quality Guaranteed

XXX Brand

Campbell's Single Bit Axe

C
XXX
C

TRADE MARK

Order a sample dozen, you will order more when you try them.

Campbell's XXX Single and Double Bit Axes

are made from the best material by skilled workmen who are paid an extra price for the best goods that can be produced.

Every axe is properly heated in forging, carefully tempered by an expert, ground true and thin to a keen edge, which it will retain.

This axe has been on the market for twelve years with increasing demand each season.

Lumbermen appreciate axes, which they can rely upon to stand up under all conditions.

Write us for prices and sample dozen. We know they will please you.

Campbell's XXX Hammer Poll Axe

Something New

Lumbermen find it difficult to get axes, which wil stand hard usage in driving saw wedges.

Our invention we guarantee for driving wedges, bolts, etc.

The poll is made from best cast steel V-shaped welded into poll of axe and cannot come apart or flatten out.

It is made to balance and will chop easier than light poll axes.

After using Campbell's Hammer Poll Axe you will discard striking hammers, mall or old style axes.

Campbell's Double Bit Axe

Campbell's Patent Hammer Poll Axe

Campbell Bros.

St. John, N.B. - Canada

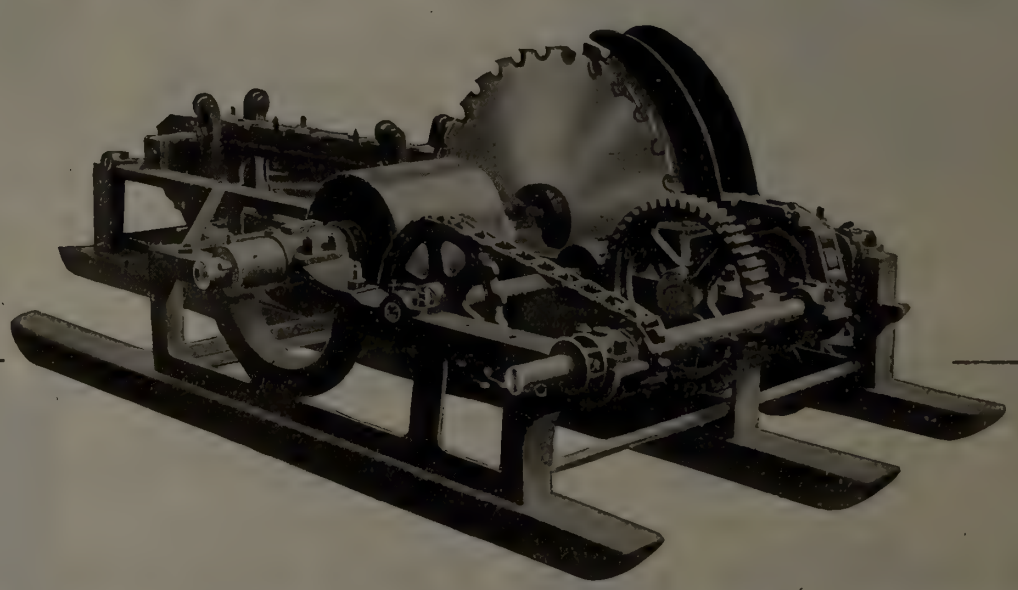
(Sole Makers XXX Axes and Edge Tools)

MARITIME PROVINCES

The McLennan Line of Saw Mill Machinery

includes

Gang Edgers, Shingle Machines
Lath Machines, Bolters, Sleeper
Machines, Sleeper Barkers, Slab
Resaws, Mill Supplies, Etc.



McLENNAN'S SLEEPER MACHINE

Here is a money maker and a time saver that would be a decided asset to any saw mill. It has a capacity of 2,500 in 10 hours and turns out perfect work.

Occupies 12 feet by 6 feet. Run by a drive pulley 16 inch diameter by 14 inch face. Has two 38 inch by 8 gauge saws.

We will be glad to send you full information and prices on this and our various other lines of saw mill machinery

McLennan Foundry & Machine Works LIMITED

CAMPBELLTON, - N. B.

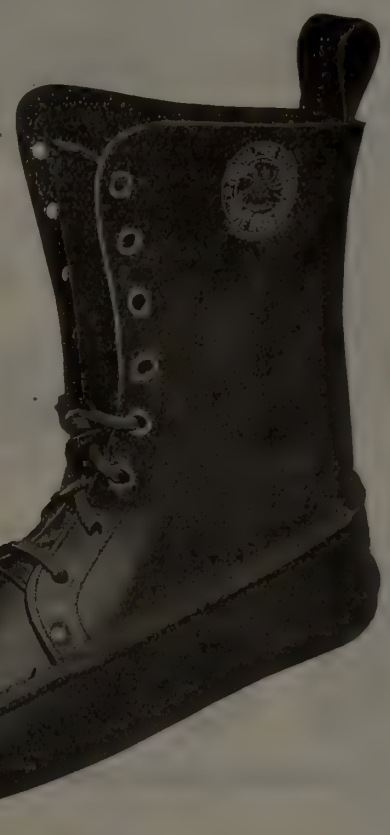
Palmer's

"Moose Head Brand" Oil Tanned Shoe Packs and Moccasins

No. 20

No. 20—Men's Skowhegan "Moose Head Brand" Waterproof Shoe Pack is made of the best skowhegan waterproof leather with heavy pliable bottoms. This is one of our leaders, and never fails to give satisfaction, also made by our Draw String non-rip non-leak process.

In every line of endeavour there is always a leader, and many imitators. Palmer's "Moose Head Brand" Waterproof Shoe Packs, Larrigans, Sporting Boots, etc., are not an exception. For forty years we have been making the famous "Moose Head Brand" Oil Tanned Footwear. In fact we are the first firm to manufacture this class of footwear in Canada. Our famous Skowhegan Waterproof leather from which these goods are made is tanned by our celebrated waterproof process in our tannery, from the best heavy packer steer hides procurable.



No. 101

No. 101—Palmer's "Moose Head Brand" Summer Pack, for men who work. These packs are also made three and eight eyelets high. Used in and around the mill, woods, on the farm, and any place where hard serviceable wear is required. Made on right and left comfortable easy fitting lasts. Light but strong and durable. Made from oil tanned skowhegan waterproof leather with full waterproofed sole leather sole and heel and solid insole.

No. 36

No. 36—Men's Skowhegan "Moose Head Brand" 10 in. Leg, Waterproof Shoe Pack, made by our Draw String non-rip non-leak process. This 10 in. Pack is one of the best sellers that we manufacture, particularly when made by the Draw String process.

Insist on getting Palmer's Oil Tans. Prices and catalogue will be sent on request.

John Palmer Co., Ltd.

Fredericton, - N. B.

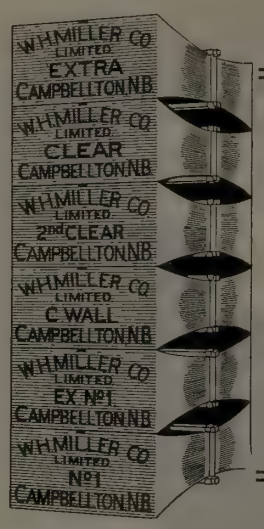
Canada's Largest Manufacturers of Oil Tanned Footwear

MARITIME PROVINCES

Let us quote you on your requirements for:

Spruce and Pine Lumber

We manufacture and export all kinds of it


W.H.MILLER CO LIMITED EXTRA CAMPBELLTON N.B.
W.H.MILLER CO LIMITED CLEAR CAMPBELLTON N.B.
W.H.MILLER CO LIMITED 2nd CLEAR CAMPBELLTON N.B.
W.H.MILLER CO LIMITED C WALL CAMPBELLTON N.B.
W.H.MILLER CO LIMITED EX Nº1 CAMPBELLTON N.B.
W.H.MILLER CO LIMITED Nº1 CAMPBELLTON N.B.

WE SPECIALIZE IN

New Brunswick White Cedar Shingles

LET US QUOTE YOU

We also manufacture

Laths and Ties Pulpwood

Shipments by Rail and Water

PROMPT—RELIABLE—CAREFULLY HANDLED

W. H. Miller Co., Limited

CAMPBELLTON, N.B.

Dressing Lumber

In Transit

Our Mill Facilities

With fast machines we can plane, match or resaw your lumber quickly

Good Work. Low Prices

Our Factory Products

Window Frames and Sashes
Mill Rollers
Tanks for Pulp Mills
Roofings
Birch Timber
Fire Doors, etc.

The Christie Wood Working Co., Ltd.

Planing Mill and Wood Working Factory ERIN ST.

St. John, N. B.

Lumber Yards and Saw Mill CITY ROAD

The best that money can buy

FRASER F QUALITY

10 modern mills to serve you

Splendid Spruce Well Sawn

With ten big mills perfectly equipped and a colossal supply of splendid spruce logs we are able to offer you lumber and service that cannot be equalled anywhere. We can ship your bill sawn to order rough or dressed.

A specialty with us is clear stock for the manufacture of piano sounding boards. We also make lath and shingles.

ASK US FOR PRICES

Fraser, Limited

FREDERICTON, N.B.

Mill Supplies

For Prompt Delivery

In Mill Supplies of every description, we handle only the better products of the most reliable makers, our large and complete stock including

BALATA BELTING **LEATHER BELTING** **RUBBER BELTING**
PACKING **OIL** **WASTE**
CHAINS **PEEVIES** **FILES** **MAGNOLIA METAL**
SAWS **EMERY WHEELS**

With every modern facility for rapid handling and prompt shipment, we are in the most favorable position to supply your every requirement at shortest possible notice.

What Can We Do For You?

W. H. THORNE & CO., LTD., HARDWARE

St. John, N. B.

The Enterprise Camper Steel Range

Just the Thing for Your Camp

The Enterprise Camper is built to meet the requirements of camp cooking conditions. It combines large capacity, generous dimensions, durability and perfect operation with compact construction.

Burns wood or coal. The fire box takes a stick of wood 32 inches long. The oven is extra large and fitted with a strong, well braced door which opens level with the oven bottom.

Will cook for 60 to 100 men.

Is made of highest quality Bessemer Steel and fitted with exceptionally heavy castings.

No. 924—Top measurements with reservoir and shelf 61 in. x 33 in. Oven 24 in. wide x 25 in. deep and 15 in. high.

No. 1030—Top measurement with reservoir without shelf 62 in. x 33 in. Oven 30 in. wide x 25 in. deep and 15 in. high.

We can supply detachable copper reservoir and large waterfront when required.

WRITE FOR OUR ILLUSTRATED CIRCULAR AND PRICES

The ENTERPRISE FOUNDRY CO., Sackville, N. B.

QUALITY HARDWOOD

Birch
Beech
Maple

If you are interested in Hardwoods, you will be interested in us.

We are manufacturing high quality Hardwood Lumber, sawing and grading according to National Hardwood Association Rules.

The Logs are cut from our own soil-right Lands, and particular attention given to quality.

Our Mills are located on Canada Eastern Branch and Transcontinental Branch of the Canadian Government Railway, and in the heart of the best forests in New Brunswick.

Our Head Office in St. John will answer all enquiries.

Edward Partington Pulp & Paper Co.

ST. JOHN **Limited** **N. B.**

MARITIME PROVINCES

White Cedar Shingles

We offer for Immediate and Spring Shipment
dry stock 1915 cut in all grades.

Our production is the largest in Canada.

Our Shingles are uniform in quality, being well manufactured and graded.

White Cedar Shingles are Good Shingles

Prices and Terms alike to all buyers

The Canadian White Cedar Shingle Association

F. G. WHEATON, Amherst, N.S.

Canadian Sales Agent

Western Representative:—

ALF. H. GILHAM, 78 Pearson Avenue, TORONTO

Made in Canada

Made in Canada

PALMER - McLELLAN

Oil Tanned Shoepacks, Moccasins and Sporting Boots

for

Men, Women and Children

Make sure you are getting the ***Genuine Palmer - McLellan Brand.*** Beware of imitations. See that all goods bear this Trade Mark, look for the

Palm Tree

embodied in the Trade Mark along with ***"PALMER."*** This is the ***Genuine Article,*** and is assuredly the finest line of its class on the market. Ask your jobber to show you a sample. If he cannot do so, then write us. Whether you buy or not, we will gladly answer any questions you would like to ask. Let us send our ***Catalogue;*** you will be pleased with it.

PALMER McLELLAN SHOEPACK CO. Ltd. TRADE MARK PALMER REGISTERED FREDERICTON, N.B.

Look for the PALM TREE Trade Mark

Palmer-McLellan Shoepack Co.

Limited

Fredericton

N. B.

MARITIME PROVINCES

Original "Dunbar" Machines

First in Quality, Workmanship, Performance

We are the original and the only makers of "Dunbar" Shingle Machines, Lath Machines, Clapboard Machines, Steam and Gasoline Logging Engines. Each is the best for its particular work. Are you using the best? Send for catalogues of any or all of these machines.

Lath Machine

From our many years of experience we evolved this "Dunbar" Original Lath Machine. Every improvement that could be suggested, every time-tested idea for the betterment of product and for greater speed, has been incorporated in this machine. We believe it has no equal, and there are a great number of mill men throughout Canada who share this belief with us. Carefully constructed of high grade materials and designed to work steadily under the hardest conditions.

Steam and Gasoline Logging Engines

Conditions in Canada necessitate an engine that will stand any amount of strain and hard work in the lumber industry. With this idea in mind we have brought out the "Dunbar" engines perhaps a little stronger than is really needed. They do their work easily and willingly, and stand a great amount of hard usage. Built entirely in Canada for the Canadian lumber trade.

Clapboard Machine

You will need no excuse for the quality of your product if you use the original "Dunbar" Clapboard Machine. Expert in every detail. This machine will give you the very best service under most trying conditions. It will turn out work without delays. It will need practically no repairs and will increase your output. We cannot recommend it too highly because it is giving this very service to lumbermen in all parts of this country.

Dunbar Engine & Foundry Co.

WOODSTOCK, N. B.

"Piles" of Dry Lumber

Yes, literally "Piles"! Ready for prompt shipment by rail or water to any part of the Allied world.

The above is a *Part View* at Mill No. 1.

Skilled employees, a modern Electric Resawing and Dressing Mill turn out the *best work* in Canada.

Send your orders for Pine and Spruce Lumber and Lath

"Beaver Brand" Shingles

Full count

Ask for our monthly stock list

Bathurst Lumber Co.

Limited

Bathurst, N. B., Canada

MARITIME PROVINCES

Forest Products

Mill at East Apple River

Mill at Pt. Wolfe, N. B.

Mill at West River, N. B.

Mill at Alma, N. B.

Nature's Mighty Efforts—Man's Supreme Skill

have resulted in our ability to serve you with the very best in

CLEAR SPRUCE

Boards, Lath, Piling
Cooperage Stock, Spars
Knees and Shiptimbers
Flag and Clothes Poles
Stage and Scaffold Poles
Pike and Tamping Poles
Selected Birch or Maple
Curly Birch and Bird's Eye Maple (For Veneer Purposes)

LARGE STOCKS - PROMPT SHIPMENTS - RIGHT PRICES

Charles T. White & Son, Limited

M. GARFIELD WHITE,
Pres. and Managing Director.

Sussex, N. B., Canada

"OXFORD" PANTS

The Universal Choice of the Lumberman

Give Better Wear — and the middleman's profit is cut out

SOME OXFORD FEATURES

Waist Band, narrow, of neat and attractive material, exclusively designed for "Oxford" and sewn firmly through the body of the pant. Double stitched edge on waist band.

Pockets—four instead of the usual three, cut deep and of a battleship grey material.

Seams—sewn with a special four cord thread. Seat seam and crotch reinforced and double stitched.

Buttons,—Rivetted Steel.

Design—cut extra large in seat for ease and comfort in working, ample height at waist band.

Pockets and Fly, strengthened with strong bar tacking.

Heel Treads, rubber gummed and felled.

WRITE FOR PRICES

Oxford Manufacturing Company Limited

Oxford, N. S.

Fire Insurance
For
Lumbermen

SERVICE - SECURITY - SAVING

Specialists in Insurance on Lumber, Saw and Planing Mills

E. D. HARDY, Mgr., Booth Bldg., Ottawa, Ont.

Lumber Insurers General Agency

McKINNON ELECTRIC WELD

With Two Sheared Toggles

McKinnon Electric-Weld

McKinnon Swell Weld

Design Patented

"Dreadnaught" Steel Loading Chain
B. B. Coil, Log, and Boom Chain

—Guarantee—

McKinnon Chain is guaranteed against defects in material or workmanship, and will be replaced free of charge if welds break before chain has stretched stiff.

Made in Canada

Made in Canada

5-16 in. Dreadnaught Steel Loading Chain, pulled to stock break at 9230 lbs. proving the weld the strongest part of the link. Tested at Syracuse University September 27, 1912

T-Bar Hook and Link

Made in Canada by

McKinnon Chain Co.

St. Catharines, Ont.

Province of Quebec

TIMBER LANDS

Timber Lands

License or permission to cut timber on public lands in this Province is acquired at public auction, after due notice has been given, subject to a yearly ground rent of $5 per square mile, and is renewable annually, povided the licensee shall have complied with the regulations.

The timber cut in virtue of such license is subject to a tariff of dues fixed by order in council.

The present rate of ground rent and tariff dues shall not be increased until the 1st of September, 1920.

Licensees are fobidden to cut on Crown lands trees less than a fixed diameter.

The Regulations also provide that all timber cut on Crown lands must be manufactured in Canada.

In the event of a licensee wishing to transfer his rights, he is at liberty to do so under certain conditions, namely, the paying of a fee of $4 per square mile.

There are at present time about 75,000 square miles of forest lands under license and over 150,000 miles in the possession of the Crown.

WATER POWERS

Water Powers

To obtain authorization for the utilization of a Water-Power in the Province of Quebec, application should be made to the Honourable Minister of Lands and Forests.

Water-Falls capable of developing over 200 H.P. are granted under emphyteutic leases, the conditions of which are upon the following lines:

1.—Duration of the lease, from 25 to 99 years, according to the importance of the water-power and to the amount of capital required for its development.

2.—Payment of a yearly rental which does not vary during the term of the lease, for the land granted, counting from the date when the contract was signed.

3.—An additional yearly charge of from 10 to 35 cents per H.P. developed according to the geographical situation of the site of the water-power; such charge being payable from the time the power is produced.

4.—The above charge is subject to revision every 21 years counting from the signing of the contract.

5.—Delay of 2 years for beginning works and 2 further years fo producing power.

6.—The lessee to make a deposit in money or in securities as a guarantee of good faith of the carrying out of the contract. Such deposit may be forfeited if the conditions are not fulfilled; but it may be repaid after a certain time, in the contrary case.

7.—Lastly, the grantee must submit plans of his works, mills, etc., to the Department previous to their installation and when such installation is completed, he must keep the Department informed as to the quantity of power produced.

Department of Lands and Forests
of the Province of Quebec

Elz. Miville Dechene,
Deputy Minister

WILLIAM POWER, M. P.
PRESIDENT, QUEBEC

W. GERARD POWER
MAN. AND SECY., ST. PACOME

RIVER OUELLE PULP & LUMBER CO.

St. Pacome, Quebec

Exterior of Mill at St. Pacome, Que.

Manufacturers of

Lumber Lath and Pulpwood

OUR Prime Quebec Spruce of most careful and unexcelled manufacture is the most serviceable lumber of the present day.

Interior of Mill at St. Pacome, Que.

CORRESPONDENCE SOLICITED FROM HOME AND FOREIGN BUYERS

***Head Office at* ST. PACOME, Quebec, Canada**

On the I. C. R. 75 Miles East of Quebec City

Mills at St. Pacome, and Crown Lake, River Manie, and Powerville, on Nat. Trans. Ry.

The Babbitt Metal that's at the Front in Efficiency and Economy

HARRIS HEAVY PRESSURE

"The Babbitt Metal Without a Fault," is guaranteed to give EXCELLENT SERVICE. It will not crack or squeeze out. It will run cool at any speed. It is copper coated and copper hardened. It is best for all general machinery bearings. Order a box from our nearest factory.

IT IS MADE IN CANADA **WHAT WE MAKE WE GUARANTEE**

WE MANUFACTURE ALL GRADES OF BABBITT METALS

WRITE FOR COMPLETE LIST

W. G. HARRIS, Sr.
President

THE MEN AND THE FACTORY
BEHIND THE GUARANTEE

W. G. HARRIS, Jr.
Vice-President

THE CANADA METAL COMPANY, Limited

HEAD OFFICE AND FACTORY **TORONTO** FRASER AVENUE

BRANCH FACTORIES:

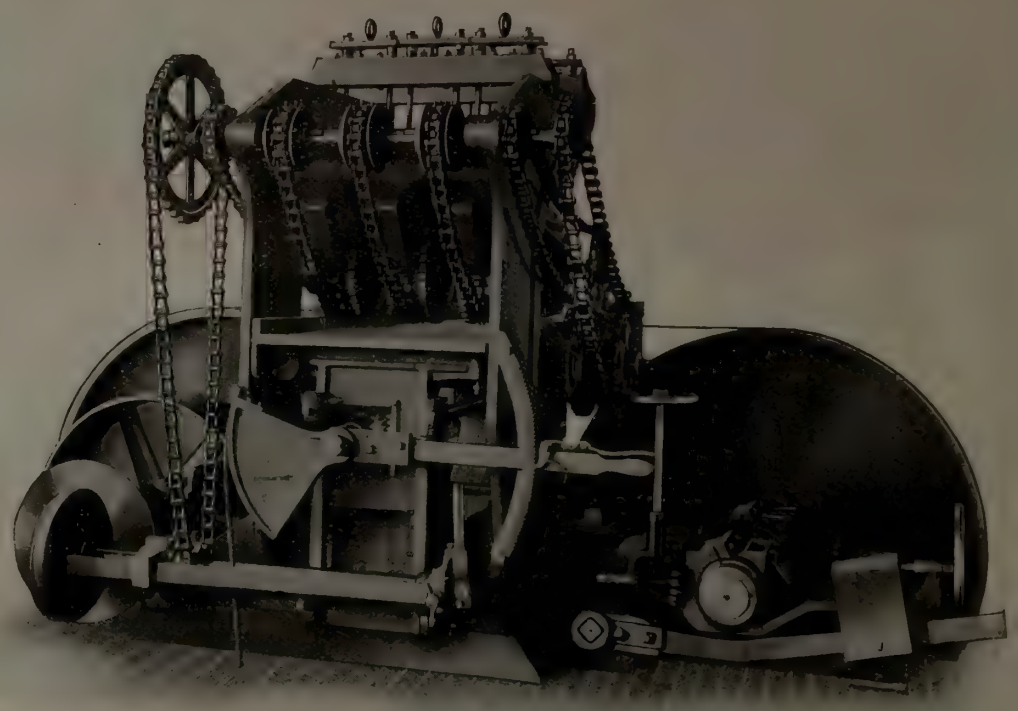
MONTREAL - - WINNIPEG

Box Lumber is in Active Demand Now

and chances are it always will be

Our Horizontal Slab Re-Saws

are designed to re-saw slabs, edgings, bolts, etc.,
into Box Lumber, lath, and other marketable stock.



No. 25 Slab Re-Saw

Ask for List of Canadian Users

Our Line of Box Machinery includes the following:

Hopper Feed Box Resaws
Vertical Re-saws
Auto Box Board Squeezers
Box Board Matchers
Bottle Box Groovers
Recessing and Hand Hold Machines
Gang Cleat Machines
Hopper Feed Equalizers
Ferris Wheel Gang Trimmers
Saw Tables (all kinds)
Short Lumber Edgers
Short Lumber Trimmers

WRITE FOR CATALOG

Mereen Johnson Machine Co.

Minneapolis, Minn., U. S. A.

Link-Belt Chains
For Saw and Shingle Mills

Superior in design; workmanship; quality. Higher carbon steel pins.
Patterns full weight, full strength.

T-Head Rivets for "H" Class Chains

The chief cause of wear and elongation of pitch in an ordinary riveted chain is the rotating of the rivet in the eyes of the side bars.

In our Saw Mill Pintle Chains ("drive" chains) the rivet is prevented from rotating or rocking, by having the head notched at one side and engaged with a corresponding projection cast on the side bar.

In our Riveted Malleable Iron Saw Dust or Refuse Chains ("conveyor" chains), where the service is heavier, we provide a T-head rivet held securely between lugs cast on one side bar.

These are the only methods in use which *insure* prevention of rocking or rotation of the rivet.

As each link carries its own rivet, this improvement does not interfere with interchangeability.

The rivets are .40% carbon steel, rolled true and smooth after forging.

This process compresses the original hard scale surface, and materially increases the durability of the joint.

These rivets are now furnished in H-108 and H-124 Pintle Chains, and in all the Saw Dust or Refuse Chains, H-97 to H-480 inclusive.

This Trade Mark >——————< on every Link

If you need chain of any kind, come to us. We are prepared to supply the entire Link-Belt Line—active sizes in stock for prompt delivery. Ewart Link-Belt, "400" class chains, "E C" class drive chains, etc., etc.

CATALOGS AND PRICES UPON REQUEST.

Canadian Link-Belt Company, Limited

TORONTO **1189 King St. West**

S. & H. Borbridge

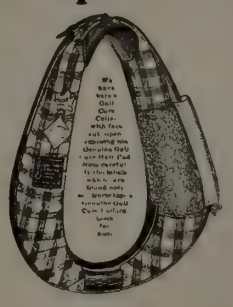
Ottawa, Ont. **Brandon, Man.**

—Manufacturers of—

Harness, Horse Collars, Horse Blankets and Moccasins

for the Lumber Trade

Maple Leaf Kanthurt Horse Collars



(PATENTED)

These collars will not hurt your horses' shoulders

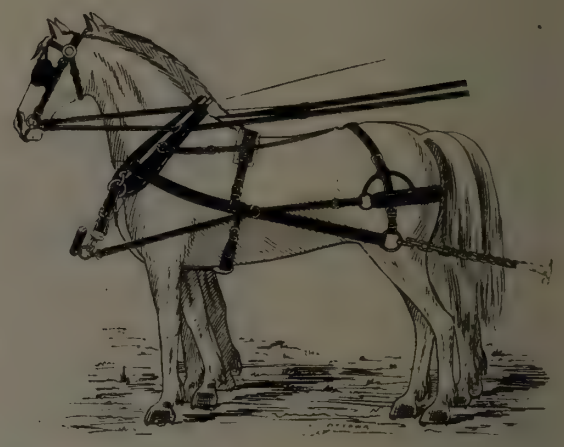
No. 62 Lumber Hogskin face, $37.00 doz.

Saddlery and Moccasins

No. 10 Jute Blanket

6 ft. 6 in. long, 80 in. wide, 60 in. lined, made square with gusset and shaped at rump. Weight 13 lbs. 6 oz.

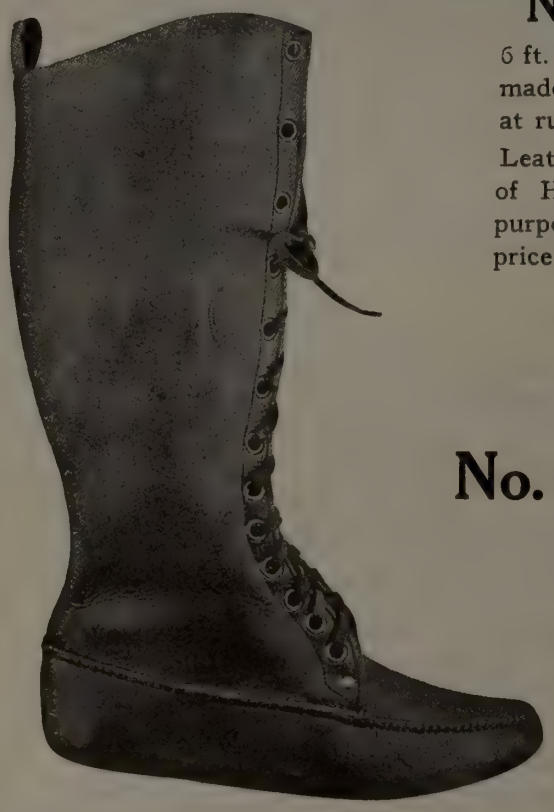
Leather Leg Strap extra. A full line of Horse Blankets for lumbermen's purposes. Write for catalogue and price list.



Michigan Lumber Harness

made in 2 in., 2¼ in., 2½ in., 2¾ in. trace. A full line of Lumbermen's Harness for all sections.

Write for catalogue



You are never in doubt when you buy of Borbridge

Patented 1911

No. 152 Long Leg Seamless Heel Draw String Moccassins

The latest improvement in Moccasins doing away with all seams at heel. Under the old method the heel would come down and in a short time the wearer would be walking on it, wearing out the stitching, thus causing it to leak and rip. With the new process the heel will not flatten out, will always keep its shape and there are no seams whatever, making a clean smooth Ripless and Waterproof heel. Made only in the highest quality, all heights of leg, with or without soles or heels.

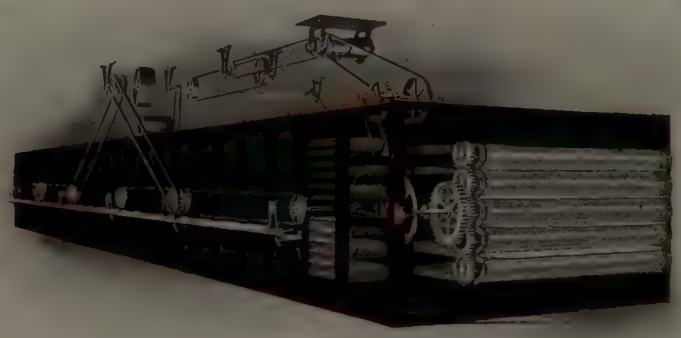
WRITE FOR CATALOGUE AND PRICE LIST

You are never in doubt when you buy from Borbridge. We have been dealing with the lumbermen of Canada for upwards of a quarter century.

DRYING VENEERS is one of the most important operations of veneer manufacture. The old method of drying in racks is too slow, and requires too much floor space and labor for handling.

THE "PROCTOR" VENEER DRYER

is an evolution of the rack drying method with the disadvantages eliminated. The **"Proctor"** Dryer is automatic and requires very little floor space, labor, and time for the operation. Veneer is dried by tremendous circulation of warm air.



Send for Catalogue 21 and list of eighty users.

THE PHILADELPHIA TEXTILE MACHINERY CO.
PHILADELPHIA PA.

HOE

Chisel Tooth Saws

The Choice of Lumbermen in two Hemispheres

More than 80,000 of these saws are now in use in all parts of the world. Hoe Chisel Tooth Saws are backed by 86 years' experience in the manufacture of saws. They are made from the finest steel, evenly tempered throughout. Special Flanged Shanks and Superior Bits are supplied for sawing hardwood.

We are the oldest Saw manufacturers in America

R. HOE & CO. 504-520 Grand Street, NEW YORK CITY

RUBBER GOODS FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable.

Hose for Steam, Water, etc., in various grades, made especially to give satisfactory and economical service under different conditions.

Fire Hose One or more of our twenty brands of Fire Hose will be found, not only in the best equipped Factories, Mills, etc., but in almost every Fire Department in the Dominion.

Gutta Percha & Rubber, Limited

TORONTO MONTREAL WINNIPEG REGINA SASKATOON CALGARY EDMONTON VANCOUVER

HEISLER
Geared Locomotives

Are Used In Canada
From Anticosti, P.Q. to Vancouver, B.C.

THE Heisler Locomotive is built especially for operating over rough and uneven tracks up steep grades and around sharp curves. A marked saving is made in the building of railroads, as in many cases no ballasting or grading is necessary. The cost of rails is often reduced one half, likewise the number of ties and construction of bridges. Has no equal for operating over temporary tracks. All wheels are drivers. Truck swivel independent of each other and are flexible. Total weight equally distributed over all drivers, no dead weight. Built to gigs and templets and modern locomotive practice throughout.

Western Representatives:
Whitney Engineering Co.
TACOMA, WASHINGTON

Heisler Locomotive Works
Erie, Pa., U.S.A.

New Doors

WE have a complete stock of Hardwood Interior and Front Doors in Plain and Quarter Cut Oak and Birch.

Fir and Pine Doors in sizes from 18 inches to 5 feet wide in a number of designs, all with veneered panels.

Interior Trim

We are in a position to supply interior trim either to detail or for stock. Our prices are interesting.

Timber

Rough and dressed Douglas Fir, Yellow Pine, all sizes for factory and wharehouse construction, Can furnish sites adjoining railway siding or would erect buildings and lease to suitable tenants.

The Boake Manufacturing Company, Limited

TORONTO CANADA

Saw Mill and Pulpwood Mill

Lumber Yard

Spruce, Balsam, Tamarac Whitewood and Poplar Lumber

Spruce and Whitewood Lath

Planing Mill in Connection with Saw Mill

Rossed Spruce Pulpwood

Rich Clay Loam Lands for Sale

Townships of Haggart and Kendry. District of Temiskaming. Excellent opportunities for the settler.

Write for particulars

New Ontario Colonization Co.

Limited

Sales Office, Buffalo, N. Y.

Mills:—Jacksonboro, Ont. Located on Transcontinental R. R., 32 miles west of Cochrane.

Planting

Harvesting Peas

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa,
December 20th, 1912.

Deputy Minister.

Good Reasons

Why Lumbermen

should use D. K. McLaren's genuine British oak-tanned leather belting. Only the best centres of carefully selected hides are used, and these are tanned by the slow old fashioned British Oak method which assures maximum strength and durability.

It has a grip that means less slip—hence the transmission of more power.

It is thoroughly stretched before being placed on the market, assuring but little attention when in service.

May we have the opportunity of furnishing you with references and full particulars?

Genuine Oak

A guarantee that is on every D. K. McLaren high grade belting.

D. K. McLAREN Limited

Head Office and Factory
351 St. James St., Montreal

Toronto, Ont.
194 King St. West.

St. John, N. B.
64 Prince William St.

Vancouver, B. C.,
847 Beatty St.

Winnipeg, Man.,
Engineers' Supply Co.,
123 Bannatyne Ave. E.

Edmonton, Calgary and Medicine Hat,
Canadian Western Foundry &
Supply Co.

Rebuilt Locomotives

sold by us give as long service, without repairs, as new ones

The above photo will give you an idea of the class of equipment we handle.
Immediate shipment can be made on consolidation, mogul, 10 wheel, switching and saddle tank locomotives.

If in the market for Dump Cars, Flat Cars, Passenger Coaches, Box Cars, Locomotives, Locomotive Cranes, Steam Shovels, Drag Lines, in fact any kind of contractors' or railway equipment write us for bulletins, photos, specifications and prices.

Canadian Equipment Co., Limited

Montreal

Branch: St. Catharines, Ont.

Goodhue

BELTS

Spell

Power Economy

We claim a lot for Goodhue Belts. They back up our claims every time. They have been running in many trying places where **ordinary** leather belts have been displaced. We have every confidence in our product and want a chance to prove their superiority over others.

For those damp places around the mill or for most power transmission needs around the lumber industry, we recommend our "Acme Waterproof" Brand.

"ACME WATERPROOF"

Only the finest selected hides are used in its construction and then only after a special treatment to render them more pliable than is usually the case. The "stretch" is practically eliminated, besides making the leather impervious to moisture and dampness from every source. We want you to put in an "Acme Waterproof" belt just as a trial. Put it on that wet hard drive where it has oil, dirt and water to contend with. You'll be convinced that our claims are sound after this trial. The belt will stay taut and not slip.

We have two other brands the "Extra" and the "Standard." Both equally as well constructed as "Acme Waterproof" but for different power uses. One of them is certain to meet your requirements. If you have ever had trouble with your belts ask your engineer what he thinks about it and give him a Goodhue belt to try

There are several features about our three Goodhue Belts. We would like you to know them. A postage stamp will get you the information and it may prove the solution of trouble you've been having with some particular belting. Send today for the details while you have the matter in hand.

J. L. Goodhue & Company, Limited

Danville - Quebec

WINNIPEG AGENTS
Bissett & Webb, Limited
151 Notre Dame Ave. East, Winnipeg, Man.

VANCOUVER AGENTS
Fleck Bros., Limited
54 Cordova St. East, Vancouver, B. C.

Doors for Export

MADE IN CANADA

HIGH GRADE PINE DOORS

Plant of Benson & Bray, Limited, Midland, Ont., Canada

Canada's Best

VENEERED DOORS

Not How Cheap, But How Good

Our Solid and Veneered Doors are built along this line.
They are all we claim for them and more.
Their popularity is evidenced by the thousands that are sold by us. They must be right—try them.

OUR GUARANTEE WITH EVERY DOOR

SEND US YOUR INQUIRIES

BENSON & BRAY, LIMITED

MIDLAND, - CANADA

GEORGE KERSLEY

DOOR VENEERS

1/8, 3/16 and 1/4 in. Sawed Quartered White Oak, Plain White Oak, and Mahogany, and other woods, cut specially for the door trade; also 1/8 and 3/16 Rotary Cut Red and White Oak, Gum, Poplar, Ash, and Birch.

3 and 5 ply Veneered Panels in all woods for Doors and Panelling.

TEAK

For Flooring, Ship Decks, and all Boat Work.
In Logs, Flitches, and Dimension.
From best India Stock.
Write for prices as this stock is continually advancing.
Will have for shipment 75,000 feet 3¾ x 6 x 16;
25,000 feet 5 in. average 16 in., and 16 feet long;
25,000 ft. of Teak Logs; 200,000 Java Teak Flitches.

Mahogany, Oak, Poplar, Gum, Basswood, and Birch Lumber

GEORGE KERSLEY

224 St. James St., MONTREAL

HAYDEN & WESTCOTT LUMBER COMPANY

823 Railway Exchange Building, CHICAGO, ILL.

500,000 ft. British Columbia White Pine

Factory Lumber — DRY and Ready to Ship Direct from Mills on C. P. R.

Good Stock of

California Sugar Pine California White Pine Idaho White Pine

Send us your Inquiries on above Stocks — — Our Prices and Deliveries will interest you

Lumbermen's Tents and Clothing

Pure wool, Waterproof Mackinaw Coats, Pants and Shirts,
the kind you have been looking for.

Repellant Brand Army Duck Tents

The best duck that money can buy.
We can equip your van complete.

Pure wool Blankets, Sweaters, Underwear. Hand Knit Mitts and Socks. Palmers Shoe Packs, Buck and horse hide Moccasins, etc.

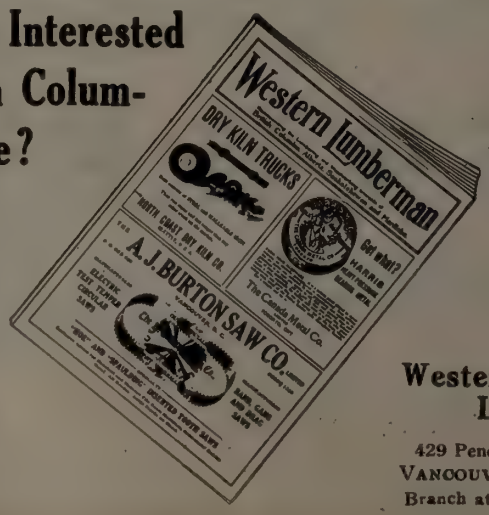
Grant-Holden-Graham, Limited

Factory and Warehouse

147 to 151 Albert Street, Ottawa, Can.

Are You Interested in British Columbia Trade?

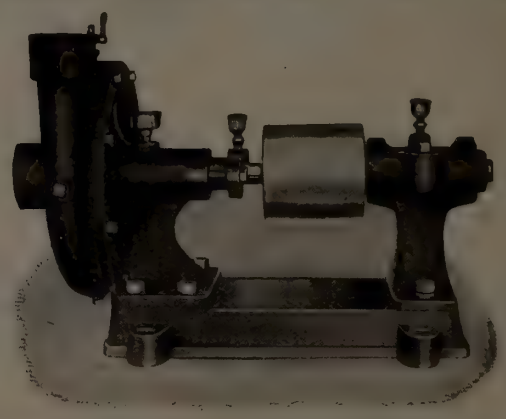
The immensity of the Lumber Industry will within a few years make this Province the most important in the whole Dominion.



There is undoubtedly a big market for Mill Equipment of all kinds. Let us Demonstrate our Advertising service. We please others, we can please you.

Western Lumberman

429 Pender St. W
VANCOUVER, B. C.
Branch at Winnipeg



When next in the market for

PUMPS

let us figure on your needs.

The Smart-Turner Machine Co., Limited
Hamilton, Canada

The Rat Portage Lumber Co., Limited, Vancouver

MANUFACTURERS OF

Douglas Fir, Spruce, Cedar and Hemlock Lumber

Rough Timbers, Dimension, Flooring, Ceiling, Siding, Interior and Exterior Finish of all kinds including Mouldings. Fir, Spruce and Cedar Lath

Prompt shipment of Fir timbers in all sizes and up to 80 feet in length

AIR DRIED CEDAR SHINGLES We specialize in supplying air dried Cedar Shingles, these cost more than kiln dried Shingles but make a better roof and last much longer

The Glue Book

What it Contains:

Chapter 1—Historical Notes.
Chapter 2—Manufacture of Glue.
Chapter 3—Testing and Grading.
Chapter 4—Methods in the Glue Room.
Chapter 5—Glue Room Equipment.
Chapter 6—Selection of Glue.

Price 50 cents

Canada Lumberman & Woodworker
347 Adelaide St. West, Toronto

We manufacture all kinds of

HANDLES

and

Wood Turned Goods

such as

pick, axe, sledge, hammer, hatchet, fork, rake, shovel and hoe; Neck yokes, single-trees, doubletrees, also horse yokes, hand rakes, both for the domestic and export trade.

When you are in need of anything in the above lines, would be pleased to hear from you. A postal will bring our Catalog.

The Canadian Handle Mfg. Co., Ltd.
Strathroy, Ont., Canada

Type "F" Range from 26" to 54". Price—from $110 to $170

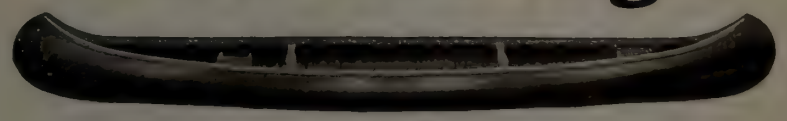
Automatic Feed Knife Grinder

This type "F," one of our full automatic feed grinders, has come to be a most popular machine; is especially adapted for grinding planer knives as well as all knives of medium weight. We make a full line of KNIFE GRINDERS and SAW SHARPENERS

Send for our catalogue.

Samuel C. Rogers & Co.
10-16 Lock St.
BUFFALO, N. Y.

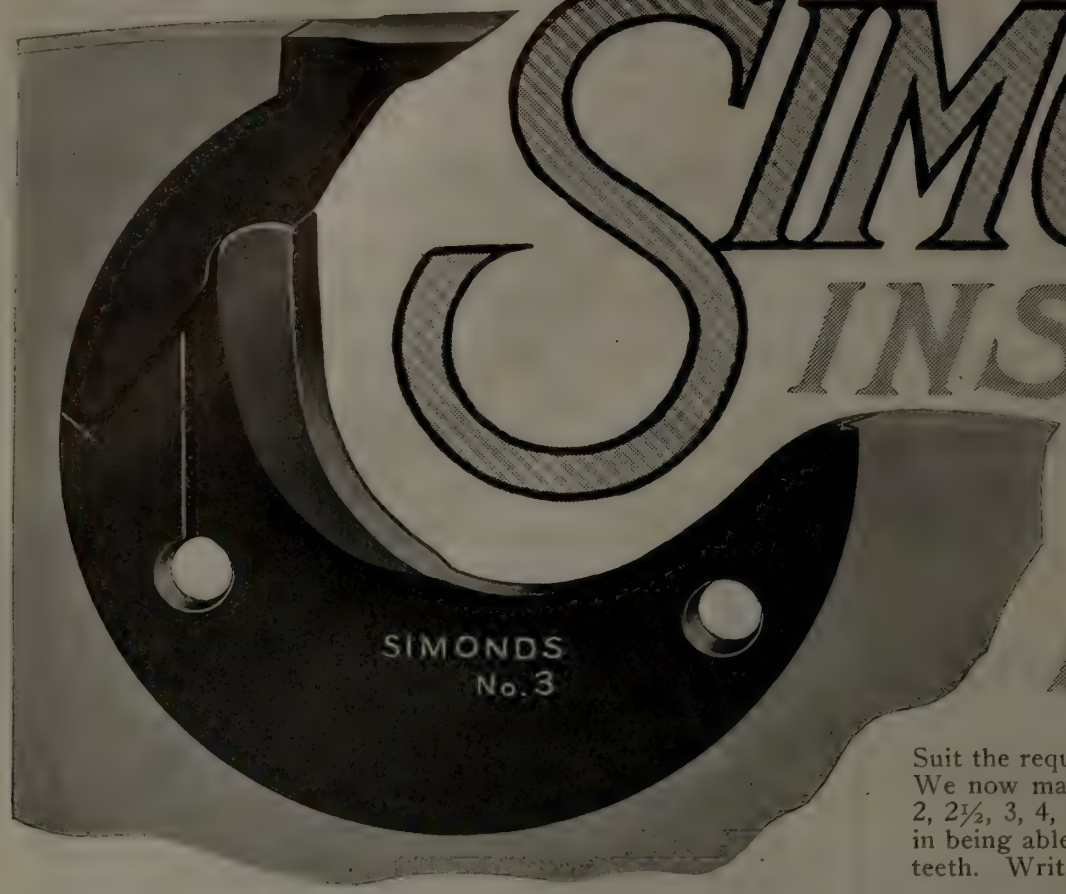
"Peterborough"



For nearly forty years we have been making the famous "Peterborough" canoes. The model illustrated is our 16 ft. canvas covered canoe which is very popular with lumbermen.

Write for our catalogue

Peterborough Canoe Co., Limited
Peterborough, Ont.



SIMONDS INSERTED POINT SAWS

Suit the requirements of your mill as to style or size of tooth. We now make the famous B. F. D. and K teeth, also styles 2, 2½, 3, 4, and 5, and the millman has a distinct advantage in being able to secure Simonds Saw plates with any of these teeth. Write us for prices.

SIMONDS CANADA SAW CO., LIMITED

St. Remi Street and Acorn Ave.,

VANCOUVER, B.C. MONTREAL, QUE. ST. JOHN, N. B.

Provisions for the "Spring Drive"

WINTER has gone and lumbermen everywhere are now busy on the big drive. You'll need a fresh supply of provisions for the camp. We can supply you with just what you want at attractive prices. Let us quote you today on

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Canada Lumberman and Wood-Worker

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Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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Our Annual Number

The present issue of the Canada Lumberman is in many respects different from all of the previous annual issues that we have published. In bringing out this year's number we have had in mind the preparation of a journal which, while not including so much as usual in the way of articles showing the growth of the industry in Canada, will give an impressive idea of its magnitude and of its many-sided interests. The articles that make up this number deal with a remarkably wide range of subjects that are of practical interest to the industry. They cannot fail to impress one with the fact that in the production of lumber in Canada there are presented a variety of problems such as can scarcely be found in connection with any other Canadian industry.

In all its aspects, from the cruising of the limits, to the use of the finished product, the lumbering industry presents a wonderful range of activities. These activities we have sought to indicate and describe, not so much by our own effort as by the effort of those who are themselves engaged in the industry. The special articles which make up practically the whole of this issue are the work of men who have spent their lives in the industry itself and who know from practical experience the details of the subjects they are discussing. For this reason we feel that this issue is much less one of our production than the production of the industry itself, and therefore, all the more valuable to our readers. It is a source of continual gratification to us to to see that those who have their life work in the lumbering industry and trade are so ready to co-operate with us in the preparation of an annual number that shall be a credit to the industry itself.

While we have sought to have this issue reflect the activities of the industry in general, there has crept into it almost irresistably one feature which is indicative of a very important development in the lumbering industry and trade in Canada today.' During the past few months we have seen a great awakening of interest among Canadian lumbermen and lumber consumers in the lumber products of their own country, and perhaps more than anything else this movement has been characterized by the aggressiveness with which the Government and the manufacturers of British Columbia have been pushing their market boundaries beyond their old limits. In Eastern Canada we have seen the effect of this campaign more forcibly than anywhere else. We had become accustomed to thinking that the quantity of B. C. lumber products that could be disposed of in Ontario, Quebec and the Maritime Provinces was strictly limited, but since the Government of British Columbia has opened up a lumber commissioner's office in Toronto and the manufacturers of British Columbia have been pushing the sale of their products in the east our old ideas have been roughly upset and today we are apparently at the beginning of an era in the east which will be characterized by a great increase in the demand for B. C. lumber products. We believe that this is the first instance in Canada of a provincial government seeking to stimulate trade east and west between the provinces, and we look to see the time, in the near future, when the wisdom of this course will have been amply demonstrated. In fact, we are certain, on our own account, that the demonstration has already been made and that the usefulness of this work will be rapidly increased.

The publication of an extensive annual issue like the present one, while it entails a good deal of special work on the part of those who are engaged in its actual appearance, also involves a great deal of work on the part of those who contribute to its columns, and is a striking illustration of the fact that the lumbering industry, in spite of all the difficulties which it has been experiencing during the past two or three years, is one of the most progressive and active industries in Canada. One would never gather, from the columns of this issue, that there is anything but optimistic enthusiasm in the lumber business of Canada today. While there is much to be regretted in regard to the actual trade situation in many parts of the country, there is little for which the lumbermen are themselves directly responsible and which they are not doing all they can to remedy. The adversities of the last few years have developed aggressiveness and determination in the best minds in the lumber business and are, we believe, doing much to bring to the top of the business those men whose influence in the days to come, when peace has been established, will be influential in rapidly restoring to the business its former greatness, and even developing it into a larger and more important industry than it has been.

Reduction in Workmen's Compensation Rates

Favorable Results in Lumbering, Woodworking, etc., lead to lower cost for 1916 —Results of 1915 Operation.

Ontario lumbermen have been so closely in touch with the effects of the Workmen's Compencation Act since its inauguration in the province on January 1st, 1915, that the results of the first year's operations, and the situation as it exists today are of importance to them all. The Workmen's Compensation Board has furnished the Canada Lumberman with special information about the results of the first year's operation of the act and exclusive information regarding changes to be made in the rates charged in connection with a number of lines of industry during 1916. The most important feature of this information is that in relation to the new rates. In advising the Canada Lumberman of the changes, the Workmen's Compensation Board say:—

"The aim of the Board is to make the rates for each kind of industry conform to the actual cost for such industry.

"The rates fixed for 1915 before any experience had been had in the actual operation of the new Act were necessarily based upon other tables of rating with allowances for the difference between the provisions of the Ontario Act and the covering of the other ratings. We have now had one year's experience, but the actual figures for the year are still incomplete, inasmuch as at the close of the year many claims for accidents happening during 1915 had not yet been filed, or, by reason of continuing disability or incompleteness of reports, had not been finally dealt with, and inasmuch as the assessments, which were based upon estimated payrolls, had not been adjusted to the actual payrolls.

"With the help of estimates, however, the situation has been gauged as nearly as possible. This has been done not only with respect to each class of industry but also, as far as could be, with respect to each particular line of industry in the class, and the rates for 1916 have been fixed accordingly.

"While in a few cases it has been deemed necessary to increase the rate, there is for 1916 in most cases a reduction from the 1915 rate, in many cases a very substantial one. In cases where the surplus was large it has been reduced by lowering the rates for 1916 retroactively.

"Separate account is kept of all the moneys received and paid out in respect of each class of industry, and the standing of each class is considered separately. It is very essential that within the class each kind of industry shall bear its proper proportionate rate, but it is immaterial to employers in one class what the rate may be in another class. If there is a surplus in the class it means a subsequent lowering of rates, while if there is a deficit it will mean an increase."

Reductions in the Rates

The rates for 1915 and the new rates for 1916 in connection with lumber, logging, river driving, woodworking, etc., are as follows:—

Industry	1915 rate	1916 rate
Lumbering, logging, river driving, rafting and booming	$2.00	$1.80
Saw, shingle and lath mills	1.80	1.50
Manufacture of		
Veneer or excelsior	1.60	1.50
Staves, spokes or headings	1.80	1.50
Lumber yards (including delivery) carried on in connection with sawmills	1.80	1.50
Planing mills, sash and door factories, and lumber yards (including delivery) in connection with planing mills or sash and door factories	1.50	1.30
Manufacture of		
Wooden boxes, cheese boxes and mouldings	1.50	1.30
Ammunition shell boxes	1.50	1.00
Cigar boxes	1.50	.70
Window and door screens	1.20	1.00
Wooden articles or wares or baskets, matches or wooden toys	1.20	1.00
Vehicle woodwork (retroactive)	1.20	1.00
Furniture, interior woodwork, fixtures, etc.	.80	1.00

The results of the operation of the act during 1915 show many interesting points. The total number of accidents reported was 17,033. Assessments collected from employers amounted to $1,539,492. The amounts distributed to employees and their families amounted to $1,186,221. There was thus a surplus of assessments over distributions amounting to $395,026.

Compensation was given in 9,829 cases. Among these the parties benefiting included 65 widows, 116 children, 35 mothers, and 10 fathers. The cost of administration of the Act for 1915 was $100,846. Cheques to the number of 150, on the average were sent out from the Board's offices daily, amounting to about $3,600.

In its report for the year the Board says:—"Though, in view of the unavoidable incompleteness of the actual figures the first year's experience cannot be regarded as conclusive, it indicates that the financial burden of the new law will be less than was anticipated. The assessments levied for 1915 are in most cases more than sufficient to meet the requirements. Though in a very few instances the bad accident record has called for an increase in rate, the Board has felt warranted in making substantial reductions in most classes of industry. In a number of classes or parts of classes, where the experience was good and the surplus large, reductions are being applied retroactively for 1916."

Benefits of the Act

"The Act has worked smoothly and satisfactorily. The benefits of the new system of law to both workmen and employers are recognized and appreciated. Claims are expeditiously and inexpensively disposed of. Employers are immune from the expense and annoyance of litigation. The intricacies and hardships upon workmen and their families of the old doctrines of negligence and assumed risk are eliminated. The facts to be determined by the Board are usually few and simple. There is no longer the need for payment of legal fees either by workmen or employers."

Evidence that employers as a whole have been satisfied with the working of the Act in its first twelve months is shown by the fact that many employers have asked that industries or operations carried on by them which are not now under the main schedule of the Act should be included.. Although the Act introduced a rather radical alteration in compensation methods, the co-operation shown by all parties in the first year's experience has been excellent and steadily improves.

Fifteen safety associations were brought into existence, the salaries and expenses of the inspectors being paid in most instances by the Board. The educative and preventive work carried on by these inspectors, devoting themselves as they do to one group of industries, is of the most valuable order.

The need for such supplementary work is proved by the records of accidents in Ontario industries. Twenty-one set screws which the Board says might have been countersunk for about $7.35 were responsible for an accident burden of $5,619.39. Open shafting and conveyors which might have been covered for a few dollars wounded 66, killed 4, and crippled 37 wage earners. Because two elevators lacked automatic locks, two lives were sacrificed and a compensation burden imposed of $6,179.06. Here is a fruitful field for the safety inspector.

Litigation Eliminated

The abolition of litigation is one of the most satisfactory benefits of the Workmen's Compensation Act to both employer and employee. More than 17,000 claims were disposed of without recourse to courts, or any friction between master and man.

The manner of dealing with claims is simple and informal. Notice of the accident is required to be sent in by the employer within three days after it occurs. The workman makes a similar report, which is supplemented by the attending physician. Promptly upon the receipt of the latter evidence, a cheque is mailed, seldom with more delay than two or three days, unless a special investigation is necessary; in that case temporary payments may be remitted to the injured party.

In the operation of the Act, great care is taken to guard against all forms of imposition. The ambitious workman, eager to return to his employment and overcome his handicap through injury is not placed at a disadvantage as compared with a comrade who makes no such effort. Individual circumstances may, and often do, vary the amounts set forth in the table of allowances. This power to discriminate has been especially needful in the rating of "permanent disabilities," for which a workman is entitled to 55 per cent. life pension, based on the extent of his impairment.

Lieut. L. F. Strickland

Lieut. L. F. Strickland

Lieut. L. F. Strickland, of the 224th Foresters Battalion, whose portrait we publish herewith, is well known to the lumber trade of Toronto, having been connected for several years with the Canada Lumber Company of Weston, Ont., which conducts an extensive retail trade in Toronto and its outlying districts. Lieut. Strickland was well known as one of the energetic and progressive younger members of the trade, having been prominent in most of the co-operative association work carried on by the trade during the past few years. The Canada Lumber Company was founded only a few years ago by the late Mr. Strickland, Sr., father of Lieut. L. F. Strickland. From the first it made its influence felt strongly in the retail trade.

After the death of Mr. Strickland, Sr., Lieut. L. F. Strickland assumed the management of the company. Although a comparatively young firm, it has already made rapid progress and has worked up quite an extensive business, operating a plant for the production of most of the important classes of interior finish.

Lieut. Strickland's business experience has been practically all in the lumber business. For some months he was employed in a warehouse in Columbus, Ohio, learning the lumber business. Then he came to Toronto with his father and continued with the Canada Lumber Company. When the war broke out he devoted a great deal of his attention and energy to the work of recruiting. He was associated with the 109th regiment from the time when it commenced recruiting and he stuck to this work faithfully until he felt that it was his duty to take on more active work in connection with the war. Having qualified as a lieutenant he was appointed to the 224th Forestry Battalion, for which his acquaintance with the lumber business gave him special qualifications, and he went overseas with this battalion.

Muir, Kirkpatrick & Sharpe Increase Their Forces

Mr. R. R. Stewart, formerly with the Long Lumber Company, of Hamilton, Ont., has joined the selling force of Muir, Kirkpatrick and Sharpe, 1123-4 Traders Bank Building, Toronto. The acquisition of Mr. Stewart by this firm is a step upon which they are to be greatly congratulated, as he is one of the best-known lumber travellers in Ontario. He has covered Ontario for the former firm during the past nine years and is in close touch with every dealer in the province.

Messrs. Muir, Kirkpatrick & Sharpe have also added to their selling force in Western Canada by taking over the Vancouver office of W. R. Chandler. Mr. Geo. R. Potter, former sales manager for W. R. Chandler, will be in charge of the western business for Messrs. Muir, Kirkpatrick and Sharpe and will cover British Columbia and the prairie provinces. Mr. Potter has one of the finest trade connections in the lumber business in Western Canada and is known to practically everybody who buys lumber.

The Oliver Lumber Company of Toronto Limited, have moved their offices from the Confederation Life Building to the Lawler Building, at the corner of King and Yonge Streets.

Mr. Hugh A. Rose, formerly eastern representative of the Canadian Western Lumber Company, Fraser Mills, B. C., has accepted a position as representative for Mason, Gordon & Company, Montreal, P. Q. He will open an office in Toronto immediately.

Mr. W. P. Kearney, vice-president and general manager of the Dominion Chain Company, Limited, Montreal, who is a captain in the 55th Irish Canadian Rangers, is now actively engaged in recruiting for the 199th Battalion.

Mr. J. L. Campbell, of Campbell and Paynes, Toronto, is on a visit to Winnipeg and other prairie province points in connection with his business interests there.

Mr. A. A. Titcomb, who travels Canada in the interests of the Jones Hardwood Company, Boston, Mass., is expected in Montreal the last of this month.

Vancouver Lumber Company Open Toronto Office

Chas. Plant, Toronto

The Vancouver Lumber Company, Limited, Vancouver, B. C., having been impressed by the remarkable awakening of interest in British Columbia lumber that is taking place in Ontario and eastern Canada, have opened an office in Toronto, where they are located at 701 Excelsior Life Building, with Mr. Chas. Plant as their representative. The office was opened about May 1st and Mr. Plant is now busily making himself known to the trade.

The Vancouver Lumber Company, Limited, is one of the largest and most important lumber manufacturing concerns in British Columbia. It has two mills, one which is known as the fir mill, being located at Vancouver. This mill cuts about 200,000 feet of lumber per day, producing large timbers, fir upper grades, such as flooring, ceiling etc. Their other mill is located at Roche Point on Burrard Inlet, about nine miles up from Vancouver. This is a cedar mill with very fine up-to-date equipment, including twelve upright machines. At this mill the company specialize in XXX and XXXXX shingles, turning out a very fine line of these grades. Their product is practically 100 per cent. clear and 100 per cent. vertical grain. The company also turn out a specially attractive line of cedar bevel siding.

Mr. Chas. Plant is an Englishman who came to Canada about 1910, and joined the staff of the Arrow Lakes Lumber Company, with whom he remained for about two years. Then he became associated with the Vancouver Lumber Company and has continued with them ever since. At first, he was employed in their office, assisting the sales manager. About the beginning of 1914 he was sent to Winnipeg and represented the company in the middle west. Then, when the war commenced, the Vancouver Lumber Company opened an office at Minneapolis, Minn., and Mr. Plant was placed in charge. Now that the company have decided to enter the eastern Canadian market actively, they have concluded that Mr. Plant is the logical man for the task. Mr. Plant will devote his attention to the trade in eastern Canada and will have his headquarters at Toronto. We are pleased to be able to publish a portrait of Mr. Plant, with whom a large number of our readers will soon become personally acquainted.

British Columbia Log Output

Reports from Vancouver indicate that during the month of May a record will be made in British Columbia logging operations. Stocks are lower than at any time in the past ten years and operators are working extensively. A number of new operations are reported at Wolfssohn Bay and other points on the coast. Over 34,000,000 logs were scaled in the Vancouver district during March and an equal number during April. Storms during the middle of April tied up many booms in harbor. When finer weather came there was a rush of logs to port which brought the total up rapidly. During the last week in April and the first week in May the logs scaled easily exceeded the quantity in any previous similar period. Among the new logging operations reported is one by the Haslam Lake Lumber Company at Wolfssohn Bay, one by Lamb Bros., who have taken over the Vancouver Timber and Trading Company's railway at Wolfssohn Bay, a new railway logging camp by P. B. Anderson at Shookum Chuck, Jervis Inlet; a new camp at Seymour & Company, at Narrows Arm, Sechelt, and a new camp by T. Highland at Turner Island. There are also a number of smaller operations begun in the coast district.

The timber statement for the month of March, issued by the Minister of Lands, shows that the total scale of saw-logs for the province amounted to 43,858,794 board measure, in addition to 149,337 lineal feet of poles and piles, and 11,216 cords of ties, shingle bolts, fence-posts, etc. The saw-logs scaled in the various districts include Vancouver, 34,279,501 feet; Cranbrook, 4,145,025 feet; Island, 3,325,818 feet; Vernon, 1,377,528 feet; and Nelson, 386,782 feet. Of poles and piles there were scaled in the Nelson district, 60, 428 lineal feet; Island, 36,900 feet; Prince Rupert, 21,763 feet, and Vancouver, 13,421 feet. Timber sales recorded during March cover an estimated total of 6,581,940 feet. B. M. saw-logs; and 28,140 lineal feet poles and piles, to produce a revenue of $9,752.

Mr. Wm. Power, M.P., of W. & K. Sharples, Quebec, P.Q., has returned from his annual visit to Great Britain.

Revising B. C. Grading Rules

Descriptions and Definitions of Various Species and Grades, to Facilitate Trade

In the grading of lumber the manufacturers of British Columbia have probably made greater advance than those in any other part of Canada, having drawn up and put in to effect definite sets of grading rules in connection with various important lines of lumber. Today, the B. C. Lumber & Shingle Manufacturers' Association has a special committee at work on a revision of its grading rules. Of late years the market for B. C. manufactured lumber has been reaching out into many new districts and the manufacturers are finding it more and more necessary to be able to describe definitely just how the various lines of stock are manufactured, so that buyers will know what it is best for them to order for the particular purpose which they have in mind. This idea is not only for the convenience of the buyer, but also for that of the manufacturer. In a great number of cases enquiries and orders are received upon which it is not possible to give a quotation, much less fill them, without a great deal more information than is given. British Columbia manufacturers are finding out that this class of order comes especially from Eastern Canada and the United States, where buyers are not yet familiar with their woods.

The intention in preparing a revision of the grading rules is that the new rules shall give descriptions of the various species of merchantable timber found on the coast in British Columbia, the particular qualities of each species and the uses for which each particular kind of tree is best fitted.

In British Columbia the manufacturers have established the custom, especially for Canadian and United States trade, of drying, dressing and finishing the lumber at the sawmills, so that it is ready to hand over to the carpenter on the job. This, they believe, is an improvement on the custom in the east, which requires that lumber shall be sawn and seasoned at the sawmill and shipped thence to the planing mills and woodworking factories for further manufacture.

British Columbia manufacturers receive many enquiries and orders for a certain number of pieces and finished of dressed lumber of certain specified lengths, for instance:—flooring or ceiling will be ordered all 16 feet long, or so many pieces 10's, so many pieces 12's, 14's and 16's. This system is even carried out to the mouldings, increasing tenfold the difficulty of filling the order, with no particular advantage to the buyer.

Matters of this kind will be pointed out forcibly in the revised grading rules and an endeavor will be made not only to standardize the B. C. finished sizes, but to make them correspond as much as possible with the rules and regulations governing other large lumber associations, the idea being that in the course of time Pacific Coast sizes and grades will be uniform. The revised rules will also point out the particular grades that buyers should use for particular work. For instance, a short time ago a contractor in B. C. was buying buffers for a large scow. The architect specified the best clear Douglas fir timber. It would have been much better to have specified good No. 1 common grade, with plenty of knots to prevent a tendency to split.

Similarly, in the matter of shop lumber for panels and door and window manufacture, the size and nature of the defects are of no particular importance, provided the lumber is clear between them; so that a fir board, not fit even for shiplap or No. 2 common boards, might be very desirable for door panels. In the same way, it is easily understood that, in connection with flooring, the length of the piece is not nearly so important as the grade.

Generally, the revised grading rules are intended to supply full and definite information to the retail dealer so that he may advise his customers exactly what is best for them to buy for the particular work they have in hand.

This work of drawing up grading rules is by no means a simple matter. Widely varying interests are affected so closely that only the most thorough enquiry into all the circumstances will result in serviceable rules. It usually takes a lumber association anywhere from six to twelve months to gather the necessary information for compiling a proper set of grading rules.—Geo. B. Cross.

A Modern Paper Plant for Ocean Falls

Lewis Bloch, formerly of San Francisco, will have charge of the installation of the paper mill which is being established in connection with Pacific Mills, at Ocean Falls, B. C., by the Fleischacker and Johnson interests of San Francisco, which also control the Crown Willamette paper mills in Oregon. The Ocean Falls proposition, representing an investment of $3,250,000, was promoted some years ago by Lester W. David, of Seattle. It includes 60,000 acres of timber, much of which is suitable for pulp paper purposes; a sawmill with a cutting capacity of 400,000 feet of lumber a day; and a modern pulp paper plant.

Business Commission Going to Europe

In the House of Commons recently Sir George Foster, Minister of Trade and Commerce, announced that a Commission of business men had been appointed by the Government to visit the United Kingdom, France and Belgium, with the object of investigating opportunities for extending Canadian trade in those countries. The Commission, which will be an honorary one, will consist of Mr. Jas. W. Woods, Toronto, former president of the Toronto Board of Trade; Theo. H. Wardleworth and Frank Pauze, of Montreal; H. E. Duper, Quebec: P. Q.; Frank H. Hatheway, St. John, N. B., and Geo. Allan, Winnipeg. Mr. Frank Pauze is well known to the lumber trade in Montreal as a member of the firm of U. Pauze and Son, sash and door manufacturers, Montreal. He is already in France, having gone there about a month ago as a representative of the Canadian Timber Products Association. It is expected that the Commission will all have assembled in Europe by midsummer.

B. C. Shingles to be Standardized

Manufacturers and Government Adopt Plan for Stamping Grades on Bundles—The New Rules

Mr. Joseph Chew, Vancouver, B.C., visited Eastern Canada recently and called upon a number of his old friends in the trade. Mr. Chew reports that the shingle manufacturers of British Columbia have recently adopted an important reform in connection with the grading of B. C. shingles. Realizing the necessity for standard and dependable grades, the manufacturers have drawn up a set of rules which have been agreed to by the association, and the British Columbia Government has consented to assist in standardizing these grades, by appointing inspectors and furnishing an official stamp for identifying the grades. These stamps are to be furnished to manufacturers who join in the movement. The manufacturers will do their own inspecting and grading, and the Government inspectors will watch the grading of all manufacturers who use the Government stamps. Any manufacturer placing the stamps upon shingles that will not stand the inspection is to be liable to a fine of $100 for the first offence and more serious punishment for further offences.

The grading rules which are thus officially established by the manufacturers and the Government are as follows:—

No. 1 B. C. Shingles Are All Edge-Grain, Strictly Clear and Well Packed

There are four kinds of No. 1 B.C. shingles, based on variations in thickness and length, known and sold under the following names:—

XXX, XXXXX, Eurekas, Perfections

XXX.—16 inches long, allowing 1 inch over and 1 inch under this length; 6 to 2's; i.e., thickness of butts of 6 shingles measured green is at least 2 inches. When dry a bunch will measure not less than 8 inches at the butts. Smoothly sawn, squarely jointed, and well manufactured. Packed 25—25 courses to bunch, 4 bunches to the M. Well suited for steep-pitched roofs or roofs or granaries, implement-sheds, etc.

XXXXX.—Same length as XXX; 5 to 2's; i.e., 5 butts to 2 inches when green. When dry a bunch will measure not less than 9¾ inches at the butts. Packed 25—25 courses to bunch, 4 bunches to M. Most universally used shingle manufactured in British Columbia; recommended for any substantial building, especially houses, barns, churches, etc.

Eurekas.—18 inches long; can show more face to weather than 16-inch shingle. Same thickness as XXXXX. Packed 25—25 courses to bunch, 4 bunches to M. Suited for low-pitched roofs.

Perfections.—18 inches long, same as Eurekas; 5 to 2¼ inches; i.e., 5 butts to 2¼ inches when green. When dry a bunch will measure not less than 8¾ inches at butts. Packed 20—20 courses to the bunch, 5 bunches to the M. Long-lived owing to thickness; artistic effect secured by means of the heavy butts.

Lower Grades

10-inch Clears and Better.—Shingles packed with 10-inch and better clear butts may be had in any of the thicknesses of No. 1 shingles. They contain all the flat-grain clears and clear feather-tips which develop.

XX.—May be had in any of the above thicknesses. Packed with 6-inch to 10-inch clear butts and contain the fall-downs from the better grades.

Lumber Production in Canada During 1914

Comparative Statistics of Relative Output and Total Production in all Provinces

A bulletin dealing with the production of lumber, lath and shingles in Canada during 1914 has been published by the Forestry Branch, Ottawa. The statistics are prepared from reports received from 2,843 firms or individuals operating saw or shingle mills.

The total production for 1914 includes, 3,946,254,0000 feet board measure of sawn lumber valued at $60,363,369; 625,010,000 lath valued at $1,585,484; 1,843,554,000 shingles valued at $3,688,746; making a total value for the three classes of products of $65,637,599.

Lumber Production

The following table gives a summary of the information concerning the production of sawn lumber classed by provinces.

	Number of Firms Reporting		Quantity	
	1913	1914	1913	1914
			M. Ft. B.M.	M. Ft. B.M.
Total, all Provinces	**2,187**	**2,843**	**3,816,642**	**3,946,254**
Quebec	684	1,314	630,346	1,118,298
Ontario	685	718	1,101,066	1,044,131
British Columbia	159	172	1,173,647	936,612
New Brunswick	177	160	399,247	414,808
Nova Scotia	322	332	247,722	279,044
Saskatchewan	25	17	114,800	56,677
Alberta	40	47	44,462	45,236
Manitoba	50	40	71,961	44,658
Prince Edward Island	45	62	6,391	6,790

	Value of Lumber	Average Value per M. Ft. B.M.	
	1914	1913	1914
Total, All Provinces	**$60,363,369**	**$17.24**	**$15.30**
Quebec	17,444,980	16.85	15.60
Ontario	19,719,972	23.41	18.89
British Columbia	10,724,424	14.00	11.45
New Brunswick	6,374,293	14.42	15.37
Nova Scotia	3,908,244	13.36	14.01
Saskatchewan	842,664	16.62	14.87
Alberta	649,146	13.69	14.35
Manitoba	601,728	13.15	13.47
Prince Edward Island	97,918	13.32	14.42

The total is an increase of 3.4 per cent. over that of 1913. The three Maritime Provinces all increased their production of lumber. The closing of the Baltic ports and the interruption of the lumber trade with Scandinavia resulted in an increased export trade in this commodity from America to Great Britain and France. The cut in Quebec is probably an increase also over that of 1913, but this fact is obscured by the much greater completeness of the returns for 1914. Alberta increased her production by 1.7 per cent. while Ontario, Manitoba, Saskatchewan and British Columbia all show decreases.

The average prices given are prices at the mill for sawn material. The average for the whole of Canada shows a decrease of only $1.94, which is a remarkably small decrease in view of existing conditions. The price fell in the three most important lumber-producing provinces, Quebec, Ontario and British Columbia, and also in Saskatchewan. In the remaining five provinces including the three Maritime Provinces a slight increase is to be noted.

The production in 1914 includes lumber cut from at least fifty different tree species. In the reports received from the sawmill operators and on the market generally the lumber cut from these different trees is grouped wherever its properties are of a similar nature. There is only one species each of Douglas fir, beech, basswood and butternut cut in Canada, but there are at least five spruces, four balsam firs, and four birches.

A decrease of 24.1 per cent. in the cut of Douglas fir has caused this wood to fall from second to third place on the list. The greater completeness of the reports from Quebec, where balsam fir is an abundant species, has brought this wood up from tenth to fifth place on the list. The cut of spruce increased by over 13 per cent. and formed in 1914, 36.5 per cent. of the lumber cut in Canada. Other increases among the more important woods are to be noted in the cases of hemlock, balsam fir, cedar, jack pine, basswood and poplar; and decreases in white pine, Douglas fir, red pine, birch, tamarack, maple, yellow pine and elm. Among the fifteen most important woods cut in Canada the greatest increase in production was in balsam fir and the greatest decrease in western yellow pine.

The average mill price of lumber produced in 1914 decreased by $1.94 per thousand feet. Out of the total twenty-seven kinds reported only five increased in price from 1913 to 1914. These were balsam fir, maple, chestnut, cherry and tulip. In every other case the mill price decreased.

Lumber Cut, 1913 and 1914, by Kinds of Wood

Kind of Wood	Quantity		Total value of lumber	Average value per M. Ft. B. M.	
	1913	1914	1914	1913	1914
Total	**3,816,642**	**3,946,254**	**$60,363,369**	**$17.24**	**$15.30**
Spruce	1,274,215	1,441,438	$21,199,799	$15.01	$14.71
White Pine	678,330	667,678	13,880,255	27.28	20.79
Douglas Fir	793,143	601,643	6,810,000	13.74	11.32
Hemlock	306,342	334,361	4,734,229	14.71	14.16
Balsam Fir	64,957	256,452	3,654,741	13.02	14.25
Cedar	101,053	118,738	1,294,238	14.72	10.90
Red Pine	144,320	107,763	1,935,543	18.63	17.96
Birch	79,369	76,424	1,247,816	17.95	16.33
Tamarack	96,325	71,791	882,188	13.77	12.29
Maple	73,580	66,610	1,283,643	17.71	19.27
Jack Pine	35,404	44,000	626,108	14.37	14.23
Basswood	36,009	38,013	752,108	21.48	19.79
Yellow Pine	58,939	34,616	463,525	14.83	13.39
Elm	30,766	29,490	610,041	21.25	20.69
Poplar	11,136	21,621	264,430	13.68	12.23
Beech	12,983	15,686	250,301	16.05	15.96
Ash	10,509	9,941	204,919	22.30	20.61
Oak	6,348	5,854	174,826	32.68	29.86
Butternut	516	1,431	25,309	23.85	17.69
Chestnut	1,317	1,163	25,942	19.26	22.31
Hickory	647	900	25,299	36.67	28.11
Cherry	246	535	15,237	25.09	28.48
Walnut	40	46	1,727	50.42	37.54
Tulip	20	23	412	17.90	17.91
Yellow Cypress	.....	19	475	.....	25.00
Black Gum	125	12	168	24.00	14.00
Red Alder	.....	6	90	.....	15.00
Sycamore	11	.....	.....	23.18	.....
Sassafras	1	.....	.....	45.00	.....

Softwoods vs. Hardwoods

Softwoods vs. Hardwoods—Total Quantity and Percentage each Form of the Total Lumber Production in Canada and in each province

Province	Softwoods		Hardwoods	
	Quantity M Ft. B.M.	Per cent. of total	Quantity M Ft. B.M.	Per cent. of total
Total, All Provinces	**3,678,499**	**93.2**	**267,755**	**6.8**
Quebec	1,053,678	94.2	64,620	5.8
British Columbia	929,381	99.2	7,231	0.8
Ontario	884,843	84.7	159,288	15.3
New Brunswick	403,565	97.3	11,243	2.7
Nova Scotia	255,795	91.7	23,249	8.3
Saskatchewan	56,672	100.0	5	*
Alberta	44,813	99.1	423	0.9
Manitoba	43,936	98.4	722	1.6
Prince Edward Island	5,816	85.7	974	14.3

*Less than one-tenth of 1 per cent.

Canada's lumber-producing trees are largely softwoods and lumber of this description formed 93.2 per cent. of the total, practically the same proportion as in 1913. In the production of this class of lumber Quebec leads. British Columbia cuts more softwood than Ontario although its total production of lumber is less. In Quebec, the Maritime Provinces and the Prairie Provinces the most important softwood is spruce. In Ontario white pine has always headed the list and in British Columbia, Douglas fir.

Ontario is the most important hardwood-producing province, cutting over twice as much as Quebec which comes second on the list. The other provinces in order of their importance as producers of hardwood are as follows: Nova Scotia, New Brunswick, British Columbia, Prince Edward Island, Manitoba, Alberta and Saskatchewan. In Quebec and the three Maritime Provinces birch is the most important hardwood. In Ontario maple heads the list and in the three Prairie Provinces aspen poplar. Cottonwood poplar is the most important deciduous-leaved tree in British Columbia.

Mr. A. J. Morris, of the Wilson Lumber Company, 1 Spadina Avenue, Toronto, has left on a fortnight's business visit to Eastern Canada. He will visit Montreal, St. John, Halifax, Truro, Amherst and Sydney.

The Reader's Viewpoint on Current Topics

Concensus of Opinion Inclines Toward an Optimistic But Cautious View of Trade Outlook

Future Prospect Undoubtedly Encouraging

Editor Canada Lumberman:— North Tonawanda, N. Y.

It is a well-known fact that students of trade, and financial statisticians agree that trade rises and falls as do the tides, and that action and reaction in trade are substantially equal except that there is a little more prosperity than depression, owing to the gradually increasing wealth of the world.

Since the early part of 1907, the lumbermen have hardly had a fair share of prosperity. While there have been a few moderately bright spots, the first real sunshine came with the recent rise, starting in the fall of 1914. While lumber, particularly southern product, has advanced sharply, the manufacturer is not making more than a fair profit at the present time, certainly not an exorbitant one. Large owners of timber at the present time are perhaps only making a fair interest rate on their investment.

It would seem that at least two or three years of substantial prosperity would little more than make up for the depression of previous years, which was most acute in 1914, and the early part of 1915.

Lumber is a crop, much the same as grain, and owing to the heavy snows of the past winter, and the fact that there have been comparatively few new operations started, there will likely not be an over-production of lumber for some time to come. For these reasons we look on the future as extremely bright, particularly so for the people who are fortunate enough to live on this North American Continent.

Our firm, Smith, Fassett & Company, manufacture spruce in New Ontario and at Lumsdens Mills. We have been in the white pine business in Tonawanda for forty years, and are interested in some southern plants, manufacturing yellow pine. We find practically the same conditions exist in these different localities.

We feel that the moderate rise in price of lumber is certainly warranted. We base this opinion largely on the experience of the companies in which we are interested.

Some of the eastern lumber dealers, particularly those supplying the Atlantic coast, have been more or less distressed with the idea that the Pacific coast would be a serious competitor on account of the low freights made possible by the Panama Canal. While the west coast is bound to be a competitor of eastern manufacturers, we do not regard this competition as at all serious for the present, as, for some time to come freights will be practically as high by water as by rail.

The west coast is having a heavy demand for its material from Pacific coast and foreign sources, and the introduction of these woods in the east is still in its infancy. Their increase will probably be compensated for by the decreased production of Atlantic coast manufacturers. Then too, the recent experiences of manufacturers in the west, and the record of the past few years, will probably not encourage investors for some time to come.

When we get back to normal freight rates on the ocean, and ships are available for the transport of lumber from Vancouver or western states to Atlantic coast ports, these freights will probably range in the neighborhood of $12 and can only be done at this price on ships carrying upwards of three million feet. This will necessitate redistribution at some Atlantic coast port, and the expense incident will tend to equalize the difference between low water rates and what we are now paying by rail, and the education of eastern people for the more generous use of the western woods will undoubtedly be delayed for some time.

To summarize—we believe that the amount of lumber in sight at the present time is unusually small. The manufacturing capacity has not increased in recent years. We have a good deal to make up in the way of profits, and the foreign demand for lumber will continue for some time after the war.

Therefore, the future, in our opinion, is undoubtedly a hopeful one.—Smith, Fassett & Company.

* * *

Co-operation By Unionism

Editor Canada Lumberman: Grand Forks, B.C.

The manufacturers of lumber today realize more fully than ever before the needs of a wider market for the relief of the industry. Other industries are a success solely because there are organizations binding together the manufacturers and dealers. No other industry in Canada is more important to the general public than the lumber industry, and if an organization along union lines were consummated general benefit would accrue to the greatest number of the people. Such an organization would be of particular benefit to the province of British Columbia, especially if formed of all manufacturers and the dealers west of the Great Lakes. Its success would be immediately apparent if a twofold policy were adopted; Service to the lumberman and service to the public.

An organization could only be a success when it increased the profits of its members and at the same time resulted to the good of the public.

Price combination should be avoided.

The aim of the union should be the standardization of material and working conditions, to increase the efficiency of its members by discussion and inspiration, to limit the production of certain kinds and grades, to use every legitimate means for reducing costs by speeding up, to conserve the timber, to plan trade economies, to keep down the overhead, etc.

It would also be necessary to have the right men at the head of the Union. A governing board should be appointed consisting of the past presidents and vice-presidents of the smaller associations. As a rule, men do not receive these prominent positions from their respective associations without being amply qualified. The greater number of them started in the industry as lumber jacks or mill laborers and have become owners of successful institutions, either as manufacturers or dealers. The majority of the manufacturers have a thorough knowledge of the mechanical requirements, but are slack on buying and selling. The meetings of the smaller associations and the board would give the members the inspiration to develop along those lines, to realize the value of team work, to learn to advertise efficiently and effectively, and to become efficient merchants who understand thoroughly both ends of the industry.

The needs of co-operation along the lines of unionism are apparent, if carried out along the lines enumerated above. The manufacturers agree that something must be done and if the dealers of the west would join with them, the success of the industry would be assured permanently. Let us hope that some action along the lines enumerated above will be taken before overproduction again forces the mills to close down.—W. Mark De Cew.

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Trade Prospect Improving

Editor Canada Lumberman: Marmora, Ont., May 1st.

There has been ample water for log driving, and our foreman reports good progress, especially during the last ten days. Another week will enable him to get his stuff through safely, and we do not anticipate any trouble whatever, so far as getting our logs in is concerned.

A year ago we carried on no logging operations whatever, and the generally depressed conditions of the lumber market during the past year have shown that it was wise not to cut any. We have taken out a small cut during the past winter; this, however, being just enough to give us an assortment of sizes wanted for our anticipated trade during the coming summer. Prospects appear somewhat brighter. We have had numerous enquiries, especially for hardwood stocks, and for hemlock timber.

The local building conditions were generally quiet during 1915. The farmers in this section have been making some additions and in some cases are arranging to build new houses and barns, resulting in a limited local demand. Although some parties are complaining of threatened scarcity of labor, we have been able to secure the required help up to the present time.

As wages are likely to advance, prices of the new cut will have to improve considerably in order to cover the extra cost of manufacture.—The Pearce Company, Limited.

* * *

Appreciates Canadian Hardwoods

Editor Canada Lumberman:— Philadelphia, Pa.

We are glad to advise you that we have found, in recent months, an increased demand for Canadian hardwoods, particularly for Canadian birch. Quite a number of our customers, after they have received sample shipments of Canadian birch, seem to appreciate the texture and appearance of it, and we find some of them are inclined to specify Canadian birch when ordering additional stock. At the present there seems to be a very fair demand for the class of hardwoods that are produced in Canada, and we are having very good satisfaction with the shipments from the Canadian territory. The manufacturers of Canadian hardwoods, in our judgment, need only to take care to see that the stock is properly manufactured and properly graded in order that they may continue to receive business for the products from the States. —Wistar, Underhill & Nixon.

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River Drivers Have Been Scarce

Editor Canada Lumberman:— Bracebridge, Ont., May 8th.

The drives in this district are now all under way although some of them were held up on the start owing to extra high water. However, this surplus water is now pretty well run off and the logs are on their way to the mills, and under ordinary circumstances should reach their destination in good time. We understand that in some districts the scarcity of river drivers is going to have a very serious effect on the outcome of some drives, but as for ourselves, we can get what men we require at from $10 to $15 per month of a raise over what we paid last season.

The output of logs during the past season in our vicinity will about equal

that of last year. There seems to be considerable lumber moving just now and the demand for this season's cut is fairly good.—J. D. Shier Lumber Company, Limited.

* * *

Lumber Trade Brisk

Editor Canada Lumberman:— Owen Sound, Ont.

The large quantity of snow on the ground at the end of March, and almost continuous rains during April, were expected to furnish plenty of water to bring out all the early drives. The greatest difficulty will be destruction of dams owing to such an abundance of water. Market conditions are much better than a year ago and trade is quite brisk at present.—John Harrison & Sons Company, Limited.

* * *

Labor Supply Scarce on Georgian Bay

Editor Canada Lumberman:— Byng Inlet, Ont., May 1st.

Our driving operations have just started and promise reasonably for a good season. We have, if anything, more water than is needed at present. There will be some delay where storage dams have gone out on account of high water, but this is incidental and occasional.

We are not able to state definitely as to the comparison of the log output of this year with last year's, but are under the impression that there will not be much difference between the two years.

The probabilities are that labor conditions will affect the sawing capacity this season.—Graves Bigwood & Company.

* * *

American Market Very Strong

Editor Canada Lumberman:— Pembroke, Ont.

Driving conditions are excellent in this district. Water is plentiful, and there are sufficient drivers on hand for the work. The output of logs in this district has been approximately the same as for the season of 1914-15.

In regard to market conditions, the tone of the Canadian market seems to be improving, and the American market is especially brilliant at this time for mill culls, box and common lumber. There is also a fair percentage of good lumber moving to the American side, which we presume is being used for pattern stock.—The Pembroke Lumber Company.

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Stocks Well Cleared Up

Editor Canada Lumberman:— Clyde Forks, Ont., May 2nd.

Driving conditions in this district are good this year, the water keeping high. There is very little driving to be done as nothing of any account was taken out during the winter. With regard to trade conditions, we find them fair at present, but prices are not up to much. Our stock has been pretty well cleared up during the last two months.—The Clyde Forks Lumber Company.

* * *

Editor Canada Lumberman:— Chapleau, Ont.

Driving conditions could not be very much better than they have been this spring, with plenty of water and the ice going out nicely.—Austin & Nicholson.

What Are Canadian "Good Sides"

Editor Canada Lumberman:— Toronto, May 10.

In the Canada Lumberman of May 1st, on page 38, an article appeared under the heading of "Query and Comment," referring to the grade known as Canadian "good sides." The definition given by your informant does not agree with my own experience, and I would like to draw your attention to what it seems to me should be included in Canadian "good sides." In order to make the matter clear I will repeat the questions asked in your May 1st issue, by one of your readers, and then will give my reply. The questions were as follows:—

1. Will "Good Sides" allow No. 1 Dressing boards. If so, what percentage?
2. Will this grade allow No. 1 Cuts, if so what percentage?
3. Will this grade allow No. 2 Cuts, if so what percentage?
4. Will this grade allow Shaky Clear, if so what percentage?
5. What is the narrowest width that 4/4 "Good Sides" will allow?
6. What is the narrowest width that 5/4, 6/4 and 8/4 will allow?
7. In a representative grade of "Good Sides" what percentage of the stock would consist of Fine common, Selects and Uppers?

My replies to the above questions would be as follows:—

1. No.
2. This grade will allow of small red knotted stock that might be graded as No. 1 cuts, but coarse knotted and black knotted cuts are not permissible.
3. No.
4. No, but it will allow what is usually termed fine shake stock.

5 and 6. Eight-inch in all thicknesses.

7. According to American grading, "good sides" will consist of red knotted No. 1 cuts, all clear stock, with coarse fine shake, fine common, selects and uppers.

I may not be absolutely right in my interpretation of this grade and I would like to have other readers put me right if they think differently.—Toronto Wholesaler.

In the Public Eye

A budget of comment presented in the interest of public welfare, independent of party politics and with malice toward no one.

So many pages of reports about the fuse investigation at Ottawa have been published by the daily press that most of us have had a hard time getting at the bottom of the thing, particularly when we found that whatever newspaper we read served the thing up to us with a strong party flavoring. During the last few days when some of the real parties to the contracts have been in the witness box, a good deal of definite information has been brought out, showing that there was ground for the suspicions held by the public about the way in which the contracts were handled. During the first few days of the investigation, however, and even up to the present, I have not been able to get rid of an idea that the whole thing is being staged and that the effect of the proceedings upon the public mind is being considered far more definitely than the importance of unearthing any irregularities that may have been going on before the investigation commenced. I am still in doubt whether the investigation is being conducted in the direct interests of those who are most concerned in having the facts made public, or whether its chief objects are to look after the interests of some other people.

The Canadian manufacturer is the man who has most at stake in this business, and don't you think that, both as a tenderer for contracts and as a witness before the Commission, a Canadian manufacturer has been given a pretty raw deal? After the way in which Mr. Lloyd Harris states that he was treated by the Shell Committee, being turned down and discouraged when seeking contracts, and being advised to see Col. J. Wesley Allison, I was expecting to see him handled rather sympathetically by the members of the Commission. What do you think the Commission has been appointed for? Is the object to find out whether contracts have been improperly let and whether Canadian manufacturers have been passed over in favor of United States manufacturers?

There must be a lot of Canadians who felt hot under the collar when they read the report of the manner in which Commissioner Meredith handled Mr. Lloyd Harris, when the latter was giving evidence to the effect that Col. Carnegie told him to see Allison about fuse contracts.

"How in the world can you square your evidence that he (Col. Carnegie) dishonestly prevented you from getting a contract with the statement that he is an honorable man," asked Commissioner Meredith of Mr. Lloyd Harris. "The only thing I could think of was that influences had been brought to bear" was Mr. Harris' reply.

"To force an honorable man to do a dishonorable act, do you think that is comprehensible?" "It does not seem so, but it is the only way I can explain it."

"Then your theory is that Col. Carnegie was honest, but was forced to do something against his better judgment?" "Yes."

Sir Wm. Meredith: "Let us call a spade a spade. If you thought that, did you not think you had a high public duty to bring it out?" "I did, I went to the Prime Minister."

"Why did you not bring it out publicly?" "Because I would not take the responsibility of bringing it up while the war was on."

"Was the secret this, you were looking for a contract?" "No, it was not."

Is this the kind of treatment that a Commissioner appointed by the Government is expected to hand out to a reputable Canadian? The only thing I regret is that Mr. Harris was calm enough not to give back as much as he got. However, the whole affair looks so much as if it is in the hands of a stage manager, that it would probably have done no good even if Mr. Lloyd Harris had got off a little indignation when it was insinuated that motives of business cunning prompted his course, rather than motives of patriotism. Commissioner Meredith, moreover, is the same man who a few days previous had taken upon himself to read a lecture upon politeness to Mr. E. F. B. Johnston, who represents the interests of the public.

There is a definite contradiction between Col. Carnegie's evidence and that of Mr. Lloyd Harris. Col. Carnegie said that he had not referred Mr. Lloyd Harris to Col. Allison. In view of the direct statement of Mr. Lloyd Harris to the contrary, it looks to me as though the evidence upon this point, on which so much depends, will fit in best with Mr. Harris' statement, by the time the investigation has closed. But no matter what may be the fact in this connection, or how different the Commissioner's opinion as to a man's duty to his country may be from yours or mine, a witness of Mr. Harris' standing is entitled to freedom from such treatment as Commissioner Meredith handed out to him. If the findings of the Commission are to have any weight with the people of Canada, the behavior of its members towards respectable witnesses will have to be improved.

SEARCHLIGHT.

Log Loader Shipping on to Vessel.

Logging Railroads in the East

Conditions That Make Them Profitable or Otherwise—Advantages from Steady Log Supply

Logging by railroad is not carried on in Eastern Canada to anything like the same extent as in Western Canada, but it is in some localities an important feature in connection with logging operations. The chief reason for the installation of a logging railroad in Eastern Canada, as a rule, is the fact that it permits a mill to make a clean cutting of its limits, taking out both the hard and soft woods, and also makes it possible to carry on operations throughout the year, instead of confining them to logging in the winter and sawing in the summer. This feature makes a logging railroad, when other conditions render it feasible, a valuable asset in connection with a sawmill. Not only are the expenses per thousand feet of logging and sawing reduced by the increased output rendered possible, but a manufacturer is also enabled to serve his market much more promptly and satisfactorily. He is able, like the manufacturers in the Southern States, to take out special orders; that is to say, when a certain line of stock is required in a hurry he can send an order to the woods and have the logs cut and shipped into the mill in a very short time. The fact that a mill is thus in a position to turn out practically anything promptly, makes its appeal to the wholesaler and consuming trade far more definite and interesting. However, it is possible by means of a logging railroad, to take out not only the soft woods and the hard woods, but also wood and pulp from tops and from the small trees which are ordinarily left in logging operations.

Roughly speaking these are the chief features in connection with the operation of a logging railroad in Eastern Canada. When one comes to contrast the conditions rendered possible in this manner, with those existing in connection with a plant whose logs are received entirely by water the advantages of the logging railroad are all the more apparent. It must be borne in mind, however, that when speaking of the advantages of a logging railroad, it is not being suggested that this method of logging should supersede the method of log driving by water. It is only under certain definite conditions that the logging railroad in Eastern Canada is feasible, and only in such cases will the advantages which are referred to in this article exist. By way of contrast, take the case of a mill which receives its logs by a water route. In most cases, in practically all cases in fact, these logs will be soft woods only. Such hardwoods as are received in these mills have to be hauled to the mill on sleighs, or in some cases they are specially wired up to soft wood logs for the water drive. Unless the hardwood logs are thus secured, the proposition resolves itself into one of taking a portable mill to the logs or leaving the hard woods standing. The portable mill proposition, of course, is an extra one standing upon its own basis as a matter of expense, so that to all intents and purposes, unless the hardwood logs are brought in by railroad, the soft wood logs have to bear the whole burden of operating expenses. In the matter of cost of operation it must be remembered that large operators who drive their logs by water are obliged to keep sufficient logs cut ahead, for from one to three years in advance, in order to make sure that they will have sufficient stock for the annual output of their mill. Thus they continually have a large investment lying practically idle, upon which they will realize nothing for some years. When a logging railroad is operated, this source of operating expense is greatly reduced. At the most, it is necessary only to keep one year's output ahead, and in some cases logs are hauled to the mill as fast as they are cut in the woods and the outlay invested in logs is never extensive. Under these conditions the operator is able to realize on his investment much more quickly.

A Stimulus To Economical Sawing

An important point in connection with operations carried on by means of a railroad is the efficiency that can be developed in connection with securing the utmost possible in the way of good stock from each log. It is possible, and is a frequent practice, to ship the trees from the woods to the mill pond in their full length, so that they can be cut into separate logs at the mill pond to the best advantage for filling such orders as are on hand. This enables the manufacturer to obtain a better price for the product of his logs than if they were cut into shorter logs in the woods.

In considering the advantages of railroad logging one must also bear in mind the fact that in connection with river drives, especially on narrow, awkward streams, one is certain to lose a definite percentage of hardwood logs that sink, either when they become waterlogged, or when they break away from the soft woods to which they are wired. It is also almost impossible to drive long logs in narrow streams, as they block the streams and sometimes cause a great deal of trouble and expense by starting a jam. All of these difficulties are avoided by the operation of a logging railroad.

In Eastern Canada the construction of a logging railroad may vary considerably in cost, according to the nature of the country. For instance, the grading of the roadbed will cost anything from $500 per mile under the most favorable conditions, to about $2,000 per mile in mountainous country. Probably an average cost would be about $1,700 per mile. This cost should provide a standard roadbed, but the grades and cuts, of course, would not be standard. A logging railroad is generally built for the sole purpose of handling logs with as little expense as possible, and it is therefore not necessary to go in for such guarantees of efficiency as are necessary in connection with a railroad for ordinary traffic. The cost of railroad ties, for instance, is likely to be very small, comparatively speaking, in connection with a logging road. As a rule the ties can be made along side of the roadbed. The average cost per tie laid down on the roadbed is probably in the neighborhood of 12 cents each. The comparative shortness of a logging railroad, in contrast with a regular railroad, also makes it possible to effect considerable economies in the cost of rails. Sometimes these can be rented. Even if they have to be bought outright, it is generally possible to purchase second-hand rails which suit the requirements fully. The weight of the rail will, of course, depend entirely upon the weight of the locomotives which are to be operated upon the road.

Equipment of a Logging Railroad

In the matter of equipment, much will depend upon the grade of the road. Where steep grades are encountered the general practice is to use a geared type of locomotive. Geared locomotives are not built for speed. Their chief characteristic is their capability of handling heavy logs on very steep grades. The cost of a geared locomotive will vary according to its weight, and will be anywhere from $6,000 to $12,000. For shipping the logs the practice is to use either flat or logging cars. The flat cars are best suited for hauling long logs, but the logging cars are the best for short logs. The cost of cars will vary from $400 to $800 each; the higher price being for steel cars. An important piece of equipment in connection with a logging railroad is the steam loader for lifting the logs from the ground to the cars. Steam loaders are of many types and they vary greatly in price. With a crew of three men they are capable of handling about one thousand logs per day, which makes the average cost of the handling per thousand feet comparatively small.

The above points are the principal ones to be taken into consideration when one is considering whether or not to install a logging railroad. There are, of course, other very definite factors which will come into play. For instance, before one even considers this method of logging it will be necessary to estimate the amount of timber that can be cut per square mile. The larger the cut per mile, the less will be the cost per thousand feet. Taking into consideration the points that have been briefly outlined, one may easily see that logging by railroad, wherever it is economically feasible, is the most up-to-date and practical method at present known of conveying logs from the woods to the mill, and that it is the most economical under its special conditions. When it is also borne in mind that it makes it possible to keep a sawmill operating throughout the year, to eliminate a large layout of logs and to handle special orders promptly, it becomes apparent that the possibility of operating by railroad ought to be very thoroughly investigated in connection with any lumbering business in Eastern Canada. The instances in which it will be found to work out advantageously may not be numerous, but in the cases in which they are feasible their benefits are so important as to warrant a considerable expense in their installation.

That the operation of a logging railroad in Eastern Canada is not looked upon by all lumbermen in exactly the same light becomes

The log loader at work.

A loaded train of logging cars.

quite evident when one makes enquiry of those who are already conducting their operations in this manner. We recently had reason to make fairly extensive enquiry among those who are conducting logging railroads in Ontario and Quebec. The reports we received showed that some firms were meeting with much success while others were finding the difficulties in connection with this work so great as to discourage them. The point which this difference of opinion emphasizes is that one cannot make too careful a study of the conditions involved in connection with a given operation, before deciding to install a logging railroad.

In this connection, it is interesting to note that a prominent operator in the province of Quebec reports that, generally speaking, where there are drivable streams, railroad logging should not be considered. In railroad operation, he says, cars have to be loaded either by team or steam, and in order to keep a mill of 75,000 feet per ten hour day capacity in operation it will be necessary to have two locomotives, if the length of line is anything up to about 25 miles.

The same operator discussing the question of fuel, states that the chief consideration under this heading is the fire risk, and the solution of the matter must depend entirely upon the condition of the right of way. If one were considering "Safety First" he would use fuel oil, the next best fuel from this point of view would be coal, and the next, wood. If one were considering only the cost, the best fuel would be wood, the second best coal, and the third best oil.

The same operator gives a good piece of advice in regard to employees. Locomotive drivers, firemen and brakemen, he says, are a very important factor in logging by railroad. Incompetent men who neglect the boilers cause deterioration in the fire box and the tubes. Moreover, they have a similar effect upon the machinery of the locomotive and are a source of great expense.

Referring to track construction this operator reports that the track should be made as nearly standard as possible. A cheaply laid track, according to his view, is a source of heavy and continual expense for up-keep and results in excessive wear and tear of machinery, to say nothing of being a prolific source of expense. Roughly speaking, he estimates that $5,000 per mile should be the cost of clearing, grading, ties, and tie and rail laying, to this it would be necessary to add the current cost of rails. A further item of equipment that would be necessary in districts where there is a considerable snowfall is a wing plough, also a flanger. Sometimes, even with the best possible equipment, it is a very difficult undertaking to keep the road operating in winter.

This operator's conclusion, which he has reached after conducting logging operations with almost every kind of equipment, both in the east and on the Pacific Coast is interesting. He says that he has no hesitation in advising that logging by rail "is the court of last resort in the east."

We would like other readers of the Canada Lumberman, who have had experience with logging railroads, send us their views in connection with this subject.

Logging by Rail—Few Pointers

Good Roadbed and Skilled Operators Essential—The Log Loader's Importance

By R. S. P. Smyth*

On the Pacific Coast, 25 years ago, most of the lumbermen were getting their logs to the rafting ground with oxen, but they were skinning along the shore, generally going a mile or so back, using skid-roads, and bringing their logs in "trains," that is, one dogged to the other, greasing the notch in the skids on the levels and sanding it on the down grades. Those were the days when the bull-puncher was king and the best paid man in the camp. The lumberman was making money under these conditions. Then came the donkey engines, roaders and yarders—and these are largely used even today. However, there was timber beyond the reach of the roader and yarder, so the locomotive and rail came in. As the years go by there will be more locomotives and longer rails, and fewer roaders, but the yarder has to be used to feed the locomotive business.

In the east, the nature of the timber and the circumstances of

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Logging locomotive used by Finch, Pruyn & Co., Inc., Gouraud, P.Q.

An expensive bit of trestling.

the logging operations have made logging methods a very different proposition from that of the Pacific coast. In eastern Canada, horses have been and still are the mainstay of the logging camp, hauling the logs from the stump to the stream. In the spring, when the freshets come, the logs are driven to the mill with the help of the reckless, hard-working, hard-living river drivers.

Railways as logging propositions direct from the woods to the mill have not found many locations in eastern Canada. There is good reason for this, because, generally, logs can be hauled much cheaper by horse and rail. In localities where there is an abundance of hardwood, with a long distance haul, the rail is a necessity, but it comes high.

The roadbed of a logging railroad is one of its most important elements. If a good grade of rail is used and good ties, the initial cost will be high, but if a cheap grade of rail and cheap ties are used, the up-keep bill on road and machinery will be heavy all the time, to say nothing of the cost of accidents which are certain to result. Even with good roadbed, accidents will occur. A solid roadbed with good ties and fairly heavy rail, eliminating as far as possible all heavy grades and curves, makes the cheapest road if it is to be used for several years. The right-of-way should be cleared at least thirty feet, and all slash should be burned clean. Where wood, coal or oil is being used as fuel there is always danger of fire, and naturally more danger where the slash lies along the right-of-way.

Where easy grades and few curves can be made, the switching type of engine is probably the best, but where heavy grades and curves cannot be avoided, a good geared type of locomotive will be best. From forty to sixty tons seems to be about the size of locomotive that finds most favor.

Only one kind of engineer is good for the logging business, and that is the best. The engineer has practically all the responsibility of keeping his engine and boiler in shape. There is no roundhouse equipment, as with a traffic road, and all depends on how much care the engineer gives to his engine. In fact, the skill of the engineer will have a great deal to do with the cost of up-keep.

Bearing in mind the usual length of log made in eastern Canada, the 34-foot car is preferable to the shorter logging car. There are two trucks to keep in order in any case. Cars must be rigged with tumbling stakes on one side at least. With the 34-foot car, the log loader that travels over the car is the best type. Fixed rails can be laid over the cars for the log loader, thus saving considerable time in shifting, as compared with shifting rail sections. In any case the car without platform is best, as it does not accumulate snow and bark.

The log operator is a very important man in connection with railroad logging operations. He must know how to handle his machinery, so as to get the best out of it. He must always be quick and cool, and have eyes in the back of his head to prevent accidents to men and machinery. It pays to get the best man for this job, no matter what his price may be.

A Douglas fir timber of such immense strength that it broke the testing machine at Oregon Agricultural College, Corvallis, Ore., is mentioned in a report recently made by Mr. O. P. M. Goss, consulting engineer of the West Coast Lumbermen's Association. The machine gave way and its base broke squarely off at a point indicating a pressure of 67,000 pounds. The timber did not show the slightest indication of failure although its load, figured on the basis of the modulus of rupture, was in excess of 6,630 pounds to the square inch. While this is not a record of strength for a Douglas fir timber, it is causing considerable speculation among engineers familiar with the circumstances.

Trois Pistoles Pulp and Lumber Co., Trois Pistoles, P. Q.—View of Upper Mill.

Improvements at Trois Pistoles

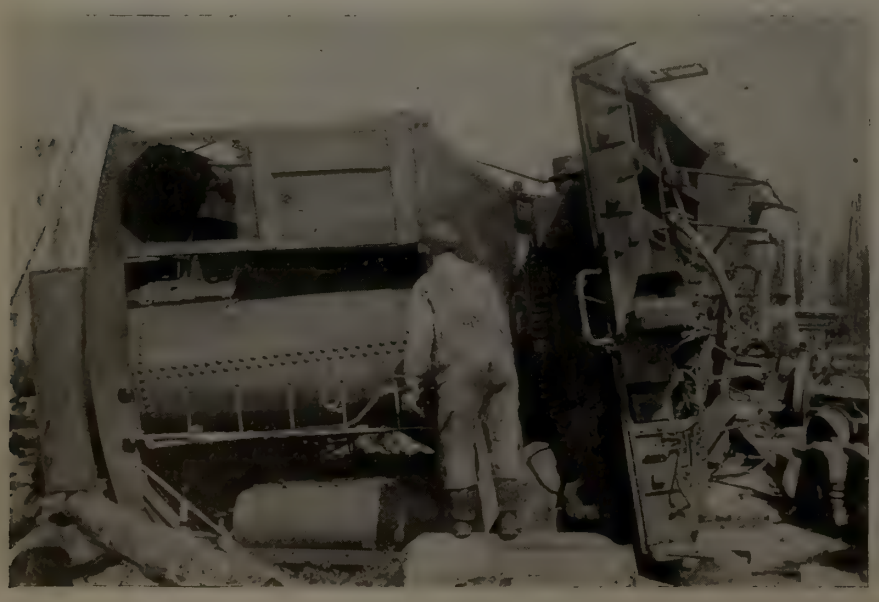
New Equipment Adds to Output of Two Mills Operated by Progressive Company

The Trois Pistoles Pulp & Lumber Company, Riviere Trois Pistoles, P. Q., have recently made many improvements to their saw mills, which are now in operation and are among the finest and most efficient in the province of Quebec.

The limits are located on the Riviere Trois Pistoles and its tributaries, and are from 12 to 35 miles from the town. The yearly output of the plant is about 20,000,000 feet of spruce lumber, cedar shingles and lath, and 1,000 cords of pulpwood, the product being disposed of in the United States and Canadian markets. The company also turn out a quantity of railroad ties. Employment is given to about 250 men in the mill, 350 on the drives and 1,500 in the bush operations.

The equipment of the company's upper mill includes a Waterous band saw; Long circular and gang; 7 Dunbar shingle machines, made by the Smith Foundry Company, of Fredericton, N. B.; 5 Waterous rossing machines, for rossing pulpwood, and one for barking; Waterous edger and cedar cut-off band mill. The new capacity of this mill is 40,000 feet of spruce lumber per day, 130,000 shingles, 25,000 lath and 30,000 cords of pulpwood.

The equipment of the lower mill includes a Waterous circular; Kendall circular gang, supplied by the Waterous Engine Works Company, Limited; Waterous lath machine and edger; 10 Dunbar shingle machines, furnished by the Smith Foundry Company of Fredericton, N. B.; one Waterous cedar barker; two Waterous pulpwood barkers; one Sherbrooke Iron Works barker; one Sherbrooke Iron Works cedar cut-off saw; 350 h.p. boilers and engines and a Westinghouse H plant supplying electric light to the whole system. The present capacity of this mill is 60,000 feet of spruce lumber per day, 180,000 shingles, 18 cords of pulpwood and 25,000 lath.

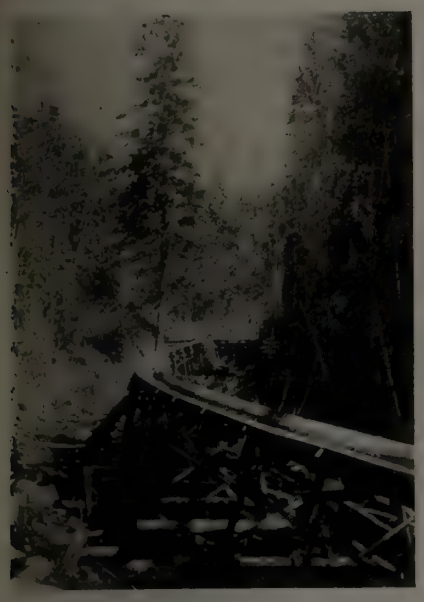


A log loader in trouble.

Trois Pistoles Pulp and Lumber Co.—View of Lower Mill and Dam.

British Columbia Logging Along the C.P.R.

Conditions Prevailing and Methods in Use in Coast and Mountain Districts Described by One of the Railway Company's Staff



Water Flume Used in B. C. Logging

It has been said "The timber of British Columbia is to that province what the wheat is to the prairie provinces." Both are products of the soil, and as long as the soil fertility is conserved the crop is assured.

In British Columbia, standing timber is the one ready source of revenue to the pioneering farmer, who makes a home for himself out of the forested regions. The sale of forest products obtained, such as cedar telegraph poles, saw logs, ties, fence posts, shingle bolts, cordwood, etc., provides the homesteader with a working capital which eventually puts him on his feet, and spans over the lean years of development and soil preparation.

In the last analysis the harvesting and production of wood in British Columbia is the greatest and most permanent industry of that province. Every mine has a measurable existence, but so long as Nature provides the mineral and vegetable soil, great forests will clothe the hills and valleys of the west slope of the Rockies.

There is in British Columbia to-day a capital resource of four hundred billion feet of merchantable timber. At the present rate of cutting this would last over 200 years. The interest, or increment, maturing every year is five billion feet—more than enough to supply the needs of all Canada. The wood wealth of British Columbia is believed to be twenty times that of Alberta, Saskatchewan and Manitoba.

As British Columbia looks to the three great provinces of central Canada for their foodstuffs, so must these provinces look eventually, and for all time, to the Pacific province to supply them with wood to build their houses, barns, granaries, piggeries, etc.

And why should not that same sentiment which prompts Canada to support the Empire with her men and money, stimulate those who remain at home to carry on business as usual, to economize, conserve and utilize the nation's natural timber resources so that the forests of Canada can play their part in making prosperity, and so build up the Empire.

In order to serve the needs of the natural market (the prairies), there has been invested in British Columbia three billion dollars in timber holdings, logging plants and sawmills. These plants, under normal conditions, distribute per year nearly $30,000,000 in wages; $16,000,000 in transportation, and $6,000,000 in supplies. The paramount position of this forest industry cannot be stated too often, nor in too strong terms. It opens up new districts, brings employment, transportation, cleans the land, furnishes the markets for the settler, and brings into the country the wealth upon which other industries are supported.

The Government of British Columbia, under the leadership of Sir Richard McBride, in 1912 inaugurated a most efficient forest administration which is responsible for the perpetuation and protection of the forest resources. The fire prevention problem has now been practically solved. The inventory of the timber areas is well under way and permanent plans are now in formation for the production of perpetual timber crops for future generations.

Loading Platform for Railway Ties

The Canadian Pacific Railway, as a private corporation, is the pioneer in this movement, and the company has demonstrated its sincerity and interest in the future of British Columbia by putting under forest management nearly 600,000 acres of timberland. The greater number of the 395 sawmills in British Columbia are located on the C. P. R. and no doubt the importance of establishing the lumber industry on a permanent basis led this great public utility to take active and concrete steps along the lines of forestry practice. This was emphasized by the fact that the largest percentage of merchantable timber in the province is on and tributary to it. The C. P. R. for many years have confined the purchase of their immense timber requirements in the west to producers in British Columbia and the west, and this policy of buying at home is now in force all over the system.

The every-day problem occurring in the exploitation of the great timber resources of British Columbia cannot be appreciated by the average buyer of lumber who draws up to the lumber yard and calmly and easily loads his wagon, but to those engaged in getting the logs from the forest to the mill, it is serious battle with the forces of nature. No two operations present the same difficulties, and for that reason many different principles are in use, from the flying machine on the coast to the one horse sloop back in the mountains.

The history of lumbering in British Columbia is an interesting one, and it is unfortunate that much of its early history is not available to the public.

There are two main fields of action which have developed more or less independently of each other:—

Pole Storage and Grading Yard on the C. P. R. in British Columbia.

Typical Log Contractor's Camp in British Columbia

(1) The Coast Zone of the Pacific Coast, not more than fifty miles deep, and west of the Coast Mountain Range. This is the region of the Great Douglas Fir and gigantic Cedar.

(2) All of the Interior of B. C. east of the Coast Ranges, and west of the Main Rockies. The forest of this region is a mixed one, depending for composition on the rainfall and elevation. The principal lumber species are Douglas fir, Western soft pine, spruce, larch and cedar.

Coast Zone of the Pacific Slope

The lumber industry had its beginning in this region in 1827-28, when Dr. McLaughlin, Chief Factor of the Hudson's Bay Company, erected and operated the first sawmill at Vancouver, Washington.

In the early days, oxen and horses were the means of transportation, but this method was far too slow and as the timber became removed from tidewater, more efficient and expeditious methods became necessary. The attention of the resourceful pioneers in the logging business was soon directed to steam, and to within the last three or four years this power was almost exclusively used. As the industry was a large and active one in the Puget Sound region years before our own Pacific Coast was tapped by the C. P. R., the methods in use there were then adopted en bloc by our own operators. This was indeed fortunate, for many years of experiment and failure were necessary before the use of steam mechanical devices were economical. The universal steam power machinery used to handle the gigantic sticks is the steam donkey in connection with hoisting drums. After the trees have been felled, swamped, and bucked, the logs are yarded by cable to the actual loading point, often a railroad, and loaded on cars, thence by rail to the mill or water.

The method of donkey skidding held supreme until the advent of overhead logging about seven years ago. The principle is the use of an overhead cableway stretched between a tail tree at some distance out from the track, and a head spar tree located at the donkey which is equipped with drums, etc., at the loading point on the track. On the main cable runs a carriage consisting of a double travelling block and supplied with loading lines, tongues or chokers. The carriage is played rapidly to and fro between tail tree and head spar tree by the skidding rope and the outhaul rope. The skidding rope is fed out, the log tongued or grabbed, and pulled in rapidly to the loading point, where it is loaded on the cars. The cost of this method is one-third less than donkey logging.

The tremendous advantage of steam apparatus is very apparent when one considers that 40,000 to 50,000 feet skidded per day is the average for a modern aerial logging rig, as compared with 10,000 to 15,000 for a horse camp. There are many modifications of the system, but the overhead principle is the same.

When timber was plentiful immediately on tidewater "hand logging" operations were common in British Columbia. The crudest bull work methods were used. Elbow grease and gravity were the only forces in operation. However, these methods are practically gone today, and the steam skidding donkey and the aerial cableway system are largely in use. The application of electricity will eventually, no doubt, become important.

To transport the logs to tidewater standard gauge railroads are generally in use. Geared locomotives haul out the logs, on especially constructed cars equipped with standard appliances, to the log dump pier on the water. A steam operated trip line unloads the cars in quick order.

In this region with the possibility of reaching any or all of the mills established on tidewater, a definite log-market is available at all times of the year.

There are many independent operators who cut and sell their logs in the open market, or contract their cut to the sawmills. However, many of the lumber manufacturers operate their camps.

Owing to the ravages of the toredo (marine boring worm), large reserves of logs are not created, and as a usual thing, the cutting follows closely the supply and demand.

Conditions in the logging industry at the Coast have become largely standardized in the past few years. However, owing to the diversity of conditions in interior British Columbia the same is not true.

Interior British Columbia Logging Methods

In this region the industry is largely centred on the main line and branches of the Canadian Pacific Railway, although with the opening of the other two transcontinentals some plants are now being established in the north.

Practically all the operators conduct their own logging operations. All of the work, from making the roads, felling the trees, transporting to the mill, manufacturing and loading onto cars, is done by the lumber company. However, a few of the lumber companies have found that it is more economical to contract the felling, skidding and watering. Small jobs ranging from 100,000 feet to 6,000,000 feet, are contracted for to responsible jobbers who work themselves. The more successful tenderers are, as a rule, of Scandinavian origin. They are very reliable, hardy and resourceful.

The influence of Eastern Canadian methods is more marked in this region, owing, no doubt, to the more frequent and easier travel east and west than north and south. Possibly the closer approximation in the size of the timber has had something to do with this also. However, the difference is nevertheless broad and is largely of a progressive character in favor of the west.

Summer logging is customary and this means a smaller circle between outlay and return.

The ruggedness of the topography has necessitated the adoption of dry and water chutes. The dry chute is generally used where the grade, combined with the use of a lubricant, is sufficient to move the logs, ties, or poles to the desired terminus, preferably a pond or river. The chute is constructed of three or four logs bevelled smooth and bedded on the necessary sills. Any grade can be negotiated by this means.

In some instances chutes made of logs are fitted to hold water (the Swedes are adept in constructing this type), and the products floated down to their destination. Cost of such chutes is from 20 cents to 40 cents per foot.

Water flumes are used in some instances where a large body of timber is to be moved. They are constructed of two ply boards and usually of the V type. The cost is from $2,000 to $5,000 per mile.

As in the east, wherever possible, advantage is taken of water transportation in getting the logs to the mill. However, driving and holding logs in storage in the Mountain rivers is attended with periodical losses caused by sudden floods, the breaking of booms, and the dispersion of the timber.

In the development of piers for storage purposes, silt has to be reckoned with, and repeated dredging is necessary to keep the area clean.

Railroad Transportation

Railroad logging has many advantages, particularly when the question of tying up a large capital in logs and other raw wood products is considered. The initial outlay is rather large, particularly in rolling stock, rails and ties. Geared locomotives are used and 30 to 50 pound steel. The cost varies from $1,500 to $5,000 per mile, dependent, of course, on the ground. In winter logging, where the snowfall permits, the methods used coincide largely with those in vogue in Ontario. However, the erratic temperature conditions do not allow the refinement of iced roads, and snow roads are the rule. Logging costs in winter logging range from $5.50 to $8.50 per thousand landed at water; summer logging, landed at water, $3.50 to $8.00.

Eastern Canada Pulpwood Trade

*An Outline of Its Recent History—Growth of the Pulp and Paper End—The Settler's Mistakes**

One of the economic problems that has never been satisfactorily settled is that of the regulation of the pulpwood traffic. Apparently government executives have never been of the same mind on this subject, as legislation regarding it has been variable.

In the early history of paper making in Canada, about 1895, around the time of the formation of the now justly famous Laurentide Paper Company, some of the large paper companies in the United States purchased extensive timber limits in Canada, principally in Quebec, and their purchases represented most of the available timber limits at that time. It is creditable to provincial governments that, with one exception, the writer knows of no limits sold to speculators—and in that instance the purchasers had all the earmarks of legitimate operators. The purpose of these purchases was undoubtedly to keep the American mills of the purchasers amply supplied with wood when their home supply was exhausted, or to assist in conserving their limits in the United States.

The idea was that at an opportune time these limits would be operated on, and the wood in its manufactured state would be taken by boat or rail to the American mill, where there was plenty of power. The American manufacturers had in mind further extensions to their plants and to build new plants in the United States, bringing the wood from Canada.

It was not believed that Canadian mills for the manufacture of pulp and paper could be operated economically enough to compete with American mills. After several mills had been in operation a few years, it soon became evident that paper and pulp could be manufactured in Canada economically enough to compete with American mills, in spite of the duty. It also became evident to many who were posted, that water power in the Eastern States at least, was becoming more erratic and less each year, due to the diminishing forests. We

* Specially contributed by a man of long experience in the Canadian Pulp and Paper Industry.

are all familiar with the conservation movement in the Eastern States during the past few years as a result of this diminution.

Beginning of the Period of Expansion

When it was realized that there was not an unlimited supply of wood available in the United States many of the mills which did not possess large timber limits, or had no limits, began to buy pulpwood in Canada. This was a few years prior to 1900. Before that time, a fair amount of wood had been purchased in Canada, but an industry in this commodity sprang up around 1900 and in succeeding years that was quite surprising, even considering the above conditions.

Buyers came over from the United States and placed contracts with farmers and settlers for wood, which would be cut from standing timber on their farms; and with jobbers and contractors, to be cut from Crown lands, or limits that they owned or were interested in. It was not long before the trade was fully organized, with accredited Canadian pulpwood agents who bought from the settlers and jobbers and sold to the American mills.

Naturally this was followed by considerable agitation to prohibit the exportation of pulpwood, in view of the fact that there was a duty of about $6 a ton on paper and $2 on pulp, which operated against the Canadian manufacturer of the finished article, while at the same time the American manufacturer was buying his wood in Canada as low as the Canadian mill could purchase. The lower freight on the pulpwood, as against a higher freight on paper and pulp practically nullified any difference in waste in the wood, especially as a quantity of the wood was booked at still lower rates, whereas the nature of manufactured pulp and paper made that practically impossible.

The agitation did not last long in Ontario, for on January 13th, 1900, an order in council was passed which prohibited the exportation of spruce and other wood suitable for pulp, cut from Crown lands. It was not, however, until April 26, 1910, that Quebec passed a similar order in council. It was a more difficult question to deal with in Quebec as there was a far greater sale of pulpwood than in Ontario due principally to sellers being nearer the actual selling mills buying, but also to the fact that Quebec settlers and farmers had more timber for sale on nearby districts than had Ontario. New Brunswick passed similar legislation on April 26, 1911, a year later, but Nova Scotia and British Columbia have not followed suit.

Results of Prohibition of Export

The result of Quebec's prohibition was that the exportation of her wood decreased 13 per cent. of her total production. It should be explained that these prohibitions affected Crown lands only, but did not affect the so-called private lands, which are lands sold out to farmers or grants, as in Quebec, to the old Seigneurs, and in Ontario to the South African veterans. Due to the fact that Ontario prohibited exportation of wood in 1900 practically all the wood was purchased for the following ten years in Quebec and Nova Scotia, but principally Quebec.

In August, 1912, the United States repealed the tariff on newsprint and pulp, allowing both articles to enter free. This relieved the tension concerning the pulpwood question considerably, especially as it was apparent then that the continued depletion of the United States forests and the shortage of power made it inevitable that Canada would be the paper and pulp producer of the future, so far as this continent was concerned, at any rate.

Americans Want Free Wood

American manufacturers have consistently combatted the idea of prohibition of wood, and it is understood that representation was made by the United States that in view of the withdrawal of duty on pulp and paper there should be no prohibition of wood export. Only a few weeks ago the president of a large American company, who owns 3,000,000 acres of woodland in Canada, is reported to have said: "The building of news mills in the United States has ceased. Canadian mills are being ertcted at short intervals; and at the present time Canada is shipping into this country approximately 1,000 tons of newspaper per day. Justice and sound economic principles would seem to demand that Congress require the free admission of wood into the United States as a condition to the free entry of the Canadian manufactured product."

The Ontario prohibition was suspended for the year 1914, the Government issuing the statement that this suspension was necessary due to a severe windstorm that had blown down large quantities of pulpwood that would otherwise be lost. That suspension was continued in 1915 and is still in effect.

In 1915, Quebec also temporarily removed her prohibition, stating that it was to provide employment for her settlers during the war. Both provinces, however, are committed to a development policy, and are bound to assist their settlers in new territory by permitting them to export the wood on their lands. No reasonable criticism can be offered to such action in view of the undoubted aid that the new settler requires. Nevertheless, it is interesting to note by the following statistics just what the prohibition of wood meant to Canada.

Statistics of Recent Years' Consumption

The cords used are taken from government statistics and represent the wood actually used in Canada.

1910	598,487	$8,977,305	$21,545,532
1911	672,788	10,091,820	24,220,368
1912	866,042	12,990,630	31,177,512
1913	1,109,034	16,635,510	39,925,224
1914	1,224,376	18,365,640	44,077,536
Increase over 1910, ...	625,889	$9,388,335	$23,532,004
or 105 per cent.			

In 1914 we exported more wood pulp made in Canada from pulpwood than in previous years; nevertheless, the quantity of pulpwood was only one-third, which means that the remaining two-thirds was manufactured into newsprint. Of the one-third pulp, one-fourth was chemical pulp, taking a higher value than ground wood; therefore, our figures for 1914 are now as follows:—

1/3 of $18,365,640	$6,121,880
3/4 of above being ground wood	4,591,410
1/4 of above being sulphite	3,060,940
2/3 of 44,077,536 sulphite	29,385,624
	$37,037,374

This total of $37,000,000 represents the value to Canada at the mill and does not include freight.

If you will refer to the figures above you will note that 1,224,376 cords in 1914 were used in Canada in manufacturing pulp and paper. In addition to that we exported 972,508 cords, for which we only received approximately $6,680,000, whereas had it been manufactured into ground wood pulp it would have been worth $14,587,620. If all had been manufactured into pulp it would have been worth about $35,000,000, an increase over what we received for it of just $28,300,000.

Pulpwood is usually purchased by American mills through an accredited pulpwood dealer. Settlers or jobbers are always safer in dealing with regular accredited dealers than with an unknown person, who professes to have contracts to place.

The Position of the Settler

The Northern Ontario settler suffered unnecessary misfortune for this reason during the winter of 1914-15, as, when the prohibition was taken off, a number of speculators rushed in and made contracts with settlers. When the settler had his wood ready the speculator had vanished because he had discovered he could not place the wood he had contracted for, or else he had permitted the settler to cut wood that was unsatisfactory to the final buyer. Settlers, jobbers, or contractors can always secure a list of actual buyers and also a list of accredited pulpwood dealers from the railroads. The T. &. N. O., G. T. R., C. P. R., are posted on this for Ontario wood, and the Q. & L. St. J., C. N. R., G. T. P., and C. P. R., for Quebec.

The contractor should also have a contract stating specifically how the wood should be cut, exact length, the maximum, diameter, and, most important of all, have it specifically stated what conditions will cause rejection. Never leave anything to be understood, have everything in the contract. The reason for this is that there is a continuous discord between the buyer and seller over rejections, quality, etc. Invariably the final buyer wants to be fair, but he absolutely cannot afford to pay long freight hauls and good prices for wood that is inferior, contains rot, is knotty, undersized, short or long in length, etc. He has his manufacturing conditions to study and cannot afford to accept what he does not buy. The seller, on the other hand, invariably feels that "wood is wood," and does not follow the buyers' specifications or does not understand them.

There is a reasonable profit to be made in pulpwood by the settler if he will only learn to study the requirements of his actual buyer, conform to his contract, and do business with responsible and known buyers, because, in that way he will save himself rejections and loss of measurement, which is the worst source of loss. Pulpwood is spruce only; jackpine, balsam, and some other woods may be used to a certain extent with spruce as pulpwood, but it is not pulpwood, except as may be agreed upon between buyer and seller.

No attempt has been made to discuss this industry in detail by provinces, but it is interesting to note the following figures for 1914 issued by the Department of Customs:

	Production	Consumption	Export
Quebec	1,323,917	636,496	687,421
Ontario	587,494	447,751	139,743
New Brunswick	193,126	49,339	143,787
British Columbia	80,013	80,013	.....
Nova Scotia	12,334	10,777	1,557
Canada	2,196,884	1,224,376	972,508

"Hire and Fire" vs. "Hire and Inspire"

Two Policies in Connection with the Relation of the Employer to the Employee—The Old and the New Methods

By A. M. Johnston

IN these days, when we are turning away from problems of distribution and fixing our thoughts upon that most vital element in production, labor, it may not be altogether profitless to consider some of the principles which govern the organization and management of the working force. In order to do this intelligently we must consider men both individually and in the mass. The psychological attitude of the average man differs radically when acting individually, from his activities in connection with his fellows. A man is steadier, more dependable, more open to the influence of reason when acting individually than when associated with his fellows. He has more balance and poise and is more inclined to see conditions from the standpoint of his employer. The average employee moves in the direction from which the greatest force is exerted; therefore, when the employee is acting individually the strongest force proceeds from his employer and he moves in that direction. When he is acting with his fellows the strongest force proceeds from them and he moves in that direction. In every organization of men there are always certain leaders of stronger than average personality who direct the force which proceeds from the organization. It follows, therefore, that to influence the direction in which this force is to be applied it is only necessary to influence these leaders.

As these leaders, acting in their individual capacity, are controlled by the same general law governing the actions of every other individual, they must be isolated so that the force proceeding from the employer shall not be overcome by the stronger force proceeding from the organization. The term "force" is used here in the sense that reason is one of the strongest forces with which men are endowed. The organizer and manager of men must not overlook the fact that emotion is also a force and takes the place of reason with a vast majority of men. It is emotion which exerts the most powerful influence upon men in the mass and invariably overcomes the force of reason wherever these forces come in conflict; therefore, to influence the leaders of an organization they must be placed in a situation where the influence of emotion can be neutralized and reason exert its full force.

Encourage Confidence Between Employer and Employees

He is but a poor judge of human nature who cannot readily pick out the men who are most influential in his working force, and a poor manager who does not constantly keep in touch with these men, know their activities, understand their weaknesses and stand ready at all times to influence them for the welfare of both the concern and the organization. Periodical meetings and conversations with these men, both individually and collectively, should be held, at which meetings the reciprocal relations of employer and employee should be frankly emphasized. These men will appreciate the confidence reposed in them. Ask their opinions of the proper solution of the different problems with which you are confronted. Encourage them to talk and, if it is necessary to show them where they are wrong, use tact in doing so and explain to them fully the reasons therefor. Never forget that they are men with like passions, emotions, feelings, loves, hates and ambitions as yourself, and, above all, that they exert a tremendous influence on your fortunes. They realize, perhaps vaguely, that their prosperity is bound up in yours, and that your success of failure is a matter of moment to them. Carefully develop this feeling by tactfully leading the talk into the proper channels. Try to have them express this idea in words from time to time. A man cannot keep saying the same thing over and over with the idea of being believed without finally coming to believe what he is saying. If you have the material in you for a successful manager you will find no difficulty along this line.

The importance of the work outlined above cannot be over estimated. The leaders in your shop or mill are constantly in touch with your entire working force, influencing them either for or against you. They are the men who often make or break a manufacturing concern and to neglect the work necessary to secure their goodwill and influence is to turn one of your greatest assets into a liability. When I use the term leaders I do not necessarily mean bosses. To be a leader among the men is quite a different thing from being a foreman or boss. The foremen or bosses are seldom in the confidence of the men, while the leaders are, and therein you will find the real reason for cultivating these men in the manner outlined above.

To handle men successfully a manager should be a good judge of human nature; at least in its general aspects. The first thing he should learn is that all men are not alike. This truth is axiomatic and yet how few of us recognize its important bearing on the organization and management of men? We all admit that men are not all alike, but very few of us take the trouble to ascertain in what particulars they differ from each other. Too many managers adopt cut and dried, rule of thumb methods of handling men. They handle their men as they feel that they should have to be handled themselves. They forget that men are only boys grown tall, and that they still possess many of the characteristics of children and must often be handled as such. One must be encouraged, another driven, and still another coaxed. Some men grow sullen under compulsion, and, while seemingly obedient, are sulking on the job. Some have their hearts broken by the merciless driver; the big-fisted, broad-shouldered, pugnacious-jawed manager. Some have to be driven and look upon every word of encouragement given them as so many signs of weakness on the part of the boss. Other men must be appealed to through their ambition, and the man who aspires to handle a working force successfully must learn to differentiate. Many a valuable man has been lost to the organization because the manager failed to understand these truths. It has been easier in the past to fire a man than to study him.

"Hire and Fire"—The Old-Time Manager's Duties

The duties of the manager in past years can be summed up in two ordinary English words—hire and fire—and, when he had performed these duties satisfactorily, he felt that he could read his title clear. He hired a man to do certain work, and if he failed to do that work in a satisfactory manner he fired him, and that was all there was to it. The man might have been with him one year or one month, it made no difference; he didn't handle the job right and the only remedy known was the toboggan slide. Finally, some timid souls began to suggest that they had some money invested in this man, either in salary or wages, and to ask how it was proposed to realize on the investment if they fired him out of hand. This started a mild investigation with startling results. It was discovered that many business concerns were losing thousands of dollars in the form of salaries and wages paid to employees who either quit or were dismissed before becoming an asset. One large concern in Chicago changed its entire working force every ten months and figured the yearly loss at over one-half million dollars. The result of these discoveries was that the gentle art of firing fell into disrepute and the accusing eye of the stockholders was cast upon the hiring. More care was used in selecting employees with regard to the likelihood of their remaining with the concern. Careless hiring and firing became a thing of the past, but, so far, little has been done toward fitting the man to the job, and the haphazard methods still in use are costing the business concerns of this country uncounted dollars every year.

Hire and Inspire—The Modern Manager's Job

The manager or superintendent of the future will be one who knows whom to encourage, whom to drive and whom to coax. When he sees a big, slow-moving man working at a job requiring light, quick action, he will immediately shift him to a position more suited to his deliberate movements. When he finds a light, quick, active man working on a slow moving machine he will place him at work where his agile fingers and active brain will find their fullest expression. In a word, he will know how to fit a man to his proper job so that the organization will work smoothly and harmoniously. He will recognize the trouble maker as soon as he sees him and be able to place him where he will do the least harm. He will be a diplomat, adjusting complaints without friction, heading off trouble before it has a chance to express itself, playing one man against another so as to keep the organization properly balanced and with one object constantly; to keeping his organization working silently and smoothly like a huge, well oiled machine.

It may be thought that I have cut out a big job for the future manager, and that my prophecy will be more of a delightful theory than an accomplished fact, but, when I state that this very work is now being done in the larger and more progressive business enterprises, it will be seen that the work is beyond the experimental stage. It has been demonstrated to the satisfaction of hard-headed business men that this work is feasible, and, as they long ago saw the folly and wastefulness of present methods, they are beginning to look

around for superintendents who have a sufficient knowledge of men to do this work in a satisfactory manner. After all, doesn't it appeal to you as being the height of folly to have five hundred to a thousand men in your employ and know absolutely nothing about their personality, their habits, their inclinations, their aptitudes or even their home addresses. When you install a new machine in your establishment you study its operation, you test it, you learn its advantages and its shortcomings and investigate the best methods of getting the greatest production from it, and yet the poorest paid workman in your employ represents more of an investment than the highest priced machine in your factory. After all, isn't it just as important for a superintendent to know something about the men working under him as it is for him to have a knowledge of the machines they operate?

This subject is one which deserves the careful thought and consideration of every employer. The time has arrived when profit and loss on labor are the determining factors in the success or failure of a business enterprise. Many employers flatter themselves that they have an organization when, as a matter of fact, their so-called organization is little better than a mob. How often have we seen waves of dissatisfaction start, apparently from nowhere, and run like wildfire through the force, reducing production, and affecting adversely the quality of the day's product, while the superintendent is blissfully ignorant of the fact that anything is wrong? How often do jealous, bitter rivalries and desperate effort to shift blame arise in the shop and continue for weeks with no one to adjust the trouble and smooth out the ruffled feathers of the employees involved? These things are constantly happening wherever men are employed, and, unless the man in direct charge of the organization knows his men and keeps in touch with them, the output is bound to be affected injuriously.

While keeping in touch with the individuals do not forget the organization as a whole, as it is worthy of your utmost efforts. Leaders come and go but the organization goes on for ever. Much has been done, said and written lately about welfare work, and most of it absolutely futile. Welfare work will never take the place of fair compensation and proper working conditions. In fact, the very foundation of effective welfare work is fair wages and proper working conditions. If you are not prepared to pay your men a fair wage and see that the surroundings in which they work are adequate for the protection of life, limb and health, every dollar spent in welfare work is just so much money wasted. The question may be raised, what are fair wages, and it can be answered only relatively to the nature of the industry, but in every case their fairness or unfairness is determined by the wages generally paid in like industries throughout the country or competing territory. The question of proper working conditions is determined by the nature of the industry, regardless of working conditions in other like industries.

If you have laid the proper foundation by paying fair wages and furnishing proper working conditions you are ready for the right kind of welfare work. The manner in which this is done will have a profound effect, either for good or ill, on your organization. If it is done in the manner in which you throw a penny to a beggar it might better not be done at all. I am inclined to believe that the whole subject of welfare work should be treated from a purely commercial standpoint as the only means of rescuing it from the category of charity and lifting it above suspicion. If you are going to do any welfare work do it with the frank object of increasing the output by making your employees more happy and contented with the resulting efficiency which such conditions always bring. Much welfare work has done more harm than good because it has been done in a patronizing way which no self-respecting employee could do otherwise than resent.

Retailers Co-operate Upon Credit Work

Bureaus in Toronto and Ottawa Enabling Them to Eliminate the Dead Beats—Collection Work Also Improved

One of the interesting developments in connection with the retail trade during the past year has been the formation, in a number of cities, of credit associations for the protection of the trade. This movement has already made considerable progress both in Canada and in the United States and wherever it has been started it has proved a source of great benefit to the trade. In Canada, the chief instances are those of Toronto and Ottawa, a lumbermen's credit bureau having been formed in each of these cities.

The chief idea underlying a lumbermen's credit bureau is the interchange of information between members. As applied to the retail trade it resolves itself into an exchange of information as to the amounts purchased by each customer, the amounts for which accounts are outstanding, lists of bad accounts and judgment accounts. In order to make this sort of an association a success it is essential that the trade should co-operate whole-heartedly with one another. Upon this basis only can the plan be worked out. When it is worked out its benefits are immediate and far reaching. In the case of the Lumbermen's Credit Bureau at Toronto, the members submit each month a statement showing the names of every customer on their ledger. Opposite each name is shown the amount of his purchases that month and the amount for which he may be overdue in his account for purchases during previous months. This is the chief source of information available to a credit bureau. When it has been tabulated in the office of the bureau, it shows the exact amount owing by each customer to the whole trade and how much of the amount is overdue. Members of the bureau are able to secure this information immediately, although in giving out information it is an invariable rule with all the bureaus so far established, that the names of the members of the bureau shall not be divulged in connection with a customer's account. By this means, although each member may obtain the essential information regarding a customer he cannot learn how much that customer buys from an individual member.

In the course of a few months' operation of a credit bureau, the members become possessed of statements showing the exact course of events in connection with each of their own customers, that is to say, they learn whether their customers are dealing with them only, or with other retailers as well, and how their accounts stand with the trade as a whole. Such information is invaluable in enabling the retailer to avoid the danger spots among his customers.

In addition to information regarding current accounts it is the custom of most of the bureaus to obtain from their members and to distribute among them a complete list of all accounts that are considered bad, and also of accounts in connection with which judgments have been obtained. These two lists, together with the current account information, place in the hands of a retailer a practically impregnable protection against the dishonest customer.

One of the members of the Lumbermen's Credit Bureau at Toronto, in discussing the matter with another retailer, who was considering the advisability of joining, laid the situation before him clearly and concisely in the following manner:—

After one year of successful working of the Lumbermen's Credit Bureau there is not one member of it who would part with his membership for four times the amount of his annual fee. There is not one of us who has not received in actual results, many times over, benefits that cannot be counted in dollars and cents. We have illustrations of it almost daily when dead beats come into our offices and we are able to give them the lie because of the information we have at hand through the bureau. There is hardly a day passes, even with the few enquiries that have been sent out since the first of the year, when somebody has not been called up short and asked to pay cash who has come in with an air of confidence and claimed that he was entitled to credit. The value of the bureau information to the retail trade alone is of such importance that anyone who is not already a member should look into it for his own sake. Many instances of its advantages could be given.

A certain member of the bureau reported recently that he had a party in his office enquiring one day for a large bill of lumber. The man was a stranger, and after giving him a price upon the lumber, which was satisfactory, the retailer asked him how he was going to pay for it. The stranger replied that he need not question his ability to pay as he had been buying lumber in Toronto for the last twenty years and did not owe a cent to anybody. The dealer said that he would let him know in the morning whether he would send up the material. In the interval he communicated with the bureau and was astonished to find that this man had some 31 liens registered against his property. When the man returned in the morning for his answer and was confronted with this information he did not dare to deny it and was very anxious to find out where the information was obtained. The consequence was that the dealer patted himself on the back for a whole week for his luck in keeping out of the hole, and incidently for making a cash sale.

When retailers co-operate in this way to exchange information

with one another, it is possible to obtain information about a customer so expeditiously that before he leaves the office the retailer can know with complete certainty just how to deal with him. It is an interesting indication of the effectiveness of this type of co-operation that, in Toronto, retailers are now ascribing to the work of their bureau the fact that building operations have recently fallen off extensively. At first glance this might appear to be either an exaggeration or a disadvantage. However, there is no doubt about the actual facts, and retailers are convinced that much of the falling off is due to the fact that speculative builders have been pulled up short, even in the brief space of one year, to such an extent that their operations are now reduced to a minimum. The meaning of this is that dangerous customers have been greatly eliminated and such trade as is in progress today is of a much sounder and more profitable nature than has ever been the case in previous years.

As to the actual falling off in the total amount of trade, there may be some who will think that this is a disadvantage. On the other hand, it must be remembered that the lumber dealers have their lumber in their yards instead of having it out on jobs for which they never would have been paid. The decrease in the building trade in Toronto is unquestionably in no small measure due to the fact that the men who built largely and bought indiscriminately, from parties who are easy enough to furnish them with material—now that they are up against a credit bureau—can neither get the lumber nor build the houses. Heretofore, they built the houses with the lumbermen's money and the lumbermen got nothing to show for it but mortgages or uncollectable debts.

Collection End of the Work

An important feature in connection with lumber credit bureaus is their account collection work. Retailers co-operating in exchange of information find it advantageous also to co-operate in the collection of many of their accounts. A credit bureau can, in many cases, secure payment when a retailer finds that he can do nothing. By charging a small percentage for collection work it is possible for a credit bureau to make a small profit which can be applied to the defraying of general expenses.

Undoubtedly the success of this co-operation among Toronto retailers will make its effect felt in other branches of the trade. Wholesale members of the Lumbermen's Section of the Toronto Board of Trade are seriously considering the extension of the credit bureau to their own business, as they realize that the members of the bureau are now better protected for credit than those who are not members. Consequently, a number of them are anxious to form a bureau embracing the wholesale trade, believing not only that their own business operations will be greatly simplified, but that the general standing of the wholesale trade will be improved.

It will be noted that the principle connected with this form of co-operation is entirely different from that of the ordinary mercantile agency, which gathers information regarding the credit rating of mercantile firms. All the facts and figures secured by a co-operative credit bureau are furnished by the members themselves and handled by a staff which is sworn not to divulge any information which is not absolutely required by the by-laws of the bureau. As a result, the members have no hesitation in giving, freely and fully, all the information they can command about their customers or about anybody else. It has also been proven to the customers of the retailers who are worth having that the bureau is as much to their advantage as it is to the advantage of the lumbermen, as it enables the lumber dealer to close out from their competition all the dead ones who will not pay their bills, thereby making it easier for those who will pay their bills to secure their contracts at a living price. The main object of a credit bureau is to erradicate from the building trade all the dead beats who take contracts at less than they are worth and beat the lumberman out of his money, thereby causing a hardship to decent contractors who pay their way.

A Few of the Retail Lumberman's Problems

Trade-Getting and Holding Grow Out of Knowledge About Materials and Rendering Practical Service

By H. R. Isherwood

SUCH a subject as "Problems of the Retailer" is a very difficult one to cover. It is of great interest not only to retailers, but to lumber manufacturers as well. The problems and suggestions I discuss will be given from my personal experience, and will cover only a small portion of the many problems and different problems that confront retailers. My ideas may seem somewhat radical to manufacturers, but I am presenting them because they represent my sincere convictions as a retailer and are founded on my experience as such.

With the increase in cost of materials and additional expense of operating, coupled with a keener competition with local dealers and mail order houses, ready cut houses and other so-called distributors of substitutes for the various kinds of materials that we sell, the retailer is placed in a position where it is absolutely necessary for him to adopt more modern methods to meet the obstacles and to retain the volume of sales.

For me to cover the subjects that I feel manufacturers are most interested in, it is necessary to put some questions to them. As manufacturers of lumber, shingles and lath, you work your lumber up in various ways, such as ordered and required by the retailer. Have you investigated the use of this lumber which you manufacture and which the retailer sells so as to know whether it has proven satisfactory and if there is any room whatever for improvement? Do you, as manufacturers, furnish information to the retailer who buys your lumber, intelligently informing him how to apply, treat and preserve the lumber that you sell him, and the reasons why? Do you furnish the retail lumberman information when you sell him lath, tell him how to apply and give him information upon the different grades and varieties of wood, and why one is better adapted for certain plasters than others? Do you furnish retailers who purchase your shingles information how to make the best foundation to apply these shingles, how to lay the shingles, how to treat them to preserve them, the proper nails to use, the grades of shingles that are best adapted for the different types of buildings, and state to them the reasons why they should follow these instructions?

Retailer Needs Information from Manufacturer

To the best of my knowledge I believe I am safe in saying that such information has never been furnished the retailer. Is there any reason why the retailers should not have had this information furnished them by the individual manufacturer in circular or pamphlet form, not only for the retailer's benefit, but to be distributed to the customers of the retailers. Information about other materials such as retail lumbermen carry is furnished in printed form for distribution to our trade, with the explanation just how to apply the various materials, and the reasons for so applying, to get the best results. In each instance you will find the manufacturers of three so-called substitutes of lumber, giving the reason why they are considered superior to your products and others.

The lumber manufacturing industry has been known as the "Slumbering Industry," but the southern and western states industries have awakened and the north is emerging. Manufacturers must realize that they must develop and co-operate with the retailers. I have contended that it is the duty of you as manufacturers to use your brains, your energy and your money to create this demand for your product. This should be done not only directly through the retail lumber dealers, but through the consumer, and in turn the retailer should use his brains, his energy, and his money to co-operate with you in this venture. While I am giving you my ideas upon this subject, which I know you already have in mind, and which you are working upon, I believe it is a duty I owe to my brother retailers to carry this message to you so as to make a deeper impression upon your mind.

Not Properly Acquainted with His Goods

My first contention is a most vital one. It is that the average retailer is not properly acquainted with the product he handles. I mean to say that he is not thoroughly versed in the various grades and in the advantages and disadvantages—of the various kinds of woods for different uses. It is highly important that the retailer should have this knowledge. Without it he cannot properly advise the purchaser regarding the best wood for the purpose desired.

The retailer's advice should not stop at a selection of woods, but he should know how that wood can be treated to preserve it, and retain its good appearance. This, too, is as important to the purchaser as the right selection of woods.

The time has gone by when the retail lumberman can remain seated in a dingy old office waiting for unsolicited business to come to him. He must be up, alert and doing, seeing to it that his place of business is made attractive and up-to-date, his system perfected

and his sales force fully versed in the art of selling. I am glad to note that the old method of selling lumber is past. The dealer who is holding the trade today and increasing his sales is one who is needing the new ideas.

It used to be, in the years past, that the retailer had no voice whatever, nor took any interest in what people used in the construction of their buildings. It was not necessary, as the customer or carpenter made up his list of materials and we figured and furnished just what he specified. Specifications would always run close to the native products as southern and western products were not advertised or much known at that time.

Retailers Changing Their Methods

However, as time went on I noted changes for the better gradually taking place. After the southern and western lumbermen began to advertise their products, and various substitutes for lumber were put on the market; and the advertising campaign started, it became necessary for the retailer to pursue a radically different course. Today, the retailer must know the products that he sells, particularly lumber. To know whether it is suited for the purpose specified; to know how to treat it; to know more of the different designs to work the material into; to make it more suitable for the purposes, giving the desired effect to meet the approval of the purchaser—these are things the modern retailer cannot ignore.

In order for us to earn a profit we, as retailers, need greater knowledge of goods we sel, and we need greater knowledge of proper and profitable publicity, and of modern merchandizing. My ideas are from the experiences I have had in the past, to secure a better knowledge of goods we sell, and we need greater knowledge of proper and merchandizing methods of today, that "service" is the answer to the whole problem.

Neither the retail lumberman, nor you as manufacturers, can charge for service in this open, or at least understood manner. As service is most effective when least expected, the fact remains that it is a recognized factor today, that service is the means of getting new trade and holding the old customers in the face of competition.

I have had the opportunity of hearing retailers talk on the subject of service, and some of them said they were going to stop talking service because they could not see where it did them any good. It is true; it did him no good, simply because he talked service but didn't render it.

The retailer who will give service to his trade cannot help but become better acquainted with the products which he sells. To illustrate this, I will say that when I first started in business in this section, I immediately began taking an interest in the buildings that my prospective customers were about to build, drawing them plans in a crude, rough way, and in many instances making out a list of material for the building. This gave me an opportunity to become better acquainted with the actual construction of the buildings, and compelled me to give consideration and thought to the various materials for the construction of different buildings. Thus I became more and better acquainted with actual building needs as I developed the "Service Department." Now I have reached the point where I am furnishing plans—real blue prints—to my customers without any charge whatever.

In doing so, I find it is up to me, or my contractors, who I am keeping in line as well as possible, to make up, and estimate on, a list of material, and specify the right kinds and grades. This gives us an opportunity to specify the kinds and grades that we can sell to the best advantage, but we always take into first consideration the customer's interest. In rendering this service it gives us an opportunity to become better acquainted with the people we are doing business with, and by rendering service and backing it up with satisfactory goods and methods of construction, we make satisfied customers. This is what increases our sales.

Rendering this service not only brings me in contact with my customers oftener, but it makes it quite necessary for me to visit the locality in which these buildings are being erected, which I find is a very good policy, because it widens our acquaintance with the people in general throughout the country. We get ideas of the ways and methods that they follow in their farming, or whatever business they are in. We have an opportunity of getting better acquainted with the younger generation and discussing different problems with them, which we find they are all interested in.

Educating the Salesman

Now, inasmuch as manufacturers throughout the country are repeatedly adopting new methods of marketing their products, I assure you it will be necessary, if you wish to keep in line with them, that your representative, the lumber salesman, who in the past has been too much of an order taker, and has not fully understood all those things which are needed in the marketing of your product, should not only be familiar with your product by knowing the places it is best adapted for, its advantages and its disadvantages, but should know more about the product which his product has to compete with. He must have in mind information and facts placing him in a position where he can meet any and all arguments. He can do much in giving the retailers information that they can use in selling the product. In other words, he can do much in helping to educate the retailers in the lines of modern merchandizing and of placing them in a position to meet competition, not only on the product itself, but to meet competition with other substitutes that are offered in its place.

This information and knowledge which you can obtain of the products you manufacture, which you in turn can enlighten your salesmen with, should be in pamphlet form for distribution not for the retailer's interest only, but in such form that the retailer can distribute it to his patrons. It would not be a difficult matter for you to carry this out by having your sales manager and salesman co-operate with the secretary and his assistants of your manufacturing association. It would not be long before they would be known as authorities on the wood products you manufacture, and it would do much toward improving the conditions with the retailer and getting the retailer to that point where, if he takes an interest in his community, he will soon establish a reputation as an authority on wood products which he sells, and matters relating to buildings.

The retailer who renders "service" such as I have outlined will not be long in establishing his own reputation in his home town as an authority on material that he sells and on the construction of buildings. However, it will be necessary for him to have a complete assortment of plans, plan books, books of every description pertaining to the materials he sells.

There are many opportunities for you, as manufacturers, and for the retailers, to improve the conditions and open new fields for wood products. I am going to cite a few ideas that I have in mind which I believe will be of interest to you, as they have proven a great success with me.

Play Houses

For instance, the idea occurred to me a few years ago of building a small children's play house entirely of wood for exhibition at the County fair, and giving it away as an advertising proposition, by having a guessing contest. It would have surprised you if you could have seen the interest that was taken in this play house, not only by the younger generation, but by the older people as well. The old saying is that if you want to reach the heart of the parents it can be done through the little ones. We not only arouse interest in the little ones but created goodwill among the parents, for through this play house we sold many a bill of lumber to parents for the construction of a like play house. Thus we opened a new field for our product.

Afterward it occurred to me that if a play house would create such a demand for lumber, why wouldn't it be a good idea for the retail lumberman to build a miniature house, say 8 x 10 ft., or 10 x 12 ft., one room and a small porch—give it a buigalow effect, using hemlock, white pine, Norway pine, white cedar shingles and hardwood flooring; treating the siding with creosote, the shingles with shingle stain and all the trimmings with paint, and thus put before the people an idea in tangible form of a home built entirely from materials always carried in stock for immediate delivery. There is much to be gained in making a sale by having an actual illustration of just how to use the material and how it looks made up. I have every reason to believe that this would be a strong feature in making sales in the various localities.

Bird Houses

I have noted with interest in many States, the different contests, and the interest thus created, in small bird houses. Since noting this interest, especially among children, I have gotten together the various pamphlets upon bird houses and found it is an easy matter to get the local newspapers to give publicity to this movement. Through this channel I expect to dispose of material to the boys of my town for building these houses. There are many other ideas that can be worked out that would create a demand for lumber.

Now there are other ways that are too numerous to mention in which your manufacturers' association can stimulate a demand for your product. I wonder if you have ever realized and noted that the material you manufacture and which the retailer has for sale, is the only material used in and around the house that the women cannot buy? I don't believe that there is a single home in any of the towns which you gentlement are in, or where the retail yards are located, but what this very moment there is not something wanted, which you have for sale. I believe that you find this statement to be true largely, that when the residence is complete and workmen have left the house and the family moves in, the interest of the building material man ceases. This is another suggestion that I want to impress upon your mind, that you as manufacturers and we, as retailers, should not stop when the sale is made and goods are delivered, but should take an interest in our product after it has been delivered and in use. We certainly should be interested in these buildings to the extent of seeing that the materials that we have delivered have proven satisfactory, and if not, the reason why they have not, so as to insure our future customers and business interest.

Referring again to the shingles. A short time ago a farmer came

into my office with a large barn bill and I noted that all the material to complete a good sized barn was included in this bill, but there were no shingles. I have always made it a point to note if there are any articles such as shingles, lath or other items that I know would be necessary to complete the building, that are not included, and to make enquiry of the prospective purchaser. In this instance I asked this farmer what he intended to use on his roof. He stated he was going to use galvanized iron. I informed him that we have some very good shingles for barns of a very good grade at a reasonable price. He then stated he would not put wood shingles on his barn; and this gave me an opportunity to ask him the reason why. He stated that in noting various barns in his neighborhood during the threshing time, that much dust and chaff covered the roof and it remained there. When the rain came it would form a sort of crust over the shingles which held the moisture and rotted the shingles.

Now, gentlemen, this was his reason for not using wood shingles. My suggestion to him then was that the cost of a good white cedar shingle dipped into a good creosote would be less and it would be much more serviceable than the galvanized iron, and the shingles would be protected against rot. Now then this will give you another problem.

Cement

We often hear the word "substitute" used. We hear this used when speaking of cement, yet a large percentage of the retailers are distributors of cement. My contention is that the substitute is not to be feared. It is entirely up to the distributors of building materials to recommend and sell the materials that are best suited for the purpose required. In order to accomplish this good, as I have stated before, it is necessary for the dealers to become better acquainted with all of their products so as to know the various kinds of material and what they are best suited for.

It is very unreasonable for one in the lumber business to advocate the use of wood for purposes for which he knows, in his own mind, cement is best. And this applies as well to cement, where wood is best.

Wall Board

Now take wall board. Wall board is sold and advertised as a substitute for lath. I am selling from seventy-five to a hundred thousand feet of wall board annually and yet I cannot, in any way, see where this is taking the place of lath or plaster, because it is being used for purposes where lath or plaster were never thought of, and never would be used. It has opened up a new field, and a profitable one, for all the retail lumber dealers.

Prepared Roofings

Prepared roofings today are undoubtedly one of the greatest gambles that the public have to deal with. The great variation in grades and quality, together with the largely fictitious advertising and unreasonable statements as to guarantees, makes it a business that cannot be depended upon in general. However, a lumber firm with one good and reasonably reliable product, can sell this material for buildings that require its use, and this is usually where shingles cannot be used under any conditions. A good, standard reliable brand is a profitable and satisfactory article to carry and sell.

Silos

One of the subjects that retailers are all deeply interested in is the silo. The silo is one of the most important structures there is on the farm today, and one of the most profitable to the farmer. This is a proven fact, so requires no discussion. However, the different types and kinds of silos are an interesting subject to be discussed at this time. We know that the one most important feature in the silo is the preservation of the silage; and the best silo is the one that holds the heat longest. Comparing the stave silo with the concrete, hollow tile, brick and other types of silos other than wood, we know that these latter are all contractors of cold, and that for this reason the wood silo has many advantages over any other silo.

Yet with the stave silo or any other silo, there is one point vital to all—and that is, proper construction. I will say that the concrete silo can be made a good serviceable silo if properly finished on the interior. Likewise, the stave silo can be made a very serviceable and lasting silo if properly constructed.

The greatest injustice that I know of today in the construction of silos is that so many of them are so cheaply constructed that they keep their shape or form only for a very short period. When they get out of plumb, hoops become loosened, causing them to get further out of plumb, it not only makes them look unsightly, but it is impossible to tighten the hoops and bring the silo back to position so the joints will be air tight.

Plenty of Water in North Western Ontario

Editor Canada Lumberman:— Keewatin, Ont.

There is plenty of water in this vicinity and there should be no difficulty in getting all the logs out this year. Very few logs were put in here during the last winter. Market conditions are fairly good—Keewatin Lumber Company, Limited.

Retail Association Gets Results

Southwestern Ontario Dealers Demonstrate Benefits of Co-operation

One of the most progressive associations of retail lumbermen in Canada is the South Western Ontario Lumber Dealers' Association, which has been doing a lot of practical pioneer work among the retailers in its district and has met with much success. The annual meeting of the association was held on April 28th and a number of interesting matters were discussed and disposed of.

The members of the association find that the older their association becomes the more the dealers feel the benefits derived from it. The great aim of the association is to promote a better feeling among the members and to induce them to place full confidence in one another. The trouble with organizations of this nature, and with the retail trade in general, where it has not been organized, is lack of confidence, a condition which prevails especially in cities where there are a number of dealers.

One of the practical matters brought up at the last meeting was the subject of figuring upon plans. After a lengthy discussion it was decided to abolish this practice, as it was found that several members were in the habit of making out a bill from a plan and guaranteeing to furnish all material for a building at a certain fixed price. The association is now making an effort to establish a practice of having all contractors and carpenters bring in their own bills, as they feel that the carpenter who is not capable of making out a bill of material should not be trusted to make a contract for a building.

Keeping Tab on Wholesalers

Another way in which the Association is trying to improve trade conditions is by inducing wholesalers to sell to retailers only. This, of course, is one of the chief objects of the association, and so far they have succeeded very well in certain districts, but where towns are near wholesale yards they are finding it a much more difficult undertaking. They report, however, that they are looking forward to correcting this situation entirely during the present year. Their method of handling it is to hold a meeting every month and discuss any reported violation of their rules.

In connection with their own internal affairs such as the management of yards, they are working together in a commendable manner and securing quite definite results. One way is by educating their members to a proper appreciation of the fact that it costs something to do business. Some dealers have no idea whatever of overhead expenses. One dealer, for instance, claimed that he could sell posts cheaper than his neighbor because he owned his own boat and his freight did not cost him anything. Another dealer estimated that 25 cents per thousand was a good profit on shingles, even though he had to team them half a mile. There are several dealers also, known to the association, whose business methods are far from ideal. Some of them, for instance, have never taken stock since they went into business.

Frequent Meetings Promote Mutual Interests

All of these matters are freely discussed at meetings of the association, along with market conditions, the best wholesalers from whom to buy certain kinds of lumber, etc. If some of these wholesalers could hear themselves discussed at the meetings of the association, they would probably exercise a good deal more care in filling their orders.

From this outline of the work of the South Western Ontario Lumber Dealers' Association it will be clear to our readers that the association is a very live and practical one. Their secretary reports that there seems to be no end to the good that can come from the meetings of the members, and once a member attends, he rarely wants to miss another meeting.

The election of officers resulted as follows:—Chas. Hubbell, Thamesville, president; W, J. Taylor, Ridgetown, vice-president; B. F. Clarke, Glencoe, secretary; directors, F. H. Laird, Dresden; D. J. McEachern, Alvinston; P. G. Piggott, Chatham; W. H. Longfield, Mount Brydges, and G. D. McPherson, Merlin.

Hardware for Silos

A large woodworking firm wants to get in touch with manufacturers who make a specialty of hardware used in the construction of silos. The publishers of this journal will appreciate any information our readers can give.

The Abbotsford Lumber Company, Abbotsford, B. C., are shipping an average of sixty cars of lumber a day.

M M. Wall, Buffalo, N. Y.

U.S. Capitalists Heading for B.C.

Maurice M. Wall of Buffalo, N. Y., Enthusiastic About Red Cedar—Other Capitalists With Him

Many lumbermen both in eastern and western Canada are well acquainted with Maurice M. Wall, of Buffalo, N. Y., whose portrait we publish herewith. As a member of the Buffalo Hardwood Lumber Company he has had business dealings with most of the prominent lumbermen in Ontario and many of those in western Canada. All of his business experience has been connected with lumber. Every interest that he has connected himself with has felt the benefit of his business ability and energy.

Maurice M. Wall was born on July 16th, 1864, at Avon, N. Y. When his schooling had been completed he headed straight for the lumber trade, in the office of Frank W. Warren, at Avon, N. Y., but made his first real connection with a firm known as Stanton, Crandall and Company, who carried on a mill and retail business in a village bearing the name of Painted Post. His first independent connection with the lumber trade was in conjunction with his brothers, when they all went to Buffalo, in 1889, and purchased the Buffalo Hardwood Lumber Company, of which Maurice M. Wall became secretary and treasurer. The company has continually expanded and is today considered one of the largest and strongest wholesale lumber concerns in the east. Its yards cover eight acres in the heart of the railroad centre of Buffalo. Upwards of 15,000,000 feet of hardwood is handled annually at these yards and the company's customers extend throughout the northeastern and north central States.

Boosting British Columbia Cedar

Our object in outlining Maurice M. Wall's career for our readers is the interest he has taken in the Canadian lumbering industry. He has always been a practical lumberman, knowing the business from the stump to the consumer. His very wide experience and great success are proof that when he takes hold of any particular line of business it is something that has decided merit in its favor. One of his latest interests is British Columbia timber. In a recent interview, referring to this subject, he said:—"Red cedar shingles and siding have been used and recognized as superior for many years, standing the test of exposure to all kinds of weather. British Columbia has practically the only available cedar and will be the logical source of supply from now on. Then, too, builders are rapidly learning that cedar lumber can be put to practically every use that white pine has filled for generations. For housework, doors, siding, finishing, flooring and sheathing, as well as poles, ties, fence posts, etc., cedar stands up to every test. The widely varied uses and the vast market that is opening up made western cedar and fir look good to me. That is why I purchased this timber, and we were fortunate to get a low price for stumpage.

"I have a cedar board four feet square and 1¼ inch thick in my office. It stands against a radiator and has been there for nearly eight years. Although I had it planed on one side only, and in spite of changes of temperature, hot and cold, dry and damp, not a particule of warp, check or split can be seen after all these years. This shows me that western red cedar is a good, durable wood and I should think it might make good gun stocks.

"Cedar has taken the place of white pine for shingles and siding and is bound to be one of the most useful woods of the future."

These ideas are not mere theory on Mr. Wall's part. They are based on experience and investigation. He has been all over the northwest making an extensive study of the situation, and finally has decided to invest the savings of a lifetime in the purchase of timber. After careful search he selected what he considered to be the best tracts available and had them gone over by competent B. C. cruisers under the personal supervision of a thorough lumberman who had been one of his trusted employees for about fifteen years. Mr. Wall then made a trip to the northwest and looked over the property. Being completely satisfied, he associated himself with a number of Buffalo men and financed the purchase of what are said to be the best three pieces of forest growth in Lillooet, Yale and Cariboo districts, B. C. Each of the three tracts carries an average of over 300,000,000 feet, mostly cedar, but including also 100,000,000 feet of high-class white pine and about 100,000,000 feet of large fir timber. These tracts are of great height and massive girth, growing often as high as 100,000 feet to the acre. Each tract was cruised, mapped and estimated in most conservative fashion, and the facilities for cutting, hauling, driving, sawing and shipping were carefully verified before the purchases were made. The timber is so located that much of it can be felled right into the streams and delivered to the main line of railroad at a minimum of expense.

Mr. Wall and his associates are now contemplating the erection of a mill and are looking over their British Columbia timber with a view to starting an operation there soon.

Mr. Wall's activities in the lumber business have always been interesting to Ontario lumbermen and his new connection makes him a still more important factor in connection with the Canadian lumber industry.

A Notable Figure in the Trade

It would not be right to give an outline of Mr. Wall's business career without some reference to the National Hardwood Lumber Association. As first chairman of the inspection bureau of the National Hardwood Lumber Association he did the pioneer work in organizing its inspection department, formulating uniform rules and appointing the first corps of inspectors under bond. He acted as chairman of the bureau for several years. These were real services to the trade that will never be forgotten. After this bureau was organized and was in good running order, Mr. Wall resigned as chairman, but he was soon drafted again into the active work of the association, becoming chairman of its forestry committee. During his years in this service he collected exhaustive data and wrote some valuable papers on forestry and the visible supply of timber in the United States and Canada. For three years also Mr. Wall has been a director of the National Wholesale Lumber Dealers' Association.

In civic life Mr. Wall has also occupied an important place, having been president of the Manufacturers' Club of Buffalo, the nucleus of the present Buffalo Chamber of Commerce, of which he was a director for several years. He was for seven years City Park Commissioner of Buffalo and president of that body during the last year of his service. He was president of the Automobile Club of Buffalo for 1913 and 1914 and is now president of the New York State Motor Federation. The most recent honor to come in Mr. Wall's direction is his election as president of the Lumber Exchange of Buffalo.

Canadian Government Railways

Until quite recently Canadians have been in the habit of thinking of the Canadian Government railways as a peculiarly Maritime institution. The Intercolonial Railway, in its earliest days, ended at Riviere du Loup, not far outside of New Brunswick, in the province of Quebec, where it connected with the Grand Trunk, and in that way was put in touch with the railway systems of the western provinces. The extension to Montreal was made twenty years ago and even then the I. C. R. seemed still to be a Maritime institution. Few people at that time imagined that the government railway would some day be extended to tap the great grain country of the far west. During the past few months, however, ws have been growing accustomed to a new idea. The old Intercolonial of the Maritime Provinces has become a national institution and we are changing our habits of thought and learning to speak of the Canadian Government Railways instead of the I. C. R. Three separate systems have now been rolled into one: the Intercolonial Railway, the Prince Edward Island Railway, and the National Transcontinental Railway, and the western gateway for the time being is in Winnipeg. Events of recent days, moreover, point to the probability of the Canadian Government Railways extending in the very near future through to the Pacific Coast. Government ownership apparently is increasing in Canada. It is an old story in Europe, but in Canada the public has not yet learned to accept the principle of government ownership so extensively as the people of the Old World. If the example furnished by the equipment, service and efficiency of the present Canadian Government Railways can be continued, as the system is extended, we feel assured that government railway ownership in Canada has a brilliant future before it.

The Care of Woodworking Equipment

Its Importance Not to Be Exaggerated—Careful Upkeep Reduces Operating Costs and Encourages High Quality Output

By W. J. Beattie

A great deal of the success in connection with the operation of a woodworking plant, and in fact the operation of almost any kind of a plant in which power machines are run, depends upon the care that is given to the machinery in operation, and in the attention which is given it from day to day by those who are responsible for its up-keep. It is a common thing to find a manufacturer paying a good steep price for what he considers to be the best possible machinery, in fact allowing the price to be a really secondary consideration, because he has made up his mind that he wants the best machine that can be obtained in the market. It is also quite an ordinary thing to find that an expensive tool of this sort is installed and lives well up to its reputation during its initial performances, but in a week or two the novelty wears off, the interest of the employer in the machine decreases and he finds his attention taken by other schemes or plans. Then the new machine, unless it has a careful and efficient operator in charge, falls down in its work, and trouble is likely to commence. You will often find the same manufacturer quite ready to talk by the hour about how he might be able to reduce the cost of his product. He will tell you of this, that and the other scheme for getting a larger output, but many a time he will pass by one of the best means of effecting this result, namely, keeping his machinery well up to the 100 per cent. efficiency point. This is something that ought to be given far more study than it is. In fact, the care of machinery is not considered anything like as seriously as it deserves to be.

It sounds rather unreasonable to say that a manufacturer who is interested financially in the output of his plant will allow the machinery for which he has paid thousands of dollars to fall into a state of inefficiency, in fact to be reduced much below its capacity both as to quantity and quality, and especially in regard to quality. Facts, however, are stubborn things, and the writer is quite ready to assume the responsibility for saying, that if statistics could be secured, it would be found that 25 per cent. would be a high estimate of the number of factories in Ontario that can be classified as good in regard to the care given to their machinery, while the other 75 per cent. could be unquestionably classified as bad or indifferent plants.

Keeping Machinery "Up to Scratch"

It is quite an exacting task to keep woodworking machinery "Up to scratch." The high speed at which it has to be run, and very frequently poor installation, cause an excessive amount of wear and tear. In the larger factories, as a rule, this is not so much the case as in the smaller ones, as expert help is more often employed to keep the machines in proper order and to keep the saws, knives, cutter heads, etc., in good shape than in the small and medium sized plants. However, it is an ordinary thing to see this work badly neglected. It is frequently passed on to the "handy man" who may have time to do that babbitting job today, or perhaps next week. "Keep pouring on the oil and keep her going, or shut down occasionally and cool her off with a pail of water"; that is the type of advice so often handed out in the smaller plants, and the inevitable result is that much mischief is done which could have been avoided, and a considerable repair bill is entailed.

Everyone will agree theoretically, at least, that the proper care of machinery is one of the most important things to be attended to in connection with a woodworking plant, but how many of us have heard all too frequently, a manufacturer complaining about having to buy too much babbitt, or having to pay over 25 cents a gallon for machine oil? The same type of man is practically certain to buy belting which has about one-third or even one-half the necessary strength for the job. There are far too many men of this class in charge of woodworking plants.

To begin at the beginning, the first essential in the care of machinery is the proper installation of the machinery, and in the installation, the most important thing is to secure an absolutely firm foundation. A cement base is always desirable for heavy machinery, and if this is put in just flush with the floor, there will be no obstruction if it should be found desirable later on to move the machine to another position in the event of re-arrangement or enlargement of the plant.

The Importance of Proper Belting

Probably the next most important matter in the care of machinery is the type of belt used. It is important to have reasonably long belts, that is to say, to keep as good a distance from the line shaft as the room will allow, in order to avoid unnecessary belt tension. The writer remembers in this connection an instructive instance of ignorance and false economy leading to loss in the installation of belting. There are some funny people in the world in this regard, and this particular man was a good example. He was installing machinery in a furniture factory some years ago and the writer was in charge of the work. Everything went along satisfactorily for both parties until the fan arrived and they had to discuss where and how it should be located. The factory was about 50 feet wide and had two rows of columns, dividing the floor into divisions each about 16 feet wide. On each row of columns there was a line shaft. The fan had to be placed over against one wall, as near as possible to the shavings vault. From the centre of the nearest line shaft to the centre of the fan would be about 14 feet. It was not practical to drive direct from the shaft to the fan, as this would necessitate too large a pulley to produce the necessary speed. It was suggested to the proprietor, therefore, that the farther shaft should be utilized with an intervening countershaft. This would give good belt lengths and correspondingly less tension, but the proprietor had his own ideas about this kind of thing. He would not listen to any proposition about long belts, saying that they would be sure to drag and slip. No argument would convince him to the contrary, so up went a countershaft from the nearest main shaft, and the circus started soon afterwards. Those belts had to be pulled so tight in order to drive the high speed fan, that no amount of lubrication could keep the boxes from heating. After considerable loss in belting, oil, babbitt, time and sweat, the thing was changed and installed as it should have been originally. It is working still. This is an example illustrating the fact that proper installation is the first step towards keeping down the up-keep cost in a woodworking factory.

Line Shafting and Bearing Problems

The line shafting is something to which close attention should be given. It should be gone over at least twice a year and tested for straightness and level. This is particularly the case in frame buildings, or in new factories where the structural material is wood. Frame buildings are very subject to disturbances caused by heavy loads on the floor, unevenly placed, or by decay of the bottom ends of the upright posts, below the floor, which will draw the shafting out of level and, if severe enough, will cause heated journals.

In the case of a new factory of brick construction, and timber frame, the timbers used are generally quite green. As the shafting hangers are put perfectly in line everything will be lovely for a short time, until the timbers commence to shrink. This shrinkage is never even, and with centres very often only nine or ten feet apart there is trouble at an early date. If this is not watched closely until the shrinking of the posts is practically over, a lot of power will go to waste.

Many factories are now equipped with ball bearings or roller bearings on their shafting, in place of the old style babbitt boxes. The ball bearing shafting is a great power saver and will take not more than one-third of the power required by the old style babbitt boxes. In fact, the writer knows from actual experience of a shaft which, with all the pulleys on, equipped with babbitt boxes running at 300 r.p.m., took within a fraction of 11 horsepower. This included the drive belting of the different machines running over the loose pulleys only. This shaft was driven by an electric motor and the indicated horsepower was accurate. The shaft was taken down and a roller bearing shaft was installed, carrying the same pulleys and belting exactly, and the indicated horsepower required under the new conditions was only a shade over three. Ball bearing boxes, moreover, require very little attention. They must be properly adjusted and looked after for a few weeks until everything is running snugly; then all the care required is to put in the special lubricant twice a year. Roller bearing shafting is also used extensively and, while it is not so great a power saver as the ball bearing variety, it has virtues that are well worth considering.

Shafting should have close care and attention, to the same extent as machinery. It should be kept clean and bright. This is an easy matter when it is in operation, but never do the cleaning from a ladder. Stand on the floor and use a long handled cleaner of a shape that will conform to the shaft. Sufficient pressure can easily be applied to do the work, and in this way there is no risk.

Wood split pulleys are in much favor for woodworking plants.

These pulleys require tightening several times as the wood bushing will give somewhat with the strain, but once this has been overcome there is no further trouble. A good plan is to cover the sides of the pulley in, or rather over, with thin wood, so as to prevent the accumulation of dust. This will also probably save considerable power, though I have never been able to give this point a practical test. It looks to me, however, like ordinary common sense to assume that a pulley which presents no chance for air resistance will take less power than one having the broad wooden arms exposed to the air. There is also less disturbance of the air and the discomfort of working near or under an open pulley is done away with.

All bearings that are not equipped with drip cups under them should be provided with them, and if a good oil filter is used the bill for oil will be noticeably decreased.

Relation of Belting to Power

Enough has been written about the care of belting and about the different kinds of power transmission to fill volumes, but the same old mistakes are being made every day and will be continued for some time to come. The original belting mistakes were born in the shops where the machines were made, and they were much more numerous some years ago than they are today, as machine manufacturers have learned a great deal by experience. The mistakes in those days generally consisted of making the driving pulleys not only too narrow, but too small in diameter, and it was never possible with such equipment to get a belt to do the work when a heavy load was on. Naturally the belting was used up at a rate that brought joy to the tanners. While there are still many old machines doing business that illustrate these faults in a greater or less degree, the newer models have plenty of belt capacity, and the fault, if any, can now generally be laid at the door of the "careful" buyer, who will think that a single 5-in. belt will do, when a 6-in. extra single is the one to buy. Of all the foolish "economies" that are practiced around a plant, the most foolish is this of purchasing too light a belt. Any man who has had a fairly varied experience in this work knows the folly of under-belting machinery. It results in loss of time, power and production. All belting should be ample to carry the extreme load that is likely to occur under fair working conditions.

When you come to consider the applying of belting to machines and the care and attention given to the belts, it is a good plan, in the first place, to stretch a new belt, not too severely, before splicing and installing. A new 6-in. belt (extra single) will stand a stretch of ¼ inch to the foot, and this will make a more permanent job, as a new belt put on at the proper tension will require taking up again, sometimes in a few hours. A belt stretcher can be used to stretch the smaller belts before the splice is made. Belt stretchers are to be found in every factory for use with the larger belts.

The best belt lacing is "none at all." All belts should be spliced to ensure smooth running and even balance, which are so necessary in high speed operation. There may be times when it is imperative to use belt lacing, and there are many good articles on the market to fill the bill, but the writer is of the opinion that for high speed leather belting the spliced endless belt cannot be equalled.

The care of leather belting is frequently neglected. In a dusty factory the working side of the belts will become caked with an accumulation of dust, and the driving power will be much reduced. This accumulation can usually be scraped off while the belt is running and the belt should be treated occasionally with neatsfoot or castor oil. This should be put on the outside of the belt as well as the inside. It will keep the belt soft and pliable. A belt that has become oil soaked can be made fairly free of oil by being covered with air-slacked lime, which will draw the oil from the belt. All odds and ends of belting should be kept in a cupboard provided with shelves and not thrown like a pile of rubbish into a box.

Bearings and Babbitt

In connection with the general care of machinery, such as looking after the bearings and keeping the machine clean, a good babbitting outfit is an absolute necessity, together with the ability to do the work properly. A small portable forge, babbitt ladle, babbitt scrapers, etc., are all required, also gasoline compressed air torch, to warm the bearings before the babbitt is poured.

The proper way to do babbitting, on planer cylinders especially, is to have a piece of shafting the exact size of the planer shaft and use it, so as to avoid the inevitable danger of springing the shaft, by sudden application of molten babbitt. The spring may be very slight, but it will spoil the machine for first-class work and the only remedy would be to send it to the machine shop.

Always see that the spindle which is to go into a boxing is perfectly round and as smooth as silk. If it is not, send it to a machine shop and have just as little as possible turned off to make it perfect.

Babbitted boxes nearly always require scraping out after running, so as to ensure an equal bearing all around against the spindle. A good babbitt scraper is made similar to a gouge; that is, sharpened on the edges as well as the end so that they can be pushed or worked on either side. The way to detect the high spots in the babbitted boxes is to rub a distinguishing color on the spindle and revolve it in the box. The high spots will then be marked and can easily be seen. A box should always be babbitted before it becomes necessary to shut down the machine for repairs. This is one of the things that cannot be put off without involving additional cost, which increases with the length of the delay.

The Clean-Up Job

Keeping machinery clean is always a considerable undertaking and generally a disagreeable one if the disinclination of the men who do the work may be taken as an indication. It is a simple thing to run a pipe along the ceiling from which branches can be dropped at convenient intervals, fitted with valves and an adjustment to screw, say, 50 feet of hose to. The hose is provided with a nozzle at least 3 inches long having a very small opening at the discharge end. This will blow the dust off anything, and the work can be done when the men are not on the job, at noon or in the evening. Once a plant has been blown clean, it is not a hard or inconvenient task to keep it clean. Compressed air can be used for many other things about the plant.

It should always be the duty of some reliable man to oil the loose pulleys and suspended countershaft bearings, as men are notoriously careless in these matters and it is not always convenient to have ladders nearby when the oiling is to be done. Having one man to do this work will be found to be a more satisfactory factory plan, and it will cost less.

Compression grease cups will be found very useful on many boxes. They are preferable to oil lubrication, especially on moderately heavy bearings which are run at less than 600 r.p.m. In the line shafting where the babbitt boxes are used the caps can be made to accommodate the grease in sufficient quantity to last at least six months. If the box has a tendency to warm up, the action of the grease is hastened, and unless something is radically wrong, a hot bearing is uncommon.

The general up-keep of machinery is a vital question for every factory. It is a subject about which a great deal could be written in regard both to its effect upon the output and its relation to the loyalty of the men. It is a fact that men cannot take any pride in working in a sloppy plant and they are very quick to take on the same "dull gray tone" as the equipment reflects.

War Disturbs Mahogany Stocks

Philippine Wood Coming to the Front to Relieve Shortage of Other Lines

THE way in which the war has affected the lumber industry, both in the United States and Canada, is pretty well known to those who are engaged in it, yet few of them realize to how complete an extent the conditions arising out of the war have permeated the whole lumber business from top to bottom, including not only the better known lines of lumber products, but also those which are considered more or less among the choice and to some extent luxurious lines. The case of mahogany is an interesting example. It has become increasingly difficult, on account of the war, to obtain mahogany in any quantity. The scarcity of vessels and the lack of labor have been important factors in this connection, making it difficult for importers to obtain their usual supply of stocks from Africa and other mahogany-producing countries. As a consequence the price of mahogany has gone up very rapidly and manufacturers are puzzled to know what the outcome will be. One of the extensive dealers in mahogany at Toronto, The Wilson Lumber Company, report that they have found themselves in this quandary, and after investigating carefully have decided to handle stocks of Philippine (Laguan) mahogany. Referring to this wood, they report that, in their opinion, it is likely to increase in favor gradually, and eventually to replace to some extent African and Honduras mahogany.

Mahogany is found more or less in abundance throughout the tropical zone. It is only a very short time since the only mahogany used in any quantity was brought from Santo Domingo, but as time wore on and mahogany came into more general favor, the stock was brought from other points, until to-day. African wood is more generally used than any other. The beauty of African mahogany is found in its figure and in the txeture of the wood. It is easily worked and will probably always be in demand for the higher grades of furniture, such as dining tables, dressers, and all case goods. However, in chair work this mahogany is not used, Cuban mahogany being substituted on account of its extreme hardness. African wood is considered to be too soft to stand the strain of hard knocks to which a chair is subjected. The one serious defect found in African mahogany is the cross

or wind break. This is caused by the storms which frequently occur in the African forests, causing the trees to bend and split internally. Although this causes no real harm to the growing tree the injury is brought out in the lumber as a defect when the forest giant is eventually felled for commercial uses. Philippine mahogany, we are informed, does not contain this defect, although it does to some extent contain small worm or beetle holes. However, these holes do not affect the value of the wood in any way because they are little larger than a pin head and the use of a good paste filler obliterates them. Philippine mahogany, when these holes have been filled, take an excellent finish.

The wood is of two colors, light red, which is slightly lighter in color than a Mexican mahogany, and dark red, which is of the same color as Mexican or African mahogany. However, since all woods are stained, this does not have any effect on the finished product.

The texture of Philippine mahogany is practically indentical with African mahogany, being, if anything, more easily worked than the latter, which has a tendency to cross grain. The Philippine mahogany has more or less of a straight grain and therefore is more readily worked. It can be surfaced, scraped, sanded and finished to look equally as well as any mahogany now on the market, and the cost is considerably lower than African or Honduras woods.

Hardwood Playing an Important War Role

Emerging from Depression of Early War Period and Reflecting Activity Produced by War Requirements

Specially Contributed*

DURING the past two years, the hardwood lumber industry in Canada has had a rather checkered existence, certain lines at certain times have been in splendid demand and other lines have sagged. To quite a noticeable extent the trade has been regulated by the situation arising out of the war, a strong demand having developed periodically for certain lines, such as thick birch, which are extensively used in connection with shell boxes, gun stocks, etc. The furniture factories have enjoyed a rather intermittent demand, sometimes good, sometimes excellent and other times rather quiet. This has been the prevailing situation for a couple of years under conditions of this sort. Today, it looks as though during 1916 the manufacturer and dealer in hardwood lumber will again come into his own. Some lumbermen who view the hardwood situation from a somewhat casual outside standpoint may be inclined to think that this statement is more or less of a satire. However, I think those who have been dependent upon the hardwood lumber market as a means of enlarging their bank accounts will have to agree with me, upon investigation, that several years have elapsed since the manufacture of hardwood has really been productive of anything like a reasonable amount of profit, when one takes into consideration the effort which it has been necessary to put forth in order to secure business. In fact, many hardwood concerns would have been compelled to show a balance on the wrong side of their ledger during the past few years if they had been obliged to put a fair price upon their hardwood stumpage.

It seems a trifle strange, and one of the peculiar ironies of fate, in this year, when all true Canadians are looking upon the struggle on the European continent with mixed feelings of regret and hope, that the lumberman must really admit that the situation created by the war has brought about a definite improvement in the hardwood outlook. In August, 1914, we were just beginning to feel the discomforts of approaching financial depression. In western Canada the harvest situation had not been any too good, and, as a natural consequence, implement manufacturers, furniture manufacturers and musical instrument manufacturers had commenced to curtail their production. These industries had their money tied up in the west to a great extent and were not prepared to take on any further burdens. Similar conditions prevailed in other lines of industry. What may be said of the manufacturing concerns who are our direct customers was true also in regard to nearly all the other factories and, as an inevitable consequence, production of nearly every description was greatly reduced. Men were thrown out of employment in great numbers and prosperity ceased. Following this, and as one of its direct outcomes, building operations came to an end. Even the banks refused to grant us our usual lines of credit, so that, from the manufacturer to the consumer, industry and trade were being choked, and prosperity disappeared. At the end of 1914 there was no single line of business more completely at a standstill than the hardwood lumber business. This complete depression had come on so quickly that both the manufacturer and the wholesaler were caught with large stocks of dry lumber on hand and no sign of trade to take it from them.

The natural course for the banker to follow, under such conditions, finding that everyone was carrying heavy stocks of hardwoods, was to restrict us in our lines of credit. This was done immediately and the result was quickly seen in the volume of production. The greater portion of the hardwood output in Canada comes from small operators who were practically tied up by the refusal of the banks to extend credits. The production of 1915 was far below the average in quantity.

Hardwood's Place as a War Material

It was not many months after the declaration of war, before our hardwood manufacturers saw that they must take a prominent part in co-operating to defeat the Hun and to assist us in holding our place as a part of a great free nation. This called for the readjustment of our factories to meet the needs of war times and soon it was found that our woodworking factories in general were a very necessary factor in the making of war materials. It would be quite impossible for me, in a comparatively short space, to enumerate the hundreds of different lines of product our woodworking concerns have been able to turn out, which have been valuable contributions to war equipment. A few lines, such as parts for saddlery, gun carriage frames, automobile parts, gun stocks and shell boxes have consumed huge quantities of material; and in addition to these products which are of direct use as war materials there has been a great consumption of crating material. It is necessary to crate almost everything that we are sending to our allied troops, and for such a purpose wooden crates are really the only safe medium. Unless you will stop to count up the innumerable wooden articles that have to be forwarded to the front and the great quantities of crating materials that have to be used for their safe shipment you will find it impossible to realize fully what this war has done towards infusing new life into the hardwood lumber market.

What I have already said gives some idea of the direct effect of the war upon the activity of the hardwood industry and trade, but no trade or industrial activity can stand alone as an isolated beneficiarly from an active market. Our employees, finding their time fully taken up at remunerative wages have also circulated their prosperity by means of their own demand for what they require in connection with their domestic life. When employees are earning good wages they naturally are inclined to improve their home surroundings, and when doing so they consume a very varied line of manufactured articles, produced at Canadian factories from Canadian materials. Thus the returning prosperity is extended greatly and the extension works round in a circle so that it has, what I might call a reflex good effect upon the lumber business. In fact prosperous employees spend quite an appreciable percentage of their income upon goods made of lumber.

The Harvest of 1915

In considering the present situation in the hardwood trade one must not fail to attach full importance to the effect of the 1915 harvest. So great was this harvest and so good were the prices obtained by the farmers that the people of western Canada were immediately put back into a reasonably prosperous position which was quickly reflected in a renewal of activity among the implement manufacturers and the vehicle manufacturers, who were unable to supply the western requirements last fall. Thus the very industries which were important factors in the early days of the depression, because of their greatly restricted output, are now back in the industrial field as an important source of trade activity and are doing much to make business conditions satisfactory for the hardwood trade. Today, the implement and vehicle manufacturers, and a great many other lines of producing industries which consume hardwood are prepared to replenish their greatly depleted stocks.

Then there are the railroads to consider. The wave of prosperity and the enormous movement of freights that have developed in the last few months are placing the railroads of Canada in a position where they are not able to cope with the volume of business offering

* An analysis of conditions as seen by a prominent Ontario manufacturer and wholesaler.

and are definitely confronted by the necessity for taking on a great amount of new rolling stock. Car manufacturers are consequently calling upon the hardwood trade for quotations upon large quantities of lumber for this purpose.

Reaching Out Into Export Markets

I have been referring largely, in fact entirely, during the above discussion, to our home markets. Canada today does not have to confine her trade to her own markets. Canadians are now producing, in our native woods, goods that are quite the equal of those produced by any country in the world. During the last few years we have been steadily advancing our position by adopting high standards of grading. Now, thanks to our almost universal adoption of the National Hardwood Lumber Association rules, we are able to enter any market with our hardwood products and compete successfully even with our neighbors to the south.

For instance, we have today a huge market in the United States which, until very recently, we were only able to touch upon its fringe. The grading rules, moreover, have been studied very carefully by our producers and have had a good effect upon the manufacturing situation. These advantages are so important that a recent development in connection with the grading rules is looked upon with anxiety by a great many in the hardwood industry and trade. Extensive and far-reaching alterations to the rules are under definite consideration today. I greatly hope that the association will not now see fit to chop all to pieces the rules which it has enforced and from which so much good has resulted. If they do, I fear that in their effotrs to make grades for individual users, instead of generel rules which are applicable to the trade as a whole, they will be doing far more injury than good. These rules have unquestionably produced wonderful results for the hardwood trade; and one of the reasons why they have been of such widespread influence, is that they have been very seldom altered to any great extent. Business men have been able to develop their lines of production and trade along definite channels, knowing that their raw materials in the way of hardwoods would be available year in and year out, in definite and satisfactory grades. Therefore it seems to me unquestionable that, if a number of important amendments are made, the hardwood business will be disrupted to a great extent and the situation will be unsettled just at a time when it can least afford it and when conditions are settling back into channels of business activity and success.

The Situation Today

The quantity of hardwood stocks available today in Canada is a matter of the greatest importance. I have lately visited a large number of the most extensive hardwood producing centres in Canada and I am convinced that there is less dry hardwood unsold in Canada today than there has been for a great many years past. In fact, in many lines of stock, nothing that is dry can be found today. The only apparent surplus that I know of seems to be in our No. 3 common hardwoods. However, with the enormous advances in the price of steel, and with the great shortage in supplies of pulp and paper, there can only be one recourse for package materials, and that is wood. Spruce and pine have both advanced in price seriously and that is just where I think I see a demand developing for our No. 3 common hardwoods. Practical demonstrations which have been carried out during the past few months will lead to a general recognition of the fact that packages made from No. 3 common hardwood will soon be the solution for the supply of a strong crate. An objection that has frequently been offered to this stock for crating material is its weight, but if we remember that a hardwood crate of less than half the thickness of softwood will be fully as strong, we have no reason to worry upon this score.

At the beginning of 1916 the hardwood lumbermen of Canada are entering upon a period of business activity which, I think, holds out very bright prospects. There is practically no surplus of old stock to depress the market; the production during the past winter was not large; the financial position of nearly all the trade in Canada today is good and our laboring people are earning wages equal to, and in most cases considerably greater than, they have ever been able to earn before. The consuming trade, moreover, have awakened to the fact that times are reasonably good once more and that the producer is not overloaded with stock, consequently is willing to buy even at advanced prices. Under conditions of this nature, unless we over-reach ourselves, we should be able during 1916 to do a good business and to reap a reasonable return upon our capital invested.

Saw Milling Methods of Fifty Years Ago

Evolution of Manufacturing Practice in the Ottawa River District as the Logs Became Smaller

By I. N. Kendall

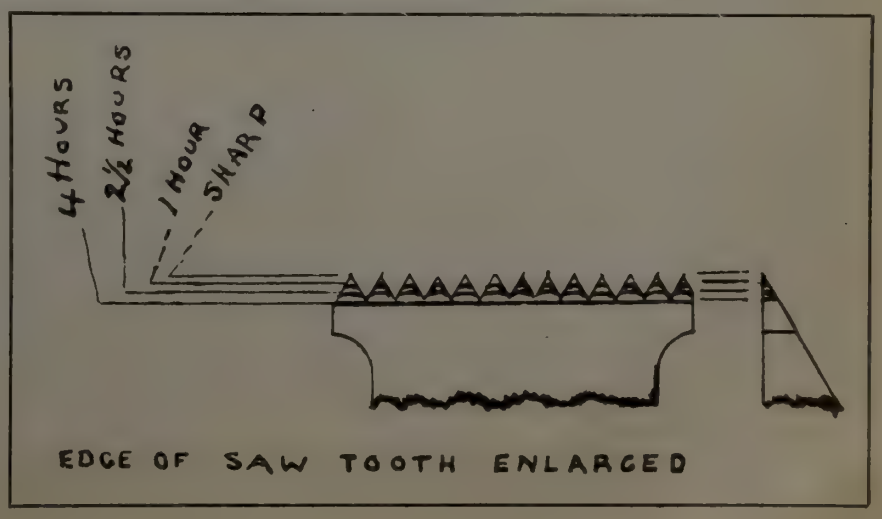
The development of the sawmilling business in the Ottawa Valley during the past fifty years has been accompanied by many changes in the type of equipment employed. The steady decrease in the quantity of large logs secured and the corresponding increase in the quantity of small logs have made it necessary to adapt the sawing machinery to the changed conditions. In a single section of the Ottawa Valley from Hawkesbury to Ottawa City, both places included, there were in the year 1864, or 52 years ago, 12 large sawmills. In all these mills the old style, straight line, vertical gang saws were used to cut the lumber. For slabbing operations or siding the logs, the saws used were from 6 ft. to 7 ft. in length, 8 ins. wide when new and No. 8 gauge in thickness. The stock gangs carried saws 4 ft. in length, 8 ins. wide and 11 gauge in thickness. The swaging of the saw teeth was done by hand with bar and hammer, and the sharpening was done with files.

In those days the timber was all white pine, the smallest log taken being 12 inches in diameter. Moreover, only the best quality of logs were then taken from the virgin forest. It was possible at that time to secure logs of this type on every hand and consequently the machinery and saws then in use were found very satisfactory. It is important to bear this fact in mind, as it helps us to understand the reason for subsequent developments.

Smaller Logs Necessitate Changed Equipment

Some twenty years later, the class of logs being taken out showed a great change and included a great number of smaller and inferior logs, as compared with those of the earlier days. The diameter of the smallest log taken out was reduced from 12 to 9 inches. It was then found necessary to change the machinery in order to adapt it to the new conditions. This was especially necessary in connection with slabbing or siding the logs of small size, for which purpose the twin or span circular was designed. Very good results were secured with this equipment where there was a limit to the feed of the machines of, say 4 or 5 inches to a revolution of the saws which were 54 inches in diameter, carrying 70 teeth. The results were not so satisfactory, however, in cases where direct steam feed was applied to these saws, with hardly any limit to the speed. I have seen a log fed 17 inches to a revolution of a saw of the above size. Uniform thickness of lumber or width of cants was quite out of the question with such rapid feed. In some mills at that time the single circular saw and carriage were installed for slabbing the logs, but the results were the same as with the twin or span circular whenever steam feeds were used without a limit.

After the introduction of the circular saw, there came the iron frame oscillating gang which was used for sawing the cants made by the twin and single circular saws, as it was thought by some of the lumbermen that more lumber could be produced by using a smaller number of machines. This was one of the ways in which they attempted to meet the situation created by the smaller logs. They suc-



ceeded to a certain extent, but it was found that the lumber produced with equipment of this type was not so smooth or so well cut in any particular as that which was produced with the old style gangs carrying thicker saws, longer stroke and less feed per stroke, the limit being 5 to 8 inches per stroke.

The Automatic Saw Sharpener

In the year 1884 a most important change was introduced in the method of sharpening saws when the automatic emery wheel saw sharpener came into general use in the mills on the Ottawa. This was found to be a great advantage in many respects, especially when associated with the pressure swages for spreading the points of the saw teeth. The time required for fitting up saws was considerably reduced. Saws of 14 gauge were now recommended for the oscillating gangs, this being three gauges less than that formerly in use. A saw kerf of 5/32 of an inch was tried as recommended, being 1/16 of an inch less than that of the 11 gauge saws. The good points in favor of the thinner saw and the oscillating gang were that they took out 1/16 of an inch less in kerf, operated at 75 to 100 strokes per minute faster speed, took ¼ of an inch increase per stroke in feed and handled cants up to and including 12 ins. thick "doubled."

The actual results secured from this equipment were something of a disappointment. Although the automatic sharpener was a distinct labor saving device and had other advantages, it was found that the emery stone in use at that time did not make so fine an edge as the file had made previously. The edge produced on the saw teeth was found to be notched as shown in the diagram, which represents an enlargement of a saw tooth. This diagram also shows how the edge of the saw tooth appeared from the time when it was sharp until after it had been in use for four hours. The saws, as is always the case with vertical gang saws, became long on the edge and the rest of the plate had to be hammered or stretched, to even up the tension, for a gang saw must always be kept tight on the edge. Bunches were made by the hammering on the sides of the saw and in a short time the saws became warm in the cut. The kerf had to be increased to 3/16 of an inch, leaving it only 1/32 of an inch less than that of the 11 gauge saw. Then it was found necessary to use thicker saws, and 12 gauge were ordered to replace the 14 gauge. The kerf was widened to correspond, being placed at 3/16 of an inch, the same as had been found necessary with the 14 gauge saw. With this equipment the lumber produced was found to be smoother, straighter and of very uniform thickness.

Sawmill Equipment in Eastern Canada

A comparison of present day machinery and that of twenty or thirty years ago in the Maritime Provinces

By John M. MacLean

THE production of lumber in Eastern Canada is quite a different proposition today from what it was a generation ago. Not only has there been a great change in the logging end of the industry as a result of the disappearance of the virgin timber, but the difference in the class of logs now being brought to the mills has rendered necessary a great many important changes in the equipment of the sawmills. The equipment that was quite satisfactory twenty or thirty years ago would not be acceptable in the sawmills that are operated in the Maritime Provinces today. In those earlier days the standard mill equipment consisted of the single log live gang, edger and trimmer. The slabs and edgings produced by this equipment were usually converted into laths. About 200 r.p.m. was the average speed of the single log live gang. The gang was equipped with 8 or 9 gauge saws. The teeth were given 1¾ in. pitch and the saw carried from 1¼ in. to 1¾ in. feed to each stroke.

This equipment, operating upon logs of the ordinary size of that time, would manufacture from 40,000 to 60,000 superficial feet per ten hours. It produced lumber at a lower cost than any other mill either before or since, but it also resulted in an enormous quantity of waste in slabs and edgings, and in the roughness of the surface produced, which necessitated further manufacturing in order to produce a satisfactory surface. Naturally, the operators of those days had their attention drawn to the problem developing out of this waste. In the end, the necessity for more economical operation led to the adoption of different methods of manufacturing.

Evolution Apparently Still in Progress

The evolution of the sawmill that has taken place since the old live gang was discarded has not produced any definite style of mill that has been so universally acceptable to lumber manufacturers of a generation ago. It is scarcely possible at the present time to find two operators who hold the same opinion as to what should be included in the equipment of a standard mill for the manufacture of logs into the various dimensions and of the exactness demanded by the different markets of today.

Although an increased price is obtained for lumber today, as compared with a few years ago, the manufacturer does not reap a corresponding benefit. There has been such a great increase in the cost of logs delivered at the mill and in the cost of labor that the increased price of lumber is practically offset thereby. It is essential, in connection with a modern mill which is to be operated profitably on the very much smaller logs that are now secured, that it must effect the greatest possible economy in labor and lumber, while at the same time it must be capable of producing the maximum of quantity and quality. In the endeavor to secure these results millmen nowadays are not yet able to agree as to what should constitute the equipment of a standard mill adapted to meet the requirements of the eastern lumber trade.

The circular mill has never been a really serious competitor of the live gang during the past, except in cases in which a mill was required to cut dimension lumber. The single and double cutting band saw have not come up to the expectations of those who were most enthusiastic about them. The drawback with the single and double cutting band saw has been the uneven thickness of lumber which these saws have produced. This difficulty is the result, to a very great extent, of the numerous connections in the setworks, which are difficult to regulate in such a way as to avoid lost motion. Inaccurate setting is a fertile cause of difficulties of this nature with band saws, and a further source of similar trouble is the tendency of saws to swerve from a straight line when they encounter hard lumber or when they are subjected to over-feed.

The only practical machine for cutting orders for dimension seems to be the carriage with setworks. This equipment will probably have to be retained in mills where there is work of this nature to be done.

The Band Resaw

In connection with the log band saw many manufacturers are now adopting the band resaw. The vertical band resaw is a favorite machine with some operators, because it helps to increase the output and at the same time improves the quality of the lumber manufactured. For the same type of work the horizontal band resaw also has its enthusiastic advocates who claim for this machine that it increases the output greatly, and that where the logs are small it is possible to take a single cut on the carriage with the log band, after which the log may be transferred to the horizontal band resaw and put through the machine a sufficient number of times to cut it into the exact sizes desired.

While each of the above methods is advocated strongly by many operators, an unbiased observer can scarcely fail to be impressed by the fact that, although the band saw saves a large percentage of lumber in saw kerf as compared with circular saws, there is still the difficulty of producing lumber of even thickness. Thus, what is saved in saw kerf with band saws, appears to be lost again in having to cut the lumber oversize in order to make up for the variation in thickness which results from saws that do not run true. This difficulty in connection with resaws, without doubt, is to a great extent the result of over-feed in trying to obtain the greatest possible production. In connection with the log band saw and carriage the difficulties are of the nature already discussed above.

Under the conditions prevailing in former days, before the operators found it necessary to bring out the small logs to the mill, the stock gang and resaw produced good results, but in recent years, as a result of the excess of small logs, the stock gang is being replaced by other varieties of equipment. The chief objection to the stock gang as a machine for sawing small logs into deal or plank is that so much space is required to keep the logs steady, and the width of the lumber is much reduced by the heavy slabs taken off. Moreover, there are other serious difficulties such as that of lining the logs properly for the saws when the gate is practically full of logs. If the logs are put through a stock gang only one tier in depth the capacity

is so much reduced that it is no longer a profitable machine to operate, compared with what it is when the logs are of good size.

Smaller Logs Creating New Problems

Year by year as the logs that are brought out to the mill become smaller than those of former years, it becomes increasingly more important that the equipment in the mill should be designed to manufacture them profitably into whatever the market demands. The circular gang overcomes the lack of capacity of the stock gang for small logs and at the same time gives the same standard of even thickness in sawing as that for which the stock gang has been so justly celebrated, producing at the same time a much smoother surface on the lumber. The circular gang, moreover, has the advantage of a considerably higher rate of feed, thus giving the operator an opportunity of placing each log individually in line with the saws, and enabling him to obtain the desired result much more regularly and easily. A very light slab only need be taken off the log for this machine. The lumber, therefore, is not reduced so much in width as it is by the use of the stock gang.

In the manufacture of English deals it is necessary to have a resaw behind the circular gang to convert the sidings into thinner lumber.

Many mills in Eastern Canada still retain the circular carriage, but new mills are not being equipped in this manner when the supply of lumber justifies more modern machinery.

When one takes into consideration the relative costs of saws and filing, the most favorable showing is made by the stock gang. The band mill makes the most costly showing and the circular gang comes in between these two.

I have outlined my own views in regard to these matters briefly, in the hope that they may be of some interest and value to other readers who have similar problems to solve. I feel that it will only be by an extensive interchange of views among those who are handling these questions that a satisfactory understanding of the problem of sawmill equipment in Eastern Canada will be reached.

An interchange of such views from correspondents, published in the Canada Lumberman, would be a great help to us in coming to a conclusion as to just what equipment should be installed in a modern sawmill in Eastern Canada.

Cleanliness Essential in Sawmill Upkeep

Neglect at Production End Keeps Down Profits All Along the Line—Too Much Indifference to Care of the Plant

By M. Lane

Indifference to small defects and carelessness in regard to the upkeep of plant and equipment are responsible for an almost incalculable loss in connection with a great many lumber manufacturing plants in Canada and elsewhere. This indifference and carelessness are difficult to understand, because, from the plain commonsense point of view their results are never classified in any column except that of loss. There are so many different kinds of indifference and carelessness that it would be quite a job to list them all. There is one kind of carelessness attributable to the employee and another kind attributable to the employer, and the two, when working together will create havoc in connection with any manufacturing industry. On the other hand, a spirit of co-operation enthusiastically shown on the part of both employer and employee will go a long way towards producing profits for the manufacturer. Why then does it happen that many mill owners, and sawmill owners in particular, exhibit so great an indifference in regard to the upkeep of their plants and exercise so little vigilence in keeping their employees up to the mark in connection with the proper care of equipment? It is a difficult question to answer and one to which a different answer will have to be given in connection with each case.

Sudden Desertion When Mill Closes Down

Fortunately there are exceptions, but in far too many cases these conditions prevail. Visiting a sawmill of this class at any time between the closing down of the plant in the fall of the year and the beginning of operations in the following spring one's attention is pretty sure to be drawn to something definite in the way of carelessness and neglect. We are speaking now of mills in Canada where the sawing operations commence about the 20th of May and close about the first of November. Visit one of these mills at any time after the latter date and you will probably notice a general air of neglect about the whole place. You will find many a mill in a generally filthy condition, with bark, sawdust, pieces of old iron, bolts, nails, shovels, sawdust scrapers, old cotton waste and other discarded materials too numerous to mention lying round about, and everywhere there is a general appearance of sudden desertion. Inside the mill you will often find costly belts hanging from shafting to the floor of the mill covered over with sawdust and bark as if they had seen their last day and were no longer required.

Then pay a visit to the blacksmith shop and the same state of affairs will be found as elsewhere, only the confusion will be, if anything, more intense. You will find drills that are not fit for further use, and taps and dies that are out of order and require renewing; all the result of inattention and indifference by careless or ignorant men who should not be allowed to use them. You will find iron of every description thrust under the bench into the blackest corner of the black shop. Presumably the shop is black because it is a blacksmith shop, and the public has a well founded idea that the blacksmith is supposed to have cats' eyes. Ask the blacksmith why he puts up with conditions of this sort, and he will reply that he is too busy to fix up. Ask him how he manages to get along with such tools and probably he will inform you that he has asked to have them renewed, possibly has made his request several times, but has been told that there was no hurry until the spring, when the repairs would begin. This putting off repairs until the spring is a great mistake in many cases. When the sawing is about to begin it will probably be too late in quite a number of important cases to have the repairs or renewals attended to as thoroughly as they should and have the mill ready for operation when it is required.

Cleanliness is Infectious

Is it not astonishing how often one comes across these distressing conditions in connection with a sawmill? As a matter of commonsense, practically anyone would know at a glance that the results of this indifference and carelessness must be serious loss, and that ordinary business-like methods would do away with all this difficulty at practically no expense worth considering. There are, fortunately, many notable exceptions to this situation, but on the other hand there are far too many cases in which these conditions exist to a greater or less extent. There seems to be something about the atmosphere of a sawmill, or the make-up of those engaged in operating it, which leads regularly to these results unless a definite practice is made of keeping everything continually cleaned up and in good shape. It is all the more important, therefore, that the manufacturing lumberman should make a fight against this tendency. Unless this is done there is sure to be great deterioration, equipment of every description going more or less to rot before notice is taken of existing conditions. Apparently, the offenders in this connection travel along the line of least resistance, having an idea that anything is good enough for a sawmill, and especially for an old sawmill; whereas ordinary business intelligence would convince them that they ought to give this matter more attention almost than they give to the selling of their output. The up-keep of the mill is, in fact, the place where the general business course of any lumber manufacturer will take its most definite step towards success or failure. A good example set at this stage of operations will produce not only efficient manufacturing conditions in the plant, but an infectious cleanliness and care about all the business methods of the company.

Nowadays, when the labor market has been so greatly disturbed by the enlistment of large numbers of men for overseas service, it is a more difficult matter than ever to maintain a clean mill, but it is none the less important to do so, so far as possible. Every day, in fact continually throughout the day, the operation of the mill should be accompanied by a continual fight against the accumulation of debris and dirt. Then, at the end of the year's operations, as soon as the last log has been cut in the fall, the mill should be given a complete clean-up. This will prevent great loss; it will reduce depreciation; it will almost eliminate the fire risk; and it will leave very little to be done the following spring when operations are to be resumed. It will, in fact, save many a dollar for the lumber manufacturer.

John Austin, head of the firm of J. Austin & Sons, Kinmount, Ont., died recently at his home.

B. C. Lumber for Eastern Canada Markets

Its Special Qualities of Strength, Variety, Beauty and Cleanliness, Entitle It to a Greater Share of the Trade.

IN considering the question of domestic markets sion of Canada's industries will prove helpful. for Canadian products, a brief survey and divi- Canada's industries may be said to be located as follows:—

Eastern Canada--Manufacturing, mining, lumbering.
Prairie Provinces—Farming.
Extreme West—Lumbering, mining.

Both east and west have industries other than those mentioned, that are common to both, such as farming and fruit growing. The mining industry accounts for a very big slice of Canada's wealth and operates in both the east and the west.

Eastern Canada, the most thickly populated portion of the Dominion, produces the great bulk of the manufactured articles for the use of the remainder, while the far west province of British Columbia has a stock of raw material in lumber sufficient to supply all Canada's needs and, indeed, those of a considerable portion of the world besides. The prairie provinces are the great common consuming market for the manufactures of both Eastern Canada and British Columbia. In addition to this common market, British Columbia and Eastern Canada carry on a moderate trade as between themselves, the balance being largely in favor of the east. We propose to deal in the following brief remarks with the British Columbia lumber supply and the Eastern Canadian lumber requirements, under the following heads:—

1. The ability of British Columbia to supply lumber of the highest quality and unlimited quantity.
2. The requirements of Eastern Canada in lumber.
3. Why Eastern Canada should buy British Columbia lumber in preference to imported lumber.

Before dealing with the first of these considerations, let us look for a moment into the available native lumber in Eastern Canada. The stands of high grade lumber in Eastern Canada are fast becoming depleted, especially in timbers where strength is required and a high clear quality of finish is sought. The clear grades in eastern pines are at a prohibitive price for ordinary work. Eastern spruce has neither the strength or size required for structural work. Eastern hemlock is largely used in small dimension stock, but only for the reason that it is wood and comparatively cheap, certainly not on account of its high quality and suitability for building work. The east, therefore, not having in large quantities at low prices a supply of native woods with strength values and finish qualities demanded by good modern construction must turn elsewhere for the supply which their own woods cannot fill.

Our wideawake friends south of the line, ever ready to fill any requirement in any commodity in any market, realized that here in Eastern Canada a splendid market awaited them. Thus, without delay, the Southern pine manufacturers quickly built up a large connection in Eastern Canada. Georgia pine was laid down at various points in the east at prices which appeared to defy competition from the distant British Columbia woods.

The Dominion Government returns for values of imports for the years 1913 and 1915 in pitch pine lumber, rough sawn, and lumber and boards dressed one side, all from the United States, are as follows:

	1913.	1915.
Pitch pine, rough sawn	$2,435,376	$1,608,788
Dressed one side	6,089,548	2,322,368
Totals	$8,524,924	$3,931,156

The returns are given for 1913, as that year represents a year of normally good business, while 1915 represents a year of abnormal business conditions resulting in a very small consumption. Surely, in the space of twelve normal months, Canada should not import over eight million dollars' worth of a raw material that she has in such abundance and excellence within her own borders?

The figures given above are for softwoods suitable for building and construction purposes which entered this country free of duty (except the 7½ per cent. war tax). The figures do not include shingles or any hardwoods.

L. B Beale

The Department of Public Works of the Dominion Government have lately issued instructions that Canadian woods only are to be used on public works. Similar orders have been issued by the Canadian Pacific Railway for their work. These orders combine sound business and patriotism and might well be emulated by all Canadian users of lumber.

The Ability of British Columbia to Supply Lumber of the Highest Quality and Unlimited Quantity

The stand of merchantable timber in the province of British Columbia is estimated to reach the enormous total of four hundred billion feet B.M., which is over half the total of all Canada. British Columbia has vast stands of Douglas fir, the most important timber tree on the North American Continent. No other one species exists in such great individual sizes, such excellence of quality and such vastness of quantity. This wood is equally well adapted for the most exacting work in modern engineering practice, the usual forms of building construction, and the highest form of interior finish. Probably no other wood has so wide a range of usefulness. Average results of tests show that Douglas fir possesses higher strength values than longleaf southern pine, or any other commercially available soft woods.* One outstanding feature of this wood is its increase in strength with seasoning. This increase amounts to some 30 per cent. to 35 per cent. In this respect it is far ahead of Southern yellow pine, which does not appear to increase in strength values with seasoning.† There is no condition of use or service in which B. C. Douglas fir is not equal or superior to Southern yellow pine. The writer lately heard an interesting address by a prominent Canadian engineer. In comparing Douglas fir with Southern yellow pine for heavy construction, the speaker said, "I will always use Douglas fir in preference to Southern yellow pine for the following reasons: It is a better wood, a stronger wood, a lighter wood, and it is produced in Canada." This sentence is a terse, clear statement of reasons for preference in Douglas fir, that are the result of long experience in wood construction. The largest sizes called for in modern engineering practice are easily filled by B. C. Douglas fir. Equally well can this wood supply the demand for all kinds of lumber for railroad work, building construction and the best class of finish. This is a unique record for one wood, a record that justly entitles it to the name of "The Universal Wood."

Douglas fir, however, is not the only wood British Columbia produces. western red cedar, western spruce, western hemlock, western white and soft pine and western larch grow in abundance and in very large sizes and high qualities. Space does not permit of a detailed description of the character of these woods. Their qualities cause them to be in demand for a wide variation of uses from shingles to shipbuilding, factories to food containers, farm buildings to implements, mansion to cottage, in fact for every use to which wood can be put. Truly, British Columbia has "A wood for every use." Moreover, the mills of the province are equipped with modern and efficient machinery enabling them to manufacture their lumber to satisfy the most exacting requirements and they are prepared to manufacture their forest products to meet the special requirements of any market.

The Requirements of Eastern Canada in Lumber

The lumber requirements of Eastern Canada can in part be satisfactorily filled by her native woods. Such requirements demanding wood for pulp and paper making, boxes, crates, cheap forms of dimension stock for small buildings, some veneers, hardwoods, and some other items Eastern Canada is well able to supply from local sources.

Eastern Canada's lumber requirements in engineering work, docks, wharves, heavy construction, buildings of mill construction, high grade floorings, residence work of the better sort, and so on have to be supplied with lumber from beyond her own borders. Go into any large lumber yard in Ontario and you will find stocks of imported Southern yellow pine and other imported woods, to fill such requirements. Those stocks can be filled better with B. C. woods at prices

* See U. S. Forest Service Bulletins Nos. 88 and 108.
† See page 20 and 21 U. S. Forest Service No. 28.

which compare favorably with any wood of similar high qualities. A closer business relationship between British Columbia mills and Eastern Canadian lumber dealers will greatly aid the "Made in Canada" movement. In this connection a point may be mentioned regarding "Canadian Products for Canadian Consumption." The writer has recently visited several lumber yards, factories, etc., in Eastern Canada and in many has seen the following notice displayed in a prominent position in the office: "By buying goods made in Canada, you help the other fellow keep his job and he helps you keep yours." This has a good patriotic-standing-up-for-our-own-products kind of sound. A visit to the yards adjoining the office, however, frequently reveals the presence of large stocks of imported woods in many cases inferior to our own products.

Why Eastern Canada Should Buy British Columbia Lumber

In a country of such vast extent as Canada, the value of the products of any particular part or province vary with the transportation facilities for reaching a market. Until recently, but one transcontinental line was available for Coast to Coast transportation, but with three lines now operating, many products hitherto unknown in the east as marketable commodities, are able to reach consumers. The trade relations of British Columbia and Eastern Canada are on the eve of great expansion in many lines, due to the additional railroad facilities and the availability of the Panama Canal. The haul of nearly three thousand miles by railroad is a considerable item on such bulky products as timbers, and it is anticipated that transportation by water will cut freight rates to perhaps one-half of the existing railroad rates. This will enable points in Eastern Canada available to vessels of moderate tonnage, to obtain shipments of B. C. products at much lower prices than now, and will tend to make such ports distributing points for the inland eastern districts. Any comparison of freight rates by water and rail must be based on normal shipping rates and such rates will not obtain until some few months after the war is ended. The existing freight rates by rail, however, do not prevent B. C. woods from entering Eastern Canada at favorable competitive prices.

Industrial expansion in all Canadian industries will surely occur with peace and the requirements of the countries in which war has been waged. With the war over, it is not difficult to foresee that Canada will have trade opportunities unsurpassed by any other country. Her population will be increased by the influx of thousands of people from the old world. This will mean tremendous demand on Canada's manufacturing plants, and it is Eastern Canada that will get the lion's share in the manufacturing industries. One of the sure results of this huge trade in Eastern Canada will be an increased demand for lumber for all kinds of buildings. Many kinds and qualities of lumber are or can be used in the same building. The structure requires timbers of certain strength, durability and wear resisting qualities; some parts demand beauty in grain and figure while other parts can be supplied by almost any kind of wood. British Columbia, alone of Canada's provinces, has lumber in unlimited quantities which combine the qualities of strength, resistance to wear, durability and beauty to a degree unequalled by wood from any other part of the world. In the natural order of things, all Canada should, therefore, obtain that portion of her lumber needs, which cannot be supplied locally, from British Columbia. As a matter of fact, Canada does not do this, as far as the East is concerned. A very large proportion of Eastern Canada's wood for building work is imported. This imported wood has neither the strength values or beauty of many of our own Canadian woods. The reason for this apparent injustice to our own woods is difficult to place at first glance, but investigation will show us the cause.

Canada is yet young in her existence. Her birth industrially and every other way occurred in Eastern Canada and her expansion has been westward. But while the growth has been gradually developing through the West, the trade of the East has expanded to a very big thing in order to supply many of the needs of the growing West. This trade growth in the East resulted in large increases in population, larger factories, more homes and consequent demand for building materials. Building material is composed very largely of lumber. Canada had lots of lumber in the far West but little was known in the East of its qualities and it is probable that ignorance of the qualities of B. C. lumber has, in the past, been largely responsible for its comparatively small demand in Eastern Canada. A better knowledge of the qualities of B. C. woods has resulted in an increased demand for B. C. forest products in Eastern Canada from engineers, architects, and the general public in Eastern Canada will, it is hoped, aid their far western brother lumbermen in filling this demand. To do this successfully, stocks of B. C. woods must be held for immediate delivery, just as similar stocks of Southern yellow pine are now held. Present prices of B. C. woods are favorable and, indeed, in many cases lower than Southern yellow pine, freight paid to eastern points.

The British Columbia Government has established a Lumber

BRITISH COLUMBIA'S SUPPLY OF LUMBER
FOUR HUNDRED BILLION FEET
CANADA'S SPLENDID TRANS-CONTINENTAL RAILS FOR UPBUILDING OF INTER-PROVINCIAL TRADE
MILLIONS OF ONTARIO MONEY PAYED OUT EVERY YEAR BY U.S. LUMBERMEN
ONTARIO

Commissioner's office with a permanent exhibit of B. C. woods at the Excelsior Life Building, Toronto, where full information may be obtained on all B. C. forest products.

B.C. Shipbuilding Bill Discussed

Important Measure Introduced to Promote Export Lumber Trade.

During the discussion upon the shipbuilding bill in the B. C. Legislature on May 5th, Mr. H. B. Thomson (Victoria), made a number of interesting statistical statements about the industry. He said that B. C. coast mills have a capacity of 700 million feet of lumber annually. Of this, 280 million feet was available for export. This 280 million feet of lumber could not be shipped to the large overseas markets unless the Government furnished loans to shipbuilders and paid a bonus for the operation of the vessels. In referring to overseas markets he stated that the Australian market could take $10,500,000 worth of lumber, New Zealand $2,500,000, South Africa $6,000,000, and that large quantities could also be taken by South America, India, Japan, The Straits Settlements and East Africa. At present, on account of lack of vessels, Canada was selling only $265,000 worth of lumber to Australia, whereas the United States, which had a fair supply of vessels, was selling $7,000,000 worth in that market, Norway and Sweden were selling $420,000 worth, and Russia $323,000 worth. In addition, Australia was buying $140,000 worth of box shooks, of which 80 per cent. was supplied in normal times by Germany, Sweden and Norway, and practically none by Canada.

British Columbia at the present time, Mr. Thomson said, was in the position of a grocery store which was trying to run its business without a delivery wagon. At present, British Columbia lumbermen were being charged in the neighborhood of $1.50 a thousand feet more than Washington and Oregon lumbermen had to pay, because present tonnage charters from British Columbia ports were controlled by Americans.

The bill introduced in the Legislature provides for the appointment of a Shipping Credit Commission with power to loan money for the construction of ships; to subsidize ships when constructed, and to guarantee interest upon the bonds of shipbuilding concerns to the extent of 6 per cent. It is stated that the Government has already received offers from legitimate dock yard companies that are willing to proceed with the construction of large graving docks at once and to build vessels therein. Other shipping men are said to be ready to operate the vessels out of British Columbia ports carrying British Columbia lumber and produce as soon as the construction of the ships has been completed.

The Shipping Credit Commission will be composed of two directors and a superintendent, all appointed by the Government, with the Deputy Minister of Finance an ex-officio member. The Commission will borrow money through the Government and lend it to shipbuilders at 6 per cent., to be repaid within five years, one-fifth at least every year. Each loan is to be limited to 55 per cent. of the value of the ship, which must be built and registered in British Columbia. The Commission is to take a first mortgage on the whole value of the vessel, and is to be managing owner until the loan is repaid. The vessel must not leave the British Columbia trade until the money has been repaid to the Government. A special clause in the bill states

that owners of the vessels must not charge a larger freight rate than is prevalent for similar commodities in the State of Washington. The measure applies only to ocean going vessels upon which construction is commenced within one year from the passage of the bill.

In regard to bonuses, the bill states that vessels up to the number of 20 may be bonused to the maximum extent of $5 a ton per year for a period of ten years. The subsidizing provision, however, will apply only after the war, when a reduction in the earning power of the vessel is likely to occur. No vessel is to benefit by the subsidy proposal which is earning 15 per cent. interest for its owners. Deep sea craft at present are making at least 20 per cent. and in many cases over 100 per cent. per annum. For a ten year period, commencing one year after the conclusion of peace, the Commission will make up any deficiency between the ship's earning capacity and 15 per cent. of her actual cost. The bill guarantees 55 per cent. of the actual cost of constructing shipbuilding, repairing and docking plants in British Columbia, by guaranteeing interest at 6 per cent. upon the bonds of such plants.

Shipbuilding and Export Trade

Grading and Tallying Bureau Suggested as a Government Undertaking—The Tonnage Problem.

Editor Canada Lumberman:— Victoria, B. C.

"The Government of British Columbia contemplates speculating the sum of two million dollars in an endeavor to foster the lumber industry by financially assisting a shipbuilding industry. I use the word 'speculating' advisedly for the reason that it was publicly stated that wooden ships to carry lumber would result in those ships earning 100 per cent. per annum! Considering that in British Columbia we have so little experience in building wooden ships, and that there are people on the Pacific Coast of the United States who have been a generation in the shipbroking, ship-owning and shipbuilding business, who are not to any large extent building ships to earn these enormous dividends, the spending of two million of dollars savors more of a speculation than an investment.

"There is no question, and there never has been a question as to whether British Columbia should do a large export lumber trade. It should do four times the trade of the United States Pacific trade, for the reason of Great Britain's mercantile marine. There is no question as to why British Columbia has not had its fair share of the export trade, the reason is obvious; British Columbia has had to buy its freight through its competitors in the United States.

"A large proportion of the standing timber in British Columbia is American owned or controlled, American standing timber has heavy carrying charges. A group of financiers controlling both American and British Columbian standing timber would naturally use all their endeavors to cut their American timber in preference to their British Columbian timber.

"The leading people in the British Columbia Lumbermen's Association, those who have the ear of the government, and the Boards of Trade, represent mills that are controlled by American capital. These mills get the greatest proportion of the small export trade that British Columbia is allowed to have. Most of the British-owned lumber mills are closed down.

"Building ships to the value of two million dollars would mean a carrying capacity of 30,000,000 feet b.m. per annum. The American ship brokers last year, even while the abnormal conditions of war obtained, secured freight for more than three times this amount for shipment to just one British colony—Australia. Shipbuilding under present conditions of labor and finance will not immediately foster the export lumber trade. The natural evolution is from ship broker to ship owner, and ship owner to shipbuilder.

"The British Columbian British millowner wants to be in a position immediately to obtain freights on equal terms with his competitor, and only the government can assist him to do this. There is no monopoly in freights, there is gambling in 'futures,' but all freights are open to competition, and are mostly handled in London. The big shipping men in San Francisco all have their branch houses or agents in London, and are in cable communication daily with all freights offered or ordered.

"Under present circumstances no individual export lumberman can expect to compete with these old-established firms operating their ship-broking business on the Pacific Coast, but with the assistance of the British Columbia Government they can be on equal terms or even better terms than their American competitors.

"The government should be 'in loco parentis' to the export shipping trade. A department should be established in London controlled by a man experienced in the shipping trade in London, to arrange that the British Columbia exporters should be daily posted as to what freights are offered to the different ports of the world. The expense of establishing a department such as I suggest would not be a fraction of the expense at present incurred by the Department of Trade and Commerce in endeavoring to help the export lumber trade.

"It is not necessary to establish resident commissioners, or send them round the world to talk on the merits of Douglas fir—our American competitors have done all this pioneer work, and an india-rubber stamp 'guaranteed equal to Oregon pine,' and the grading and tallying of British Columbia lumber by a British Columbia lumber and inspection bureau would do just as well. In fact, it would not be long before American competitors might have to use the india-rubber stamp to say, 'guaranteed equal to Douglas fir.'

"The British Columbia Government should immediately establish its grading and tallying bureau, it costs nothing. In America the bureau actually makes a profit out of its fees.

"Two years ago I pointed out to the Victoria Board of Trade that a British lumber mill, shipping British timber, in a British ship, financed through a British bank to a British firm in a British colony, had to go to an American concern and have their lumber graded and tallied. Two of our most prominent lumbermen strenuously opposed the suggestion of establishing a British Columbia lumber and inspection bureau. Out of curiosity I looked up the shareholdings of the two companies these gentlemen represented. One company had more than 90 per cent. of its shareholders residing in different parts of the States, the other was controlled by an American company whose shares were seemingly all held in the States.

"Fair competition is healthy. I do not even blame our American competitors for attempting to throttle the British Columbia export lumber industry, and cut their expensive American timber first. Their British Columbia holdings of timber can wait, they have small carrying charges. In the meantime, however, the British Columbia export trade is going back every day. A few special orders were obtained last year for export to the United Kingdom (and they were mostly placed with American controlled firms), but British Columbia is not getting anything like its proportion of business. It can not secure freights in fair competition, because it is not equipped to compete for these freights.

"In the month of February there was shipped from the Pacific Coast 13,000,000 feet of lumber to British ports, of that British Columbia shipped 392,000 feet, and that in a Japanese bottom!

"Even if miracles were possible, and the British Columbia Government arranged to build and launch a ship within three months, and one each month afterwards, what benefit would that be to British Columbia from the lumber industry point of view. When this war is over 30,000,000 feet per annum will not represent perhaps one per cent. of the business offering. We should be establishing now on a sound commercial basis with a ship-broking department in London, efficient codes, properly arranged finance, and our own inspection bureau.

"It wants a shipping man experienced in the different markets of the world to inaugurate this department. The qualification of being a good Conservative, a good Liberal, a good forester, a good lumberman, or a friendship with a patronage committee are not sufficient. It wants originality in idea, initiative in action, boldness of thought, the backing of the government, and chartering experience.

"Our lumber industry is not meant to foster a shipbuilding industry, that might come later, when we have established our export lumber trade. The immediate work on hand is to find employment for so many of those twenty thousand men who will be spared to return here after fighting our battles. Not to waste our time in legislating during the absence of these men, by pandering to cranks, jeopardizing our independence to save a few alcoholic degenerates, and admitting our police are incapable of enforcing the existing liquor laws.

"We have no time to worry about prohibition or shipbuilding. There is work to be done in British Columbia, and the most important work is to put our export lumber industry on a firm commercial basis.

"There is the right way of doing this: Buying our own freights and grading the exports ourselves. There is the wrong way, that of having our trade controlled by our competitors.

"Not twenty miles from Victoria is a British-owned lumber mill, that three years ago was equipped for export trade with all modern machinery at a cost of between two and three hundred thousand dollars. The new machinery has never been started—the pity of it!

"British timber, British graded, British shipped, British financed, to British markets is our heritage, and that heritage must not be sold to the foreigner for a mess of political pottage."

HENRY PEARCE.

E. H. Newton, Vancouver, B. C.

Vigorous Handling Badly Needed

Business Conditions in the West Require Men Like Those Who Have Operated Successfully in Eastern Canada

In considering the possibilities and probabilities with which lumbermen seem to be confronted at the present moment, and in commingling our prospects for the immediate future with thoughts of the past, we find that we have much to hope for, and also many things to regret. If in supplying these few thoughts for the Annual Number of the Canada Lumberman I only could omit some of the things which I feel impelled to say, I know that I could furnish you with an article which would make pleasanter reading, and perhaps have the appearance of being very much more superficially correct, but if I did this I would not be true to my own convictions, nor to the cause in which I have spent so many years in constant study.

The lumber business today may be likened unto an invalid who is suffering from a complication of deep-seated diseases. He finds on every hand plenty of lotions and local applications, and plenty of practitioners who are anxious, for personal gain, to try this, or that remedy, but none of them do any good; they do not reach the cause of the trouble, and therefore only aggravate the malady and weaken the patient. Wiser and more experienced physicians, figuratively speaking, examine the patient; they know the true cause of his suffering, but they shake their wise old heads and pass on. Perhaps they have decided that the case is hopeless, or it may be that they have prescribed for this patient before and know that he will not take their advice nor follow their instructions, and consequently rather than risk their reputations, they cultivate other ambitions and leave their profession, which is so much in need of good men, and go into other occupations, savoring more of the qualities of proportion commensurate with high ideals than does the lumber business of today. Many good and capable men of seniority have thus left our ranks in recent years, and who can blame them? Surely, approaching Heaven from the present level of the lumber business is sufficient cause for apprehension, and who can blame anyone for seizing any extended rope that seems to lead to a higher level?

Down Beside a Shady Pool

I remember, in my childhood days, playing for hours at a time by the side of an almost stagnant pool, and as I watched from the sloping banks the dancing, glittering ripples stirred by the gentle breezes on the surface of that pool, as the glorious sunshine from an azure sky shone down upon them, my childish heart filled with joy and gladness. How perfectly grand, and supremely beautiful, and how genuinely satisfying it all was to my childish nature. I did not look, nor even think, beyond the surface of that pool, and had my childish mind been able to have done so, it would have spoiled the picture which I have carried unto this day, and which is so vivid in my memory. Then again, as the day became spent, and I had benefitted nothing except from the feastings of my imaginations, the programme changed. The ripples ceased, and music by a choir of probably many thousand voices was heard in the distance as I turned from the scene. There were some very long and grating voices which made me shiver, for I had conceived the idea that their owners were very large frogs, and probably owned the pool. I have since learned that this was a mistaken childish idea, and that the loudness of the noise does not always indicate the size of the frog making it. However, the frogs in that pool all wanted to talk at once, and each seemed to try to drown the voice of the other, and as near as my childish mind could interpret them they were all of different opinions, and sometimes a sudden splash in the water would indicate that they were ready to enforce their opinions on a neighbor if his agility had not taken him to safety. I don't know to this day who they were addressing—it may have been me, but here are some of the things they were saying: "Go Around," "Cut across," "Knee deep," "You'll drown," "Wade in," "Stay out you chump."

A Ripple on the Surface Now

It is not my intention to insinuate in this article that the lumber business is a pool, nor yet that those engaged therein are frogs; neither do I wish to be interpreted as sounding the gong of pessimism. There is at the present time, however, a "ripple" on the surface of the lumber business which has, I fear, brought about an unwarrantable feeling of joy and optimism to the minds of those engaged therein, while from the "banks" it can probably be seen that it is only a ripple on the surface.

Now I would not have anything done to disturb this ripple, but let it dance before us in all its splendor, and in all the brightness of anticipation that can be reflected from it, but I would not have any one deceived by the belief that it is going to develop immediately into a big wave, for such is not likely to happen. All we have got to do in order to settle this matter in our minds is to consider our prospective markets, and what has to be done before we can reach them; or let us consider our home building, and where are the young men gone and going who are going to build these homes? Still, courage is one of our grandest assets, and it is good to see so much of it being exhibited in the land today. Courage is not dangerous. Rashness is. If I had gone down into that pool of my early recollection, and floundered in its stagnant waters and drank copiously of them, I might not have an existance today; but I didn't do it. I got as much of it as was good for me, and no more, and this is my advice to lumbermen today; get as much of the business as is good for you, and no more. Let your neighbor have some of the good things, for if you try to get them all he is liable to raise his voice in an inharmonious sound which is sure to break any semblance of unison that there might appear to be.

An Endless Serial

Lumbering in British Columbia affords a subject for an endless story, which, like the words of Holy Writ, may be told and retold, and never grow old. It is a subject which has more interest for the average British Columbian than any other industrial interest at the present day, and therefore it may be told over and over again, and the light of discussion so reflected that it will brong out before the listener-reader many different phases which have hitherto not been reflected. The lumbering industry in this province is one which means more to British Columbia, if not to the whole of Canada than any other of our five great industries, the other four of which are mining, fishing, agriculture and commerce, and therefore is a subject worthy of all the discussion and consideration which has hitherto been spent upon it by the best minds.

The application of principle by which the manufacturing and merchandising of lumber is controlled should be scientific in the true and logical analysis of the word. A game that is worth while, if it is to be played successfully must be understood, and so it is with this industry. There are no great mysteries about it, but it does extend to and take its root from depths beneath the surface, which can only be reached by close application and scientific study of both principle and practice. The one great trouble with the lumber business as it is conducted today is that there are too many in the business who are working by guess and by "Gaston." They guess they are right, and by Gaston when they have transacted the business they find they were wrong.

"There's a Silver Lining"

Despite the foregoing phases of the situation, which we greatly deplore, but upon which I will not dwell further in this article, it is much easier for a man who does not wish to bear the stigma of being a pessimist to discuss the lumber business today than it has been for some time, and for this we are all very thankful; I know we are. This condition of affairs, which puts words in our mouths which can be truthfully spoken today, but which would have had but little meaning a year ago, has been brought about by that one great and mightiest of all agents—energy. Some people seem to think there are different kinds of energy, but this is a mistake. It is the same energy, but differently applied. Energy may lie inactive, or it may be irrepressibly employed. It may be directed in various ways, and with varying results, but it is the same energy and comes from the same source. The energy that makes the world go round is the same energy which is behind the lumber business in this province today, and if carefully and properly applied it is going to make the business hum in spite of all its afflictions. Energy may be constructive or destructive, corrupted or perverted, but disguise it as you will, it is the same power which dominates the great forces of yesterday, today, and for-

ever. It is God-given, and neither man, Kaiser nor devil can kill it.

We are being forced on, even beyond our most sanguine hopes of a year ago by this great and all powerful agent which evolves all good things, and the evolution is already beginning to give us glimpses into the future that are very gratifying. Things are looking decidedly better, and unless we do something that will bring a blight upon our prospects by some irresponsible act committed without due deliberation, there is a brighter future, which ought to be made a reasonably profitable one, now lying before us, and while we have in the past, with all due reverence said, "Give us this day our daily bread," we hope that in the future we may be able to have a little butter on it. I cannot pass from here though, without sounding a word of warning, for a great danger is imminent. A great revival is upon us. Not great perhaps in the sense of proportion in which we have been accustomed to consider greatness in past years, but great because of the mighty hidden power which is forcing it upon us in the face of all obstacles. You might as well try to turn the tide as to stop this force; not even the Kaiser and all his hell-bound forces have been able to do it. It will take its course, but will do no harm, so do not get excited. I sound this warning because there are some people to be found in a revival of any kind who are not rooted beneath the surface, and who lose their equilibrium so easily that they not only make themselves appear riduculously irresponsible, but their acts may result in untold injury to others.

Judgment was handed down recently in the Supreme Court of Nova Scotia, deciding that all men who are engaged in the lumber business are not necessarily lumbermen. The judge giving this decision, if he has never been engaged in the lumber business himself, has at least some powers of discovery, as well as the courage of his convictions.

We sometimes hear the remark that "competition is the life of trade," but I never could quite concur in this statement without qualification. Healthy competition may give a stimulus to trade, but blind competition is sure death every time, and the worst and most miserable of all deaths of this nature is when a man is his own executioner. Even though he may pull others down with him, wherein is he benefitted? "Ah," he says in frenzied excitement, "but we kept those fellows on the other side out anyway, even though we didn't make anything ourselves." Would it not be infinitely better to have maintained a price that would have enabled them to have sent a few cars in, than to have used such methods as we have used in the past to keep them out? Let us remember the lesson of the dog and the shadow, and be satisfied with a fair prospect of making a little profit from a reasonable volume of business.

It has been said that a certain number of fleas are good for a dog, but the dog did not say so. If he could be heard he would doubtless tell a different story. He not only finds them a nuisance, but they are sapping his strength. Blind competition such as we have seen in the lumber business is just as good for the business as fleas are for a dog. If we were working only for the good of our health, and to develop muscle, then nothing could be said against some of the methods which we so often see employed. The trouble is, though, that we are looking for more, and it is also costing us more to look. We pay 20 to 30 per cent. advance on belting; 40 per cent. on nails and tool steel; 20 per cent. on truck tires; 10 per cent. on saws; 100 per cent. on bolts, washers, iron and soft steel; 400 per cent. on high speed steel for planer knives, etc., and will, if we are not careful, before the season is out be paying 50 per cent. advance on much of the labor used, because if an unwarrantable demand is made upon it the supply will be found limited and very inefficient, and the disturbing element will be set at work.

The man who proposed government regulation of prices in the lumber business of this province, and jail for the man who broke them, has certainly had enough to provoke him to wrath. Let us hope, though, that no such extreme measure may be required, but rather that we may begin upon a new era, and that in performing the obsequies of the past, all those old traits of irregular procedure may be placed upon the funeral pyre.

Geo. Gordon & Company's New Plant

Less than a year ago, or to be exact, on July 19th, 1915, the large sawmill at Cache Bay, Ont., belonging to Geo. Gordon and Company, Limited, was destroyed by fire. Today, the company is operating a fine new mill, illustrations of which are published herewith. With their characteristic energy, the company lost no time in preparing plans for the new mill and in having the construction commenced. The result is a splendid new mill with every modern equipment.

The main mill is 58 ft. by 172 ft., and its equipment consists of the following:—2 double cut band mills (Waterous Engine Works Company, Brantford, Ont.); 1 horizontal band resaw (Diamond Iron Works, Minneapolis, Minn.); 1 72-in. edger (Diamond Iron Works, Minneapolis, Minn.); 1 extra heavy carriage (Diamond Iron Works, Minneapolis, Minn.); 1 extra heavy carriage (Wm. Hamilton Company, Peterboro, Ont.); 1 gang edger (Mowry & Sons, Gravenhurst, Ont.); 2 lath machines (P. Payette & Company, Penetanguishene, Ont.); 2 bolters (P. Payette & Company, Penetanguishene, Ont.); and 1 picket machine.

The trimmers, steam feed, kickers, loaders, slash table, shafting and pulleys were supplied by the Waterous Engine Works Company.

The engine room is 26 x 43 ft., with solid brick walls, tar and gravel roof. It is equipped with one Nagle Corliss engine 24 x 48. The boiler room is 53 x 45 ft., with solid brick walls and corrugated iron roof. It contains 4 boilers 72 in. x 16 ft., 1 boiler 66 in. x 16 ft. and 1 boiler 60 in. x 16 ft.

The locomotive house is 28 ft. x 98 ft.; a frame building with tar and gravel roof.

The machine shop, blacksmith shop and boiler room are 53 ft. x 49 ft., a frame building with the exception of the part which is used for the boiler room, the latter being of solid brick with tar and gravel roof covering the whole building. The boiler room in connection with the machine shop contains 1 boiler and a dynamo which supplies light for the mill and the planing mill, and light and heat for the locomotive house, machine shop, office and store.

Geo. Gordon & Company's New Sawmill at Cache Bay, Ont.

Elm stave and hoop logs in the yard.

A good load of cooperage elm logs—4274 ft.

The Cooperage Industry in Ontario

By J. Innes

THE manufacture of cooperage stock in Ontario is one of the oldest industries we have. So far as I can learn, the first slack barrel staves that were manufactured under the present system were made at Iroquois, Ont., in 1862, by Mr. Patton, this being the earliest record we have of staves being manufactured with the concave knife. Before that large quantities of slack barrel staves were made in Ontario by hand, from red oak, by splitting the staves from bolts and then hand-dressing them, the same as white oak staves were hand-dressed in England until very recently. In fact white oak staves are still hand-dressed to quite a large extent in England and on the Continent, by using in-shave and out-shave knives.

Since 1862 the manufacture of cooperage stock in Ontario has developed into very large proportions, the high production lasting from 1884 until about 1910, when the timber (more especially elm timber), began to be scarce, and the production commenced to decrease. Probably the high-water mark was reached in 1890, when there were several mills at nearly every station in Kent, Essex and Lambton counties, and a great many mills at other points, which are now out of business. At the present time, the business is widely distributed over Ontario, and while there are not the number of mills there were in 1890, and the production has decreased, the business is still a very important one, and requires a large number of men, both in the woods and in the mills.

While the favorite timber for slack barrel staves is elm, which is the only timber to amount to anything that is used for hoops, and while basswood is the favorite timber for heading, staves are manufactured from birch, maple, poplar, basswood, beech, ash and spruce, and heading is manufactured from basswood, poplar, elm, maple, beech, birch and spruce. The highest priced staves are elm, and they are the most satisfactory staves to work. The only hoops that have proved satisfactory are elm hoops, when made from logs, but quite a large number of bark hoops are used, made by splitting and dressing small saplings, principally hickory and oak being used, although chestnut and white ash make good hoops. In heading, while basswood is the easiest to work, almost any of the native timbers in Ontario, if properly treated, will make good heading for any purpose, and as basswood is becoming very scarce, I believe that birch is the coming timber for heading.

Lumbering in the cooperage business is done, to a very large extent, by farmers, who can employ their teams in the winter, when they have nothing else to do, but the large cooperage concerns supplement the farmers' work by employing numbers of teams of their own, and almost invariably use their own cutters in sawing down the trees. As the timber is getting scarcer, and farther away from the mills, a great deal of it is railed in, or brought in by water, in the shape of logs or bolts. Very few of the concerns now manufacturing cooperage stock own large timber limits. The timber is mostly owned by settlers, and is for sale, standing in the woods, or delivered to the mills or railroad. On the logs or bolts arriving at the mills they are manufactured into staves, hoops and heading.

Handling Stave Logs

For the manufacture of staves, the logs are put through the sawmill and made into bolts. The bolts are then put into the steam-boxes, steamed for twenty-four hours, so as to make them soft and cut easily, and then cut on a stave knife, which cuts on a 20-inch circle, five staves being cut out of each 2 inches of the bolt. The staves are then piled on the yard, or in sheds, to season. After being seasoned they are jointed with a diamond-shaped knife, which puts on the required bilge, and are packed up in bundles of sixty staves each (graded according to quality), and are ready for the market.

The hoop logs are taken into the mill, sawn into hoop plank, 1½ in. thick, and whatever length is required for the particular hoop

Stave and hoop mill at Sundridge, Ont.

One of the Sutherland, Innes stave and hoop mills.

that is to be manufactured, the standard hoop being 6 feet in length. These plank are then put in boiling vats, and boiled from twelve to fifteen hours. They are then taken to the cutting machine, which cuts the hoops, six hoops to 2 ins. in thickness. The hoops are then stood on end to cool off and after being thoroughly cooled are taken to the planers. The planers plane the hoops a uniform thickness, putting on the necessary finish, and they are then carried from there to the pointer and lapper. The pointer and lapper puts the point on the hoops and the other end is thinned to what is called the lap. From there the hoops go to a vat, where they are again boiled so as to make them flexible, and from there they are taken to the coilers, where they are coiled in coils of ten hoops each, and after being piled in the sheds to dry they are ready for shipment.

The Manufacture of Heading

Heading is manufactured either from logs or bolts. If it is manufactured from logs the logs are run through the mill and reduced to bolts. The bolts are taken to the slicer, which slices them into boards, 5/8 in. thick, and in most cases they are taken from there and piled in the yard for seasoning, although in some mills they are taken direct from the slicer and piled in the kilns and kiln-dried direct from the slicer. The ordinary way of manufacturing here is to pile them in the yard first, and season them for about sixty days. They are then taken from the yard and piled on cars in the kiln, where they are kiln-dried, from thirty-six to seventy-two hours, according to how well air-dried they have been. From the kiln they are taken out into the open, where they are left for twenty-four hours to cool off, so as to be tempered. They are then run through the planer, and planed off on one side, and from there to the jointer, which straightens the edges of the boards, and from there to the matcher, which matches up the boards to the necessary width for the size of heading that is to be turned. From there they go to the turner who turns them whatever size is demanded by the customer. After leaving the turner they go to the packer and are put up in bundles of twenty sets each, packed by a power press, and bound with heavy wires or iron bands, when they are ready for shipment.

Head liners in Ontario are mostly manufactured from parts of hoops which are too short to make good hoops, and are run through a planer and then packed up in bundles of 250 each, and after being piled on the yards and seasoned they are ready for shipment.

The stock, after being manufactured at Ontario mills, goes to markets practically all over the world. While a large part of the stock manufactured is consumed in Canada, shipments are made in large quantities to Europe, more especially to the British Isles and the Mediterranean ports, and here we might say that the present war has created a demand from Mediterranean ports for large quantities of stock which formerly used to be supplied from Austria, Germany and Russia. The principal export market, however, is the United Kingdom, as, on account of most other countries making staves, in a larger or smaller way, there is quite a tariff against Canadian staves, and this shuts out our stock to some extent.

Barrel and Keg Consumption Increasing

While the manufacture of cooperage in Canada has decreased during the last ten years, the consumption of barrels and kegs in Canada has increased, and from present indications, with the agitation for sanitary packages, it looks as if the consumption would still further increase. There is no question that, as a handy package, and a sanitary package, the barrel is the best on earth, and while cheaper packages will no doubt always find many advocates where a strong and sanitary package is required there is nothing to equal the barrel.

During the last couple of years quite a number of staves have been imported from the United States, and also some hoops. This is not because there is not enough stock manufactured in Canada to take care of the home trade, but sometimes the demand for export, and for near-by points in the United States is so heavy that it pays the manufacturers to import stock from the Southern States, instead of carrying their own stock for months.

While there used to be a large quantity of tight barrel staves manufactured in Canada, whole vessel loads being shipped from Ontario to Europe, the oak in Ontario has now been pretty well used up and very few tight barrel staves are manufactured here. What we class as tight barrel stock are staves and heading required for barrels, containing liquids, more especially volatile liquids, such as alcohol and malt liquids. Nearly all of the staves and heading required for this business are now imported from the Southern States, and what oak there is left in Canada is used for other purposes, as the quality of the white oak in Canada is very much superior to the Southern oak, both in quality and figure, and is in good demand for furniture, or purposes where great strength is required, or hard-wearing qualities are desired.

As to the future of the cooperage industry in Canada, Northern Ontario has immense tracts of timber still undeveloped, some elm and basswood, but principally birch, maple and poplar, and this timber will keep the market for cooperage stock supplied for years to come.

Hardwoods of Algoma District

A Promising Locality for Production of Toys and Woodenware—Plenty of Power

GENERALLY speaking the merchantable hardwood area of Canada finds its northern and western limits in the district of Algoma, Ont. Algoma is a large district with one of the heaviest mineralized sections to be found in Ontario, and at the same time it is one of the roughest parts of the country. The southern extremity of the district of Algoma is marked by three islands, the largest being the Grand Manitoulin, Cockburn and St. Joseph. These islands are of limestone foundation and are practically an extension of the Bruce peninsula. The timber growth upon these islands has all the characteristics of that found on the Bruce peninsula, and includes all the hardwoods of older Ontario. This is true of the Manitoulin island, especially, where, on the shore of Lake Manitou, an Owen Sound Company operates a mill which has shipped a large quantity of splendid basswood and ash. Thirty years ago square white oak was being shipped to the Quebec market for export to England, from the same district.

Cockburn Island is to the west of Manitoulin and formerly had a good growth of red oak, birch and maple, but unfortunately a large amount of this has been destroyed by fire.

Still further west lies St. Joseph's island, which contains a stand of maple, particularly on the mountain section, a plateau about 400 feet above the level of Lake Huron. This section is now being logged by means of a standard gauge railway owned by the lumber company operating on the island. The largest maple yet cut upon St. Joseph's Island is reported to have contained 1,300 board feet, and the tallest contained four 14-foot logs, the diameter at the end of the top log being 14 inches. The largest birch scaled contained 2,300 feet. This tree was so very similar to cherry that the firm to whom it was shipped some time afterwards sent it to an interior finish factory as birch and had it returned to them because it was said to be cherry. The matter had finally to be referred to an expert.

Quite a fair quantity of basswood is found on these three islands, but only a small percentage of elm. On the mainland there are some fair stretches of ash, commonly known as black ash. On the mainland, across the north channel from the islands, there is an entirely different formation. The old Laurentian igneous rocks prevail and there is an immediate change in the quality of the maple found there, as compared with that of the islands.

In many of the valleys of Algoma, east of the height of land, there are to be found some of the finest birch trees in the world, both for color and texture. Unfortunately the stumpage per acre is very small. In some sections ridges of very fair red oak are found, averaging 24 inches in diameter at the stump.

East and west, a ridge of hardwood runs about forty miles with an average width of ten miles, some parts of it being so clean in the bottom that one can drive through it with a buggy. Unfortunately, this ridge is located so far away from any railroad that it is not as yet accessible

Hardwood lumber has been manufactured in Algoma for thirty years in a more or less desultory manner, no one having accumulated any great wealth at the business, largely on account of the low price, and at one time, on account of unsatisfactory grading by the inspectors employed by Canadian manufacturers. Of late, however, this condition has been altered by the fairly universal use of the N. H. A. rules.

The best way in which to develop the hardwood stumpage of Algoma district would be to construct a plant that would utilize the whole tree, converting the usable timber into lumber and dimension stock, and the poorer end and the tops into chemicals. This is being done successfully in other districts where practically the whole tree, with the exception of the brush, is converted into a marketable product of one sort or another.

The Canadian Department of Trade and Commerce have introduced some of the hardwood manufacturers of Algoma to foreign buyers by means of correspondence, and a Russian order for 10,000 butter tubs per month may be secured in the near future, also an order for 50,000 brush backs of various sizes for Scotland.

The district of Algoma offers, with its wonderful water powers and cheap hardwood stumpage, perhaps the best opportunity for the manufacture of toys and woodenware to be found in Canada. Water powers to develop 2,500 to 5,000 h.p. are available in many localities. There is fair transportation service east or west, by water or rail. There is abundant stumpage specially adapted to the manufacture of toys and woodenware. Those who are acquainted with the district are firmly convinced that there is an opportunity here for working up a large and important industry.

Surveying New Brunswick Timber Lands

Provincial Government Making an Intensive Study of all its Timber and Agricultural Lands—The Method Adopted

By P. Z. Caverhill

New Brunswick is one of the oldest centres of the lumbering industry in Canada. Nearly 300 years ago white pine from the St. John Valley supplied masts for the French navy. When the province came under British rule this trade was still further expanded. Masts, spars, squared timbers, planks, staves and shingles being supplied. In those early days, both the Crown lands and the Customs were administered from London, and only meagre information regarding the extent of the industry is now available. White pine is known to have supplied nearly the whole trade, which in 1825 reached a total of 400,000 tons of squared timber, 6,000 spars, and 25,000,000 feet of planks, boards, lathwood, etc. In that year the trade in white pine had reached its maximum and thereafter rapidly dwindled until at the end of the nineteenth century it had been reduced to a negligable amount, its place being taken in the export trade by spruce.

The first shipment of spruce was made in 1822, when 100,000 superficial feet of deals was sent to England. In 1850, 148,000,000 feet was shipped, including both deals and boards, while at the present time over 400,000,000 feet is shipped annually from our forests.

About the beginning of the twentieth century the public began to fear that the amount of timber cut was in excess of the growth; that spruce would follow along the same lines as pine and the industry, one of the most important in the province, would be short lived on account of the lack of raw material.

In 1906 the Public Domains Act was passed, providing for the better preservation and protection of the public domains. Following this act, in February, 1907, a Forestry Convention was held in Fredericton, to consider forest protection and what the future forest policy should be. The one immediate result of this convention was the creation of a forest school in connection with the University of New Brunswick.

In 1913 an act was passed authorizing the Surveyor General to make a survey of the Crown lands; the object sought being:—

1. To ascertain with as much detail as possible the quantity, quality and character of the timber on the various areas of Crown land.
2. To determine, as near as possible, the annual growth on the various areas.
3. To study logging conditions, estimating the cost of logging and stream driving on the different areas.
4. To locate and map any areas of agricultural land, distinguishing them from other areas suitable only for the reproduction and growth of timber.

This survey has been started this year and it is the intention of the Department to complete it at as early a date as possible. The Crown lands consist of about 7,000,000 acres, of which 6,530,720 acres is held under timber license. The chief aim of the survey is to secure information for the better administration of these lands, both now and in the future, the idea being to put the lumber industry on a permanent basis in so far as the present needs will permit.

The survey will show not only the areas and quantity of merchantable timber, but also what areas are being overcut, and where more cutting could be done, with reasons for the variations, such as inaccessibility, transportation, or speculation.

It will show areas where settlement should be allowed and where the land should be reserved for timber only.

While, as above stated, the survey is intended to gather information for administration purposes, it will nevertheless be of considerable importance to the lumbermen themselves. Not so much in the matter of quantity of timber will this importance be, as most loggers have an idea of the amount of merchantable material on their limits; but with regard to the growth and logging studies.

Many of the mills have long ago finished their virgin stands and are now cutting the second or third crop; that is, they are dependent upon the annual increment to supply their mills. Is this sufficient to supply their needs? Cutting down to a certain diameter, in how many years can a return cut be obtained of equal size? These are questions of vital importance to the industry, which will be answered.

The logging study will show the cost and defect or advantage of the present methods of logging as compared with other methods used under similar conditions; where saving might be effected and waste material utilized; also the possibility of establishing new industries, dependent largely for their raw material upon what is now wasted from stump to manufactured product.

The agricultural classification will show clearly the areas that are liable to be withdrawn for settlement purposes and will thus allow the operator to plan his operation to better advantage.

The plan calls for a four per cent. cruise of the entire Crown land area, and is one of the most intensive surveys yet undertaken on such an extensive area; the work undertaken by the other provincial and Canadian governments being more along the lines of general reconnaisance, except on limited areas cruised for special purposes.

Similar work has been done by the C. P. R. in their holdings in the Crow's Nest; by several of the larger paper companies and by the New Brunswick Railway Company on their lands in New Brunswick.

Hon. Geo. Clarke.

P. Z. Caverhill.

Canadian Western's New Toronto Manager

The Canadian Western Lumber Company announce to their many friends in Eastern Canada, the appointment of Mr. L. D. Barclay as manager of their Toronto sales office at 62-64 King Street East, Toronto.

Mr. Barclay commenced in the lumber business in Ontario, but, like many of the young men of the east, felt that with the opening of the Panama Canal and the gradual cutting out of eastern timber limits, the lure of the west became too strong to resist. Mr. Barclay started with the Canadian Western Lumber Company at their Fraser Mills' plant in 1912, loading lumber into cars and working in the grading sheds. Through persistent and energetic work, coupled with a desire to learn the business thoroughly, Mr. Barclay's promotion was very rapid—from car loader to lumber surveyor, from surveyor to an appointment in the shipping department and thence to the local sales, where Mr. Barclay had charge of the Canadian Western Lumber Company's retail sales in the city of New Westminster and suburbs. Mr. Barclay later covered the province of Saskatchewan and from there was moved back to Toronto as assistant manager of the Toronto office. Upon the resignation of Mr. Hugh A. Rose, Mr. Barclay has been appointed manager of the office. His thorough experience of Pacific Coast lumber, coupled with a knowledge of eastern Canadian conditions, and an acquaintance with so many of the eastern Canadian trade, made Mr. Barclay the logical man for the position.

The appointment is in line with the policy of the Canadian Western Lumber Company, in that it believes in educating its representatives, who are to meet the trade, first of all in the manufacturing and grading of its products, and when they demonstrate their ability in this line, they are sent out to represent the company in different markets where British Columbia woods are being used.

Hon. G. Howard Ferguson, Minister of Lands, Forests and Mines for the Province of Ontario, has decided to open the Gillies timber limits on the Montreal River once more, for prospecting and staking, and also for sale or lease for mining operations.

Canadian White Pine Should Be Advertised

Wood Substitutes and Imported Lumber Reaping Benefits of Publicity While White Pine Stays in Hiding

ONE of the most remarkable and probably one of the most important developments in connection with the lumber industry in the United States during the past few years has been the growth of the co-operative movement for the advertising of important lines of lumber. One might name a long list of special lines of lumber in the United States which are now being successfully advertised by those who are chiefly interested in their production or marketing. We may indicate the nature of this list simply by mentioning a few of the varieties of lumber, such as Arkansas soft pine, cypress, redwood, northern hemlock, white pine, etc.

This development is a logical result of the fact that practically all other lines of natural products manufactured in the United States have been extensive users of advertising space for many years past, and those which compete with lumber have been cutting seriously into the markets that were formerly supposed to be the natural and sole possession of the lumber manufacturers.

Now that the advertising of lumber has been clearly demonstrated as a feasible and profitable scheme in the United States, and as it has been so definitely worked out along the line of advertising special varieties of lumber, the manufacturers of which pool their interests and share the expense, the question naturally comes up why something of the same sort should not be done in Canada. There are certain varieties of lumber in Canada which seem to require something of this nature in order to put new life into their markets. Everyone who knows anything about lumber history in Canada will, when reading this, think first of the case of Canadian white pine, the old king of Canadian lumber, which, on account of the heavy drain made upon the white pine forests and on account of the co-operation of many other curious and adverse factors, has been deprived of its old place in the sun, has come upon evil days, and is sadly in need of something that will put it back into the honorable place in public esteem which it so richly merits.

The Finest Soft Wood in the World

Let us assume, what practically every lumberman knows, that white pine is the finest softwood that has ever been produced, and that the public if they had not been wooed away from it by the arguments of those who are interested in other lines of wood, and other substitute products, would now be consuming far greater quantities of their old favorite than they are. Then let us call to mind the success of the substitutes, both wood and otherwise, and we question if anyone, whether he be interested in white pine or not, will contradict the statement that white pine ought to be advertised. One of the largest manufacturers of white pine in Ontario, a firm which has had long experience both in the manufacture of lumber and in the production of finished articles of various kinds made out of lumber, writing to us recently says that one of the biggest arguments in favor of the inauguration of an advertising campaign for white pine is that practically every other kind of wood is being extensively advertised and people are becoming so used to using articles that are advertised that the demand for white pine is suffering correspondingly. It is almost ridiculous, this writer says, to note how much faith the public puts in anything that is advertised; in fact there seems to be almost no limit to the amount they will believe, so long as they see it in an advertisement. This is not suggested as a reason for advertising white pine, which fortunately has ample merits for a good advertising campaign, but it is mentioned merely by way of illustrating how the advertising of other materials which have not the natural advantages of white pine, has eaten into the market. The insidious effect of advertising is, in fact, something which ought to be very definitely borne in mind, because it can be made to produce splendid results in the case of white pine, both for the manufacturer and the consumer. Every lumberman knows how frequently he comes across someone who knows little or nothing about lumber, but who, after reading advertisements, or talking with someone who has been reading them, will come out with an assertion that a certain class of lumber is superior to any other, for certain kinds of work, not really knowing anything whatever about the matter. He simply has been educated into such a belief by the force of advertising.

The greatest home of advertising in the world is the United States, and we are not surprised, therefore, to find that the woods of the Southern States have been among the first to benefit from advertising; nor are we surprised to see that this advertising campaign has produced effects not only in the United States, but in Canada, and has been an important factor in the marketing in Canada (one of the greatest lumber producing countries in the world) of vast quantities of lumber of various kinds from the Southern States. In fact, it is astonishing how great an amount of such lumber has been imported into Canada, as shown by the statistics published by the Government. A great many factors have combined to produce this result, but none of them is so potent as the insistent and widespread publicity purchased in newspapers and periodicals, both in the United States and Canada, by the producers of United States woods. This campaign has taught everybody to renew his old appreciation of wood as a building material and to give the preference to those few definite lines that have been advertised. The education has reached all classes, both in the United States and in Canada. As a result, we find architects in Canada specifying the use of southern woods, chiefly because they have been educated to a belief in their special suitability for construction purposes and finish. Canadian architects have acquired this unfortunate habit to a regrettable extent and have been specifying southern woods in great quantities. Architects are, indeed, responsible to a considerable extent for the importation of American woods into Canada. But are they really to be blamed for following along the line of least resistance?

If the manufacturers of Canadian woods, white pine for instance, are not sufficiently interested in their product to make a fight for the market, how can the architect be expected to take any interest in Canadian woods? It might be thought that a Canadian architect would be patriotic enough to favor Canadian woods wherever possible, and probably in most cases he would do so; but that is just where the advertising campaign on the part of the producers of American woods has got in its fine work. In the absence of any persuasion regarding Canadian woods, and in the presence of such definite advertising by American producers, many Canadian architects have come, almost conscientiously, to the conclusion that the interests of their clients are best served in many cases by the use of southern woods.

Probably this situation applies more definitely to the case of white pine in Ontario than to any other case which we could mention. Most of the white pine manufacturers and dealers, as we see it, and as we believe many of them will also admit, have allowed themselves and their business methods to get into a rut, out of which they do not seem to have any wish to pull themselves. All that they realize is that their product is selling fairly well at times, and at other times it is not. The situation is a difficult one to understand. It has always been more or less of a puzzle to the lumber trade, but nevertheless it exists, and the object of this article is to lay before the white pine men of Canada a simple proposition, that they should make a study of their own case, and in doing so, consider whether they ought not now, before it is too late, to get into the procession and educate the public to a proper appreciation of the splendid product turned out by the white pine mills. There is nothing personal about this idea. We have simply seen the course of events across the line and we have come to the conclusion that the depression which so regularly develops in connection with white pine might be relieved, and to a great extent obliterated, by co-operative advertising. It would only be necessary for the white pine people to make a comparison of the increase in the prices of other lumber stocks, which are not comparable for one minute with white pine, in order to convince them that their own product could be disposed of far more profitably if the public were shown by modern advertising methods what an excellent material it is.

The preparation of copy for white pine advertising would not be a difficult matter. There are so many striking arguments in favor of its use that splendid advertising copy could be prepared without difficulty by a good copy writer. It would be a simple matter, by referring to the longevity, splendid working qualities, great variety of uses, etc., of white pine, to educate the reading public quickly to a far better appreciation of its many virtues. Any group of white pine manufacturers or dealers could readily draw up a practical list of advertising points in connection with such a campaign.

This matter has been under discussion quietly among a few prominent white pine manufacturers and dealers in Ontario. We hope that as a result of this discussion, and of the case we have made out in favor of an advertising campaign, something definite will be done in the near future. Why should not a representative gathering of white pine manufacturers be held to take up this subject?

Edward Harper Wade.

The European War and After

Position of the Lumber Trade Before, During and Subsequent to the Great Conflict

By Edward Harper Wade

At the present time all interest, not only for individuals, but for business, centres in the conflict now raging. Speculation tries to fathom its probable duration or forecast the conditions that will follow its conclusion. For Canadians, as for the allies, there is only one possible end, the final and decisive defeat of the German confederacy, and the utter destruction of the Prussian military power, followed by readjustment of frontiers in accordance with the desires of the people most interested, and perfect, lasting peace. This may be far off or comparatively near at hand, but in the light of past history is inevitable. It was conceded by historians that the erruptions of barbarians that menaced civilization in the past had under modern conditions become impossible, yet Prussian-controlled German hordes have swept over some of the fairest parts of Europe, wasting fields and destroying cities, ruining cathedrals and burning libraries, levying exactions, shooting non-combatants, violating women and mutilating little children, in short perpetrating all the horrors that marked the incursions of the Huns, of the Goths and Vandals, or of the Turks and Moors, but they have antagonized and aroused the civilization of the world and their doom is inevitable. Already, it is reported, Longwood, Napoleon's residence at St. Helena, is being put in readiness for another guest.

Lumber Business Greatly Affected

Possibly no business has been more directly affected in various ways than the timber trade, and for no other has after war conditions a closer or deeper interest. The money that has poured into the United States will to a certain extent go out again for Canadian lumber. The people of the United Kingdom have learned more respecting the intrinsic value of wood since the war commenced than in all their previous history. They have for some time past grumbled over the increased price of wood generally—an advance that arose from the depletion of the forests, the greater consumption in the supplying countries and the heavier cost of manufacture and delivery at the port of export, but this has specially been in the higher grades, and has been met in them by limiting consumption and substituting cheaper woods or other material whenever possible. Now the advance has come in wood of all descriptions, including the lowest grades and the cheapest kinds. To give one typical instance out of many. Churchill & Sim, leading London brokers, in their circular of August 6th, 1914, gave the current selling value of New Brunswick spruce deals as £10 10s. to £11 per Pg. Std. of 1,980 feet B.M., with oddments, battens and fourths at £9 to £10, equal to an average all round price of about $24.25 per 1,000 feet B.M. piled in London. The same firm in their circular of February 29th, 1916, gives the value of the same descriptions at £28 to £29 and £26 to £28, equivalent to $64.25, an advance of about 165 per cent. Now where are the substitutes of which we heard so much at every slight advance in times past? It seems a particularly favorable time for their appearance, but practically they are conspicuous by their absence, and consumers pay for their requirements the increased prices as readily as they did the former ones, seeing no alternative. The intrinsic or real value of wood is clearly demonstrated against its commercial one under competition.

No doubt a great proportion of the advance comes from increased ocean freights. Great Britain has always recognized the value of her fleet, and whatever party has been in power the Government has maintained the naval efficiency as a necessary protection to the shores and commerce of the United Kingdom, but the value of the mercantile marine was only dimly recognized. Yet under the enterprise and management of the steamship agents and owners, the mercantile fleet steadily increased without Government protection, subsidy or assistance, till both ocean freights and marine insurance reached lower and consequently cheaper levels than ever before. On the whole, no doubt a fair return for the investment of capital was obtained, but in many cases the margin of profit was extremely small for the service rendered. That 165 cubic feet of deals should have been loaded, taken across the Atlantic, and discharged for delivery for 40s. per P.S.H., as was sometimes the case. is one of the wonders of modern commercial traffic, seeing the rate is equal to less than $5 per 1,000 feet B.M. After the war commenced freights began to advance, at first slowly, but later by leaps and bounds, till 45s., the current rate when hostilities commenced, has become 350s., with more enquirers for tonnage than steamers available.

It is quite certain there will be an immense demand for wood on peace being restored. Man requires first of all food, then clothing and next shelter, and except in a tropical clime the need for the latter is almost as imperative as for the former, though not so immediately pressing. Of all possible material a shelter can be most readily constructed with wood. Scantlings and boards are readily transported, quickly put together and form an efficient shelter.

The Crimean war in 1854 created the last high-water mark of wood prices in the United Kingdom, and at the close of that war they fell heavily and rapidly, but conditions were entirely different in many respects from the present, and no comparison can be drawn.

It seems certain that, after the war, new commercial conditions will obtain. For the United Kingdom the income tax and death duties, the spirit and beer excise and customs, the tobacco and tea duties, the post office and other present sources of revenue, will probably be insufficient in their product to meet interest on the National Debt of the future, pay war and old age pensions, and defray general necessary expenditure, so it is highly probable an extended customs tariff will be necessitated. This will give an opening for Colonial preference that hitherto has been wanting, and is quite likely to benefit the Canadian wood trade. Each of the Overseas Dominions might arrange its own tariff on its own lines as heretofore, but by common agreement each portion of the Empire might concede a reduction of one-third of the duty to any other part, with some possible necessary exemptions, to apply to all, such as spirits and tobacco. It is regrettable that the one-third concession, or British preference, which was at one time the special feature of the Canadian customs tariff was ever abandoned for the present system of three separate rates in the same tariff. Formerly each Canadian province made its own tariff and held its own customs boundary. At Confederation this was swept away and free trade within the Dominion arranged, with a common customs boundary. The same process followed in Australia and South Africa, and in the long run no one was the worse and all benefitted. Is not the next logical step free trade between the four Dominions and any other British possession that desires to come into the arrangement, or failing free trade, as large a percentage preference on the tariff of each Dominion as may be found possible or advisable. Does anyone suppose the result would be disastrous for Canada, if she admitted duty free everything except spirits and tobacco that Australia, South Africa and New Zealand could send her in return for a similar concession on the part of these Dominions, and how great a benefit would the corresponding concession be to the lumber trade of the Pacific Coast and Canada generally, in connection with Australasian and South African business. The United Kingdom might still be limited to a tariff percentage reduction as at present, till she had defined her new tariff and decided on her future customs policy.

The Rate of Exchange

The question of the rate of exchange, at one time during the war, a source of very considerable anxiety to Canadian and American shippers to the United Kingdom, now seems well in hand. The sovereign, or pound sterling, payable in London, for a time lost a portion of its purchasing power in the markets of this continent. Early in September last year, while Canadian banks would readily give in exchange for fifteen sovereigns the sum of seventy-three dollars, they would only give about sixty-eight dollars for a sight draft on London for fifteen pounds sterling, a heavy loss to shippers of wood and all produce. The situation was finally relieved and exchange brought back to approximately its normal condition by the British Government purchasing and mobilizing American securities held in England, and transferring some for realization to the markets of the United States, so re-establishing the balance of trade which had been upset by heavy shipments of munitions and produce from this side against greatly reduced imports from the United Kingdom. It is remarkable that the remedy was first suggested by a correspondent of the Montreal Gazette on August 23rd last, though not adopted in London till all other attempts to adjust matters otherwise had been found inadequate.

The wood export trade of Canada need have no fear of a return of such adverse exchange conditions as prevailed for a time last year.

In the present scarcity of ocean tonnage it seems regrettable that interned German steamers should be idle in United States ports. If they could be sold by auction to the highest bidder, the proceeds of the sale to be held instead of the steamers by the Government of the United States till the declaration of peace, both the owners of the vessels and the commerce of the world would benefit, and it is possibly not beyond the wit of man to devise restrictions that would prevent the purchasers from using them to the detriment of the Allies, so no one would suffer.

It seems certain that at the termination of histilities there will be an unprecedented demand in Europe for wood, and the steamers now employed in transporting troops or military supplies will again be available for its shipment. It would be well for all members of the trade to keep this in mind.

New Conditions Created by European War

High Cost of Tonnage—Scarcity of Vessels—Wooden Ship Revived—Skilled Labor Enlisting

By Elihu Woodworth

THE war has created a number of new conditions which have had and are still having a direct bearing upon the lumber trades. Some of these conditions were brought into existence almost as soon as war was declared and have affected the trade ever since; others have been created or developed at a comparatively recent date, but are none the less making their influence felt. Separately or combined these conditions have produced results such as were never before known in the history of the lumber trade, and such as are by no means likely to be experienced again.

Early in the war came what practically amounted to the closing of the ports of Northern Europe. Some of these, it is true, were still nominally open, but the attendant risks largely discounted their commercial value. When the cost of importing European lumber became in a measure prohibitory, British buyers were forced to look elsewhere for their supplies and, very naturally, the demand for Canadian lumber became very urgent. The increased demand and the consequent advance in prices would have undoubtedly been very satisfactory to Canadian lumbermen, but unfortunately they were confronted by an unexpected condition which threatened to neutralize their advantages. This was an almost unbelievable lack of tonnage, and this remarkable shortage, like the imperative demand for more bottoms, was due to the war. In recent years steamers, as deal-carriers, as well as in other trades, had practically driven sailing ships off the seas, but there appeared to be no reason to anticipate a scarcity of steamers. Here, once more, the war became directly responsible for an unexpected and far-reaching condition. The British Government found it necessary to commandeer a large fleet of merchant steamers for the transportation of war materials, and many others were destroyed by mines and submarines. The result was that the supply of available steamers was found to be entirely inadequate to meet the requirements of the trans-atlantic trade. In this emergency old sailing ships, which for years past had found little or nothing to do, were refitted and remanned and again put in commission on better terms than they ever had before. A fleet of small three-masted schooners, which had hitherto been employed in the coasting trade and which were believed by many to be utterly unfit for ocean navigation, now came to the aid of the "square-riggers" with satisfactory results, and, with the assistance of the few steamers that could be secured, managed in the aggregate to handle exceptionally large shipments.

Meanwhile, growing out of the other conditions, a very important condition was developing, one which although not unknown at other times, soon surpassed all former records. The freight on deals to the United Kingdom, which had risen to fifty shillings per standard at the close of 1914, jumped to ninety shillings in February of last year. The rate advanced steadily during the season, and the year ended with offers of two hundred shillings. In January a charter was closed at two hundred and twenty shillings, and it was thought that the limit had been reached, but a month or so later no ship-owner could be found who would consider anything less than three hundred. A few weeks ago a charter was closed at three hundred and twenty-five shillings, and it is currently reported that the astounding rate of three hundred and fifty shillings is being offered. This report may be slightly premature, but there is little doubt that this figure or even a higher one will soon be reached, and there are men interested in lumber and shipping who are confident that the marvellous advance in rates will not stop short of the four hundred mark. Nothing even remotely approaching present figures was ever known before. Old ship-masters tell of a brief period during the Franco-Prussian war when the rate rose to one hundred and twenty shillings, but this extraordinary advance was shared by very few ships. Since that time the rate has been down to thirty shillings or lower more frequently than it has been up to or above sixty.

One might reasonably suppose that the present freight rates on lumber would prove prohibitive, and they undoubtedly would have that effect if the lumber were required only for ordinary purposes. But the conditions in this great war are new and strange and, as a consequence, the materials of war include large quantities of lumber. Freight charges approximating forty dollars per thousand feet, added to the original cost and extremely high rate of insurance, would soon stifle any ordinary demand for lumber, but when it is required for war purposes the cost becomes a secondary consideration. The quantity of lumber imperatively needed in the prosecution of the war is almost beyond belief. Millions of shells are being turned out as fast as men and machines can make them, and many million feet of lumber are required to make boxes for their transportation. Battle ships of all kinds are being built rapidly and much lumber is used in their construction for staging and other purposes. Lumber is the only material available in many places for making huts for the soldiers, and, when it can be procured, much of it is used in the trenches. While the war lasts lumber will be required for war purposes.

Another condition arising from the abnormal freight charges and intimately connected with them is the excessive advance in the price of merchant ships. Old vessels which would have been sold for a song a few years ago, have been bought recently at prices covering or even exceeding the original cost of construction. One Parrsboro schooner built six years ago at a cost of about $16,000, was sold the other day, it is said, for $25,000. A barque that was dismasted at New York last year and was converted into a barge, was sold recently for $42,000, and is being rigged as a schooner. American schooners well advanced in years, which found little to do before the war, are now busily employed carrying lumber from Nova Scotia to United States ports. Every vessel at present available has been chartered to carry deals, and yet it is feared that the scarcity of tonnage will be much greater than it was last season. Many Nova Scotia shipyards are once more active after a period of idleness, and will turn off quite a fleet of sailing craft during the year, but most of these vessels, although built for and well adapted to the business, will be launched too late to render much aid in relieving this season's shortage.

Enlistments Affecting the Labor Market

Another condition which has just arisen and was undoubtedly created by the war, and which is likely to exert a marked and far-reaching effect upon the lumber industry, is the extremely large number of enlistments among the lumbermen. It is customary in the lumber camps after the logs have been cut and yarded, and while the snow is still deep in the woods, for the men to come out to their homes or to the nearest town and wait for the snow to melt and the streams to rise. When a permanent thaw comes and the ice in the streams break up, the men, or as many of them as are required, go back to the woods and "drive" the logs to the mills. When this task is completed large numbers of the men are drafted into the mills and are kept busy during the season preparing the lumber for shipment. Others find employment as stevedores or wharf men, and, as a rule, all the men who work in the woods in the winter have something to do with lumber during the remainder of the year. All this has now been changed. When the lumber-jacks came out of the woods this spring they were met all over the country by recruiting officers who offered strong inducements to enlist, and were very persuasive and persistent in their solicitations. The result is that very large numbers of the sturdy choppers and teamsters have joined the colors, while a few who are not enamored of trench fighting have enlisted in the Forestry Brigade. No better material for making soldiers than the men of our lumber camps can be found anywhere and everyone is proud of the noble way in which they are coming forward, but the fact remains that the almost universal enlistment of our lumbermen is bound to have a marked effect upon the immediate future of the lumber trade. Sailors, too, have enlisted in large numbers, and

have thus increased the difficulty of securing tonnage; but neither the lumber-jacks nor the Jack Tars have a monopoly of the khaki, for men of all classes have responded to the call of their King and Country.

The conditions created or developed by the war have in their turn produced problems that are extremely hard to solve. The solution of some of these depends upon and will quickly follow the termination of the war; while others will require considerable time for readjustment after peace returns. According to present indications there is good reason to fear that a considerable portion of last winter's cut of deals will have to be carried over. Such a result seems inevitable unless the Government releases sufficient steamers to supply the required tonnage. Even if this course should be pursued it will not afford full relief unless it is done quickly, for lumber shipments, especially when men are scarce, cannot be pushed beyond clearly defined limits. If the war continues, the Government can scarcely be expected to spare the required number of steamers, as it seems safe to assume that there is no reason to hope for large lumber shipments this season.

What of next winter's output? Well, the answer to this question seems to depend almost entirely upon the duration of the war. Unless the great conflict ends within a few months the lumber cut of next summer will be the smallest in many years, for the simple but sufficient reason that men cannot be had to do the work. High prices will be of little benefit to the operator who is unable to prepare his lumber for market, and only a very small portion of the work required for an average cut can be done by the men now in sight. This seems unfortunate, but it will not be an unmixed evil; for the most of the trees left standing will be greatly benefitted by having more time to grow.

Perhaps the toughest problem of all is the one that confronts the shipbuilders. For some years before the war wooden shipbuilding had ceased to be regarded as a profitable enterprise. Nearly all the shipyards were closed, and the only vessels turned off were additions to the fishing fleet, or an occasional coaster to replace one that had been lost or in some other way put out of commission. The war changed all that. It would pay to build ships—even at war prices for part of the materials—when two or three successful voyages would clear the cost of construction. A fleet of fine vessels will be turned off this season and will probably prove a good investment. The builders will be in a better position to continue the work than they were to begin it, and the shipyards will keep busy if the war should continue through another winter. But will it pay to build after the war is over? If it should end soon there would still be strong demand for tonnage, but the present abnormal rates and prices would cease to exist, and there would be a rapid decline in the value of wooden vessels. To sum up, the war dominates the lumber industry and everything connected with it. It has been the cause of fabulous prices and freights, it has created a remarkable scarcity of tonnage; it has revived the wooden shipbuilding industry, and it threatens to restrict the lumber output.

Americans Must Pay More for Our Wood

A Discussion of the Pulpwood Situation as Seen by a Canadian Railroad Land and Timber Manager

By Cyril T. Young*

If a knowledge of the pulp resources of Northern Ontario and Northern Quebec from Lake St. John through to the Manitoba boundary and from the Ottawa River and the Great Lakes north to James Bay, gained from 22 years of northern experience both personally and from reports of assistant cruisers, warrants me in breaking into print for the first time on this subject, it will also comply with your journal's invitations to contribute, which I cannot courteously turn down any longer, in view of the services you have rendered me personally, as well as the people that I represent.

Knowledge of timber resources alone, does not, however, give me the full grasp of the whole situation that I get from daily association with our freight departments. It will be admitted that when a man can point to any section of Northern Ontario and Northern Quebec on the map and say definitely how many cords per acre of pulp wood and tell you the freight rate from the different sections to the mills on the Hudson; to Lake Champlain; to the Watertown district; to Niagara; to Johnsonburg; to Erie; to Port Huron; to Green Bay and other mills on Lake Michigan, together with the paper rate from the Canadian paper mills into New York and Chicago, that he should know **something** of the industry and its future. Just how far a man who has this experience is going to break into print may, however, be another question, for in every walk of life, the successful men are those who know how to obtain dividend cheques from their stock of knowledge.

Will Our Spruce Follow Our White Pine?

The same awakening is coming to us later, on our pulpwood area as we received on our high class white pine area a few years ago; and American mills are now going far afield for their wood, one rail haul delivery this winter being 846 miles, and quite frequently 700 miles. This is due not only to the constant erection of more mills, but to the increase in the capacity of mills already erected on the American side. To date, it has been the short log haul and easily-driven timber and the 13 to 16 cent rate wood that has been reaching these American mills. Supplementing this rail haul timber, is the St. Lawrence and Anticosti wood, which, before the war, was reaching points as far west as Erie on a $2 per cord boat rate prior to the present scarcity of bottoms, and also, though a much lesser quantity, of Nipigon, Port Arthur, Knife River wood reaching Erie ports at the same figure, or towed to Ashland on Superior and getting into Green Bay section by rail haul from Ashland South.

The European conflict has not only affected shipping of pulp from Norway, Sweden, and Russia, but the removal of bottoms from the Great Lakes for either trans-Atlantic or coastwise trade, has resulted in making Great Lakes delivery of pulpwood practically impossible in cost, except to the mills which own their own vessels and their loading, and in some cases discharging, equipment. This is resulting in increased demands—very strong at the present time, for rail haul wood from settlers' lands and patented lands in Northern Ontario and Northern Quebec, which can be exported to the American mills, and when bottoms can be secured, this applies to New Brunswick wood as well.

Export wood, like lumber, must inevitably go higher, due to the scarcity of labor in Canada from enlistment, and the demand from war industries which men find more congenial to home life that the woods employment affords. Added to this is the increased cost of provisions, such as hogs, live weight at $12 per hundred, and sugar at $10 per hundred, wholesale, with no possible outlook other than further advances in the provision market all round. Added to this is the increased and ever increasing cost of barking plants, saws, boilers, chain, rubber, leather belting, etc.; several of which have gone up from 65 per cent. to over 100 per cent.

Are Railway Rates Too High?

American paper mill men think that railway rates on pulpwood are too high, yet the earning power of rolling stock and heavy engines is lower today on pulpwood and especially on paper in Ontario and Quebec than on wheat from western points to the head of the lakes, principally on account of the fact that return freight to the prairies is made possible by up-bound cargoes from the lake steamers and the package freight lines. The present pulpwood rates do not warrant the purchase of additional box cars at the prevailing cost in these war times, and flat cars equipped as rack cars for summer shipments will assist in the solution.

Niagara and Watertown mills purchasing wood in Temiskaming, fail to see why the Ontario Government Railway (T. & N. O.) and Grand Trunk cannot get their rates down lower on pulpwood. Are they aware that, notwithstanding the immense traffic and tonnage derived from Cobalt and Porcupine mining camps, this government-owned railway, in past years, has only been able to earn one-third of its interest charges, due to low rates, and particularly low rates on pulpwood and timber products, resulting in the people of the province of Ontario, through its Government paying two-thirds of its interest charges and total assumption of the amortization of its bonds. Berlin and New Hampshire mills clamor for rate reduction from Roberval on Lake St. John and from La Tuque and Three Rivers, south without a thought to increased cost of operations at present, for while the return from production in every industry has risen with leaps and bounds, the railway rates are still without an advance except the 5 per cent. conceded by the Interstate Commerce Commission.

The final solution does not lie in cheaper Canadian wood or de-

* The author of this article bases his conclusions upon his experience in charge of Ontario and Quebec land and timber for the Canadian Northern Railway System. We invite the views of others upon this important subject.

creased cost of transportation but in **increased paper prices** during the period of the war. Canadian pulpwood operators selling to American mills are not now making any more money than heretofore and are taking immensely larger risks unwarranted by the profits obtainable. Personal friends of mine are operating all the way from the head of the lakes through to St. John and have made less money and some of them more debt within the past eighteen months than at any other period of their pulpwood operation. Many of the operators have had to close out entirely, and this is bad, for the reason that in any business, if the stream of consumable goods is steady, economic life goes on smoothly; while, if for any reason the stream is interrupted, more or less serious consequences always ensue. Operators should go further in insisting on financial assistance from the buyers, for these mill owners know that there is no greater help to legitimate business than well regulated and easy flowing credit.

Nor is the quantity for future supply to these American mills up to a 19c rate, by any means unlimited. Most convincing indeed is a map showing the pulp concessions granted in Ontario and Quebec, and if to these could be added those that will likely yet be granted on five good pulp and paper mill sites remaining in the north, the result would be more convincing still. Mill sites to manufacture the wood growing north of the National Transcontinental are impossible except at Lac Suel and none on the Nelson on the Hudson Bay line. I might also possibly add one on the upper waters of the St. Maurice above La Tuque. All the other waters are flowing north and will not be intercepted by steel within a quarter of a century.

Looking away to the future, because some of our Canadian mills will yet have to go as far afield for their wood as the American mills who are rail hauling 600 miles are doing today, it would be well to state frankly that there is no commercial timber for a hundred miles south of the waters of James Bay on the territory known as the James Bay Basin.

Are Our Spruce Resources Over-estimated?

Many Canadian and American mill men have the idea that because they are told spruce is growing on the banks of the Albany, lower Mattagami, Moose, Hurricanaw and Nottaway, Northern Ontario and Northern Quebec is all timber country. If they were to get out of a canoe and travel inland for days as I have done, not only below the last portages going down to James Bay, but away up on the rivers, sometimes even south of the National Transcontinental, they would find merchantable timber does not exist back from the river banks. This is true of an immense area around Lake Mistassini, north and west of Lake St. John, where heavy fires have occurred, on across the Hurricanaw and Moose—on past Martin's Falls (the only fall in 300 miles of navigation on the Albany) and I understand from Indians on through Patricia to Port Nelson, for all this lowest bench of land is practically muskeg.

It is all very well for reporters to turn up Departmental records of northern exploration of 1910 showing 288,000,000 cords of spruce in the then explored section of Northern Ontario, but is it there, out on the ground? It certainly is on the better sections of the northern clay belt such as Temiskaming, Abitibi, and parts of Mattagami, Kapuskasing, and Missinabi, but I personally know large sections grossly over-estimated at forty-five to eighty cords to the acre, that cannot possibly cut more than four to five cords to the acre, on the average. Spruce mixed with pine is sometimes quite deceiving, and certain pulp areas further south, estimated at ten cords to the acre average, are today actually cutting out less than two cords to the acre.

Returning to the immediate question and summarizing:—Woods labor will be seriously acute by November 1st—wholesalers refuse even to guess where provision prices will reach—and equipment is proceeding skyward steadily.

Before the termination of the war you will see "News" selling closer to $40 New York delivery than the $25 now quoted, for, even at present, many of the mills have no reserve supply of wood and everywhere the stock of "news" is getting very low, notwithstanding the fact that we are not yet in the low water period affecting the grinders and output. Our cheaper jack pine and poplar woods should be more utilized in crafts and wrapping paper and then the logging of all timber together would cheapen spruce wood costs.

With South America, Asia and the entire Continents of Europe in urgent need of pulp and the public (with extra money in their pockets) buying more war extras than they really require, why should they not pay the cost of increased raw material—pulpwood?

Forestry Battalion in England

A cable from London, England, under date of May 9th announced that the first section of the Canadian Forestry Battalion was already doing useful work in Great Britain, having commenced hewing and preparing timber for military purposes. The battalion is moving about to sections where good quantities of timber are available. It has already had a turn at the Royal Estates at Windsor and the men have expressed great surprise at the abundance and high quality of British timber.

Increasing the Markets for Birch

A Hardwood that Has Recently Advanced from Neglect to Well-Merited Appreciation

By J. M. Donovan

In a sense, the present age, from a commercial point of view, may quite fittingly be considered as the age of substitution. What with the innumerable discoveries of chemistry which are being put to commercial uses and economizing the world's supply of raw materials, frequently even improving the raw state of natural products so that they can be put to new uses, and the universal endeavor on the part of capital, and on the part of economists, to find substitutes for almost everything, all of which is primarily due to two facts, the present restriction of supply and the high cost of production, truly we may call this the Age of the Substitute.

Even in our own line of business—lumber—the substitute is making a bold bid for a firm foothold. As an actual matter of fact, the lumber business has been hit harder possibly than any other by the substitution evil. Metal shingles, metal ceiling, windows and partitions, and concrete floors, give eloquent testimony of the statement. Even within its own circles the lumber business is affording a fertile field for the operation of the substitute germ. New woods are being tried out all the time, the end in view being to use them as substitutes for woods that are now in use and of which there is likely to be a great shortage as they are being removed from the bush so rapidly, and in many cases felled wastefully and even allowed to rot where they fall, or to be destroyed by fire. Possibly the day will come when specimens of the present commercial woods will, like the dinosaur, diplodocus or the mammoth, be placed on exhibition in museums and classified in the catalogues as:—"now extinct, flourished about the year A. D. 1916."

It is only necessary to mention one wood as a type to bring this idea home definitely to the lumbermen, namely, white pine. For many years now, we have been endeavoring to find a suitable substitute and have failed signally. One wood, however, furnishes an interesting side light upon this situation and stands out prominently in the Canadian lumber business in an interesting manner. Probably, for variety of uses, Canadian birch is second only to Canadian white pine.

No Longer a Lowly Lumber

The time was, when birch was considered so lowly a thing as lumber that a salesman was scorned when he offered it to a customer. Today, the situation shows a vast change. Offer some of the buyers a few choice sizes of birch today and you do not need to stand on the thresholds of their offices in fear and trembling, for the birch salesman is received with all the deference that is paid to an emissary of royalty, and well might he be thus received for the wise buyer knows that good birch is scarce. There is plenty of scrub birch to be had. Trees that are not fit to be cut and sawed into lumber, yet which find their way into the lumber piles because of the great rush for the almighty dollar. It might pay the manufacturer better to turn these same logs into staves, hubs and spokes instead of lumber, and a few wise manufacturers are doing this and realizing a much higher average price for the cream of their logs.

Good birch is scarce. Lumbermen ought to get this fact impressed firmly upon their minds, for they will see, not in the distant future, the greatest shortage of birch in history. In Ontario there are only about two firms who have, or will have, for sale as much as five million feet of birch during the present year and only one of them will have over ten million feet. When it is realized that there are hundreds of wholesalers and manufacturers who ordinarily handle five to ten million feet a year, and who this year will not have over 200,000 feet to sell, the cause of the probable shortage will be understood. Therefore, although some lumbermen may feel a suspicion that this is a bit of exaggeration, they will do well to take heed, for they will have to pay the highest prices they ever paid for birch as the year advances, and those who do not cover their season's requirements of choice cuts early will find them gone a little later on, and will have to be content with some of the scrubby stock.

Its Wide Variety of Uses

It is surprising to find to what a variety of uses birch is being put. It is being used as a substitute for walnut and mahogany every day. A few of the new uses for which it has been found adaptable are, gun stocks, saddle trees, billiard tables, agricultural implements, automobiles, patterns, cream separators, staves, hubs, spokes, wagons, etc.

Box manufacturers are at last learning the merits of birch as a box material, and it is safe to say that, in the future, considerable quantities of birch will be cut up for this purpose. Heretofore, white pine, spruce and basswood have had the call, but the advent of shell boxes upon the scene has shown the box manufacturers some of the

latent possibilities of birch. The favorable points of birch for boxes are: strength, durability, facility of nailing, the small likelihood of splitting, and last, but not least, the low cost, which is a great feature in the opinion of the box maker.

The production of one high class musical instrument, the piano, consumes an enormous quantity of birch. It has been found that this wood possesses many desirable features that make it especially useful in connection with the production of pianos and organs. Manufacturers of these instruments are using it extensively.

Birch has even invaded the sanctum of the wagon manufacturer. Several American wagon manufacturers who specialize on farm wagons find that birch works to advantage, and many of their wagons are finding their way into Canada, where they are giving entire satisfaction. This is in the face even of the original duty and an additional war tax. Canadian wagon manufacturers should make a stir and meet this competition. Birch is right here at their own doors and they do not have the additional expense of duty and war tax. Quite a considerable quantity of this wood is also used for sleigh benches.

The largest manufacturers of billiard tables in the world are slowly but surely cutting down the quantities of mahogany and walnut used in their product, and substituting birch, with the view eventually of using nothing else. They are finding that the wood works to advantage in their line and that the cost is considerably less.

A new field for birch is being opened up in the production of spokes. Of course, this is a new business at present and is being tried out as an experiment.

The writer has seen some very fine specimens of staves manufactured from the lower end of the birch log and there seems to be a good field for birch in this line of work.

One could write indefinitely about the uses to which birch is being put and the experiments that are being made with it. The time is coming soon when birch will be classified as the most desirable of all commercial woods, and where yesterday and today it was considered only in the light of a substitute for the more valuable species of woods, tomorrow it will be found among the species known as "precious" and we will be looking around to locate a substitute for it.

Do Tight Belts Give Best Transmission ?

An Old Theory Giving Way to Modern Knowledge About Slack Belts, Idlers and Pulleys—The Slack Belt's Advantages

By N. G. Near

It is gradually being learned that tight belts are not essential to positive and efficient belt transmission. The most important points to be observed in the care of belts is: keep them from getting hard, dry, and stiff. A pliable belt will lie down close on the pulley and every available square inch of pulling surface will be brought into active contact. The coefficient of friction of the belt is thus brought up to its maximum value and the top or non-pulling side can be relieved of much of its initial stress. In fact, in many cases the non-pulling side is often relieved of ALL tension and made to run as indicated in Fig. 2.

Fig. 1 shows two pulleys connected by a tight belt. The bearings are under high stress due to this tension, and therefore consume more power than do the bearings in Fig. 2 after the initial tension is relieved. Besides, in Fig. 1, the arc of belt contact is only 180 degs. In Fig. 2 the arc of belt contact is increased by about 45 degs., a very valuable asset in preventing slip, for every degree increase in belt contact increases the pulling power more than 1/360.

This can perhaps be better explained by citing an example. Suppose, for instance, we have a belt that embraces only 90 degrees of a pulley. It will pull a load of 100 pounds. Now, increase the arc of contact to 180 degrees, and it will be found by experiment that the belt will pull 300 pounds. Increase the arc of contact still more and the increase in belt power will be greater in about the same ratio. This, then, is one of the reasons why a slack belt, as in Fig. 2, will often pull up to the limiting strength of the belt. Another reason why slack belts pull so well is that any belt will pull better running at a rapid rate than when running slowly. It seems that at high speed a belt "hasn't time to slip."

I am not claiming that belts should always be run real slack. It is often impossible. Much depends upon the distance between shaft centres, character of drive—gas, steam engine or electric motor—and character of driven machinery. Where the load transmitted is of a highly fluctuating nature it is best not to attempt too slack running. But under no circumstances is it good practice to run belts extremely tight.

Many belts are run slack on shafts that are only 5 ft. between centres, pulleys being 12 to 15 inches in diameter. Where distance between shafts is greater it is easier to maintain slackness, and at great distances, no trick at all.

One of the greatest blessings of the slack belt is the fact that it seldom has to be "taken up." Most of the time spent in caring for tight belts is consumed in cutting out slices every month or so, and then relacing. This is necessary to maintain the tightness. However, with slack belts it is usually necessary to take out a slice only when the pulling and non-pulling sides get so close together that they touch. I know of drives that have run for over 15 years without being touched by a knife. Relacing was necessary, of course, but that was about all. The slack or easy belt is most economical.

Use Idlers Where Necessary

In such a drive as shown in Fig. 3 it will be almost impossible to run the belt slack on account of the short distance between shaft centres and the great difference in size of pulleys. I have seen slack belt drives with short distance between centres, but they are rare. The method pictured in Fig. 3 is becoming popular, and it is a good method. An idler is used to hold the belt down and give it as large an arc of contact with the pulleys as is practicable.

This idler is not and need not be heavy. At least, no additional weights need be added to the idler to effect the desired contact. The weight of the idler alone is enough. We therfore have a condition here that is logically comparable with the slack belt of Fig. 2. It has the same advantages and the same arguments go with it.

One of the big advantages of these "idler drives" is the saving of space and the saving of leather in belts. The idler costs something, of course. It is usually very well machined and has perfectly aligned bearings. At least, an idler should be accurately and well made all around for the ultimate efficiency depends much upon this accuracy. It has been proved in actual tests that a properly made and aligned idler consumes so little power that it is unnoticeable. An idler, on the

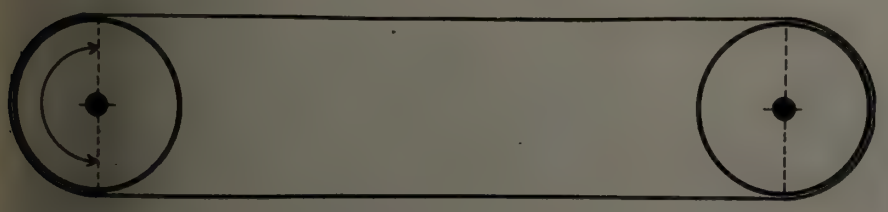


Fig. 1

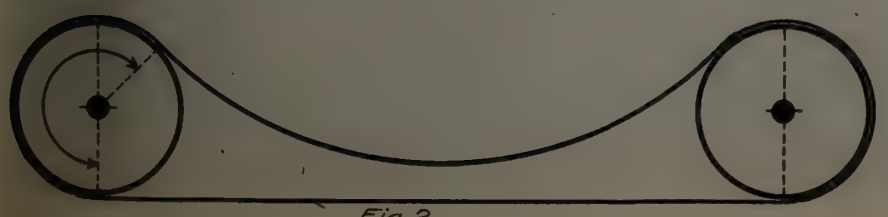


Fig. 2

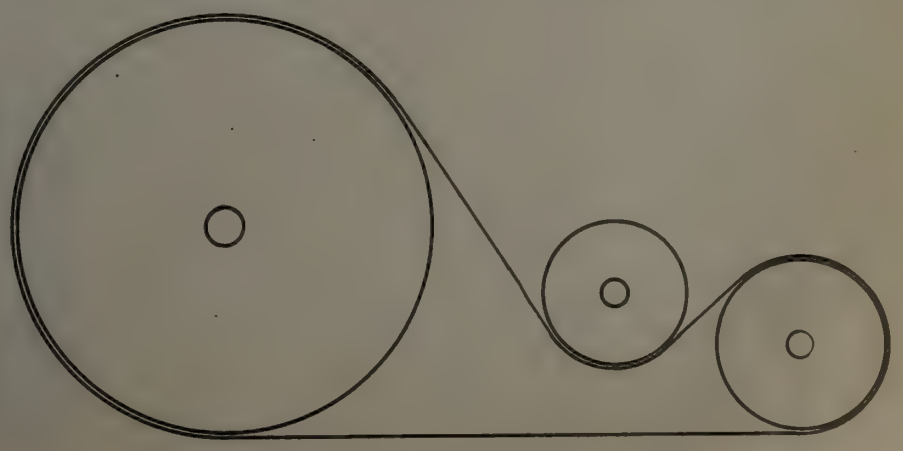


Fig. 3

other hand, with tight bearings and poorly aligned, becomes a veritable "coal eater."

It is plain, then, that an idler drive may cost less than the same drive with machines set farther apart on account of the difference in cost of leather. Nowadays, anyway, leather is pretty expensive.

Cotton, canvas, and other woven belts cannot be used in an idler drive as effectively as leather. Leather is best because of the fact that it can be made endless. Joints of rawhide or metal are rather troublesome factors if used with an idler, on account of the bumping, noise and vibration. Rubber belts have been used with success, however, on such drives.

I do not know why there is so much prejudice against idlers. Perhaps it is because men "think" that an idler consumes just as much power as one of the drive pulleys; but that is not so. A driving or driven pulley consumes power mainly because of the fact that on the "approach" side the leather is stretched and on the "leaving" side the leather has contracted, or vice versa. This adjustment in length occurs on the pulleys and there must certainly be some accompanying friction. Hence the power loss. On an idler there is no adjustment of length. The belt is just as tight on the approach side as on the leaving side. Therefore, there is no belt friction worth mentioning. The only friction occurs in the idler bearing and on account of the good type of bearing used, the perfect alignment and the very slight pressure, that friction, also, is practically nil.

It is evident that for vertical drives a frictionless idler becomes a blessing. We are usually told that vertical belts cannot be run slack, that they must be run tight. But not so. On a troublesome vertical drive, if conditions permit, I do not hesitate to recommend an idler pulley.

Of course, no matter what kind of drive, always place the idler on the slack side.

Investigations which have recently been made by The Contract Record, into the present cost of various building materials, shows that among those materials that have not advanced in price since 1912-13 are included lumber and mill work. In fact the prices for these to-day are said to be considerably lower than during the former period. Many other building materials are included in the list of those which show no advance, or even a decrease, the list being: stone and sand which are somewhat lower in price; brick, which is fully 25 per cent. lower; cement, 10c. to 15c. a barrel lower; lime, the same price; lumber and mill work, no change, or a slight advance, but much lower than during 1912-13; hard wall plaster, no advance; fireproof materials, no advance; varnishes, about the same price, and beaver board, no advance. Materials showing an increase in price include the following: plumbing and heating goods, a considerable advance, because of the higher prices of metal; fireproof doors,, windows, sash, etc., a considerable advance; papers and felts, large advances in certain classes, especially dyed material; metallic roofing, an increase of 10 to 25 per cent.; paints, various increases; glass, an increase of 50 per cent. to 60 per cent., and stocks very difficult to obtain; steel, an advance of 15 per cent. to 30 per cent.; electric wiring, an advance of 35 per cent.

The chestnut blight has already done damage estimated as close to $50,000,000. The disease attacks both American and European species but does little damage to those from Japan and China. Plant breeders by crossing Japanese chestnut and native chinquapin have produced resistant trees.

Forest Conservation During War

Protection Against Fire Loss and Prevention of Waste Making Encouraging Progress

By Clyde Leavitt

"Natural resources lie at the foundation of all preparedness, whether for peace or for war." These are the words of Gifford Pinchot, the foremost advocate on this continent of the better conservation of natural resources.

This statement by Mr. Pinchot is no less true for Canada than for any other country. Its truth is obvious, so far as the great world-war is concerned, since a moment's thought will demonstrate that behind the production of munitions and of all the multitudinous articles of equipment and supplies essential to warfare, there must be great supplies of the natural products of the earth. Of these, the metals and other minerals, and the various woods, come first to mind. All food supplies, including meats as well as grains and vegetables, are dependent upon the productive capacity of the soil, which is the most important of all natural resources, aside from human life itself.

Considering this latter element, human life, it is obvious also that the capacity of a country to sustain population must depend primarily upon either agriculture or manufacturing or both, and the extent to which these can be developed depends absolutely upon the extent of the natural resources available, of which the soil, the metals, the forests, and the water-powers are the most prominent examples.

In time of war, the financial credit of a country is a factor the importance of which can scarcely be over-emphasized. The degree to which this can be realized upon depends to a very large extent on the degree of development of manufacturing industries. Since these, in turn, depend directly upon the extent of natural resources available, the connection between national credit and natural resources is obvious.

Thus we see clearly that natural resources are the determining factors, not only with regard to the production of munitions and supplies, and of credit, but of men as well, who constitute the most essential element in any programme of national defense.

The relationship above outlined for war conditions is equally true in times of peace. Practically every form of human activity is directly or indirectly dependent, either immediately or ultimately, upon the utilization of some natural resource. All agriculture and all manufacture are directly so dependent, as has been shown. Only the boundless natural resources of Canada—her lands, her forests, her minerals, her water-powers—have made it possible for her to attract so large a population from other countries, and with future possibilities in this direction which are as yet almost undreamed of by the average citizen.

These fundamental relationships are as yet realized only in small part by the great public-at-large, and that is the real reason why progress toward better methods of utilization is so slow. A vast amount of agitation is almost always necessary, as a preliminary to the adoption of reform measures, and this is as true of the conservation movement as of any other.

Contrary to the popular idea, conservation does not mean the present locking up of natural resources for the benefit of a distant future. On the contrary, it simply means the avoidance of all un-

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From the Tree to the Finished Product

On May 1st the Estate James Davidson, Ottawa, Ont., commenced operations for the season at their sawmill located at Davidson, P.Q., on the C.P.R., seventy miles from Ottawa. This mill now has a capacity of 100,000 feet per day and the whole output of lumber is used by the Estate James Davidson in their modern woodworking plant at Ottawa. "From the Tree to the Finished Product" is the slogan used in connection with all the output of the Davidson plant. Being so situated in regard to securing material for their woodworking plant, they are in a splendid position to handle all orders with promptness, no matter how large or small they may be. Their woodworking plant is modern in every detail and fully equipped for turning out all lines of boxes, box shooks, doors, sash, blinds, and all interior finish. At the present time the company are working to capacity on a large shell box order, and upon an extensive shook order for the British War Office.

Estate James Davidson sawmill at Davidson, P.Q.

necessary waste; in other words, it means wise present use, with a view to making non-reproducible supplies, such as coal, iron, etc., last as long as possible, and to using the reproducible resources, such as forests, so as to make them self-perpetuating.

Forest Fire Loss Would Pay War Loan Interest

Everywhere, among the nations at war, the avoidance of all forms of waste is being strongly advocated as a war measure. One aspect of this broad movement, which is receiving less attention than it deserves, is the need for better conservation of our forest resources. It is estimated that the average annual loss by forest fires in Canada is sufficient to pay the interest upon the recent Dominion loan of $100,000,000.

The importance of the forest resource in the internal economy of the country is shown by the fact that the estimated total value of forest products for Canada in 1912 was $182,300,000, or an annual wealth production of $25.68 per head of population. In 1913, nearly eight million dollars was derived, by the Dominion and provincial governments, directly from the sale or lease of cutting rights to publicly-owned timber lands and from royalty and stumpage payments made upon timber so cut.

There are in Canada some 5,000 wood-using industries. The permanence of these industries depends directly upon the perpetuation of the forest resources of the country. It is perfectly obvious, for instance, that, no matter how large its timber limits may be, any large pulp mill must ultimately exhaust its resources of wood if the virgin forest be continuously drawn upon without adequate provision for its replacement on cut-over lands. Yet this is exactly the direction in which many concerns are heading. Pulp and paper mills represent very large investments of capital, and dividends are bound to fail in the course of time, unless necessary provision is made for the perpetuation of the wood supply.

Better methods of protection from fire is the crying need of today, so far as the forestry situation is concerned. Great improvements have been made within the last few years, but the situation as a whole is still far from satisfactory.

In actual practice, the forest has only too generally been treated like a mine, and gutted, with no thought of the future, rather than like a crop, which it really is. The ordinary method of unregulated lumbering followed by fire, as has too often been the practice in the past, is gradually but surely turning vast areas of non-agricultural land into a desert and non-productive condition. Timber is the only crop, aside from game and fur-bearing animals, which these lands are capable of producing. They are, however, capable of continuously adding very great wealth to the country, provided fire is kept out and other necessary measures are adopted for the perpetuation of the forest as a forest. The difficulty arises in securing practical realization of the fact that the forest is a crop, and that its utilization, on non-agricultural soils, should always be so regulated as to provide for the establishment of a new crop, and of successive crops, indefinitely.

This is particularly important as to the lands which have thus far received least consideration, namely, those which, because of their greater accessibility to transportation, have been logged off first. On such lands, stumpage values will always be higher than on lands less accessible, and it is therefore especially desirable, from every point of view, that the natural reproduction should be protected from fire and given an opportunity to reach maturity. Instead, the opposite has been the general tendency, and not only individuals, but the country as a whole must in the long run pay the penalty. To a far greater extent than is the case at present, we should be drawing upon interest, in the form of natural forest growth, rather than upon capital, stored up in the virgin forest. If this were done, our great forest resources could never be depleted.

Brush Disposal Increasing Gradually

Brush-disposal, as a fire-preventive measure, is a feature to which some attention has been given, particularly in the west, and some progress has been made. However, the lumber industry as a whole is still suffering from depression, and the general level of prices is still too low to permit general attention to the matter of brush disposal over the country as a whole. It is believed, however, that even at the present time, particularly in the east, it is practicable to a materially greater extent than is conceded by most operators. At least a beginning could be made, in many cases, by a more thorough clean-up of inflammable debris in the vicinity of settlements, camps, railways, wagon-roads, logging roads and streams, and along the edges of cutting areas. Such action would greatly reduce the danger of fires causing material damage, and would afford vantage points from which to control fires of accidental origin.

One of the most essential features of a forest-protective organization is adequate supervision over the fire-ranging staff. Taking the country as a whole, there is no question but that a very great deal of money is being wasted through failure to provide enough supervision, and of the right kind, to ensure that a dollar's worth of protection is secured for each dollar expended on the fire-ranging staff.

In this connection, the provincial governments of eastern Canada, and the great majority of limit-holders as well, should take careful note of the admirable results that have been secured by the St. Maurice and the Lower Ottawa Forest Protective Associations, and should profit by their example. These two associations have been able to secure the best degree of protection against fire that is to be found over any large area anywhere in eastern Canada. These results have been secured by the adoption of a thoroughly business-like administration, of which close supervision at all points is considered an absolutely essential feature.

Competent Fire Rangers Required

Beyond any doubt, also, the matter of securing a thoroughly competent personnel in the fire-ranging staff is of the utmost importance. It is hardly conceivable that anyone should seriously question this. Yet, in no single government fire-ranging service in all of Canada, so far as is known, are the appointments of fire-rangers clearly and definitely based upon the one ideal of merit and fitness for the position. In every single one, Dominion as well as provincial, the patronage system holds the reins, and party advantage is, as a rule, the primary consideration, with merit and fitness of the applicant secondary. Undoubtedly, many thoroughly competent men are appointed under the patronage system, but the exceptions are too numerous, and the tendency of such a system of appointment is far from conducive to proper ideals of discipline and organization, and the development of a wholly efficient service. In this respect also, the St. Maurice and Lower Ottawa Associations are able to set a good example to the several governmental agencies. These associations, being composed of limit-holders, are able to select their fire-ranging staffs upon the sole basis of merit, and actually do so. On any other basis, the really remarkable results secured would have been impossible to the same degree and at the same cost.

The general tendency of the patronage system was admirably expressed by Sir George Foster in connection with the recent debate upon the estimates of the Public Works Department. His remarks are, however, equally applicable to the several fire-protective services throughout the Dominion. In the discussion referred to, Sir George made the statement that in the whole course of his thirty-four years of public life, he could not point to a single instance where political patronage ever helped the status of the bench, ever helped the status of the Civil Service, ever helped in the economy of their administration the status of public administrators, no matter what function they performed, ever helped a member of parliament in reality, or ever helped a government in reality.

In view of this strong statement and of the very general chorus of approval with which it met, it would seem that material progress has been made toward hastening the day when appointments to at least certain of the public services will be based upon merit rather than upon patronage. Certainly, such action would constitute one of the most effective means of reducing the tremendous forest fire loss sustained each year by this country. This action will not, however, be generally taken unless and until those directly and indirectly interested in securing better forest protection make their influence felt in a concrete way, in favor of this proposition. Not only are all lumbermen included in this category, both individually and collectively, but every citizen of every province as well.

Any action that will tend toward better forest conservation will be a step toward better preparedness, for peace as well as for war.

Important Dunbar Improvements

The Dunbar Engine & Foundry Co., Woodstock, N.B., have made several marked improvements to their widely known Dunbar Shingle Machine this season. This includes an improved jointed table, so arranged on the machine that it is always perfectly rigid and can be automatically swung to one side for the removal of the jointer saw. Self-oiling boxes have been put on all the boxes of the machines. Fraser Limited of Fredericton, N.B., have installed eighteen of these shingle machines in their different mills. The Dunbar people are now working on a new steam compound Logging Engine, of about 10 tons, of a width to go in the ordinary horse road and use horse sleds, suitable for Eastern Canada logging operations. This is being erected under the special supervision of Mr. A. Dunbar, the senior member of the firm. Possibly no machinery man is better known than Mr. Dunbar to the Canadian trade from his long connection in the manufacture of logging equipment. The company are also building this year two sizes of gang edgers for portable mill work. No. 1 will be of about 20,000 ft. capacity, and No. 2, of 40,000 ft. Mr. H. A. Dunbar is manager of this prominent eastern firm.

The waste product of sawmills in the United States including that fed to the furnace as fuel is estimated to be 36,000,000 cords per year, and the equivalent of 2,880,000,000 cubic feet of solid wood substance. About half of it has no use whatever but is usually burned to get rid of it.

Elwood Wilson

Scientific Cruising Creates Profits

How the Laurentide Company Revolutionized its Operations and Saved Thousands of Dollars

By Elwood Wilson

A number of years ago a large lumber company purchased a number of timber limits on the report of a cruiser who ran over the territory in ten days. The writer's men met this cruiser and were in the same neighborhood with him for a great part of the time he was in the woods and had an opportunity to observe his methods. These were very simple, as all he did was to paddle up the main streams and if he saw timber he would guess at its amount and make no effort to see how far back from the stream it extended. The following year the writer was commissioned to make a closer examination of one hundred square miles of this purchase and found that, by actual survey, ninety-seven per cent. of it was burnt clean. The president of this company was much surprised at such a report and was only convinced of its accuracy by an elaborate set of photographs.

This is only one of several instances which have come under the notice of the writer, and can only be explained, in most cases, by the fact that the price of timberlands in Canada has been such that money could always be made and that the cruisers have invariably been low in their estimates. Nevertheless, it is strange that such shrewd, hard-headed men as the lumbermen and paper-mill men, who would not think of buying a piece of machinery costing a few hundred dollars without a careful examination, will expend hundreds of thousands of dollars on the estimating of an ignorant cruiser or foreman who often cannot find his way in the woods and cannot tell one species of tree from another.

A Stock-taking Proposition

No sensible man would buy logs or lumber without having them counted, why should he buy trees without knowing how many he was purchasing? Every good business man takes account of his stocks of raw material; he takes stock every six months or oftener. A cotton manufacturer would not guess at the amount of cotton on hand, or take it for granted that he had enough without carefully measuring it. He would not be satisfied to know that there were some stocks in the next town or perhaps some within a radius of one hundred miles of his mill. He would know exactly to a pound how much there was and where it was located. Why should not the lumberman or pulp man with a large amount of capital invested in raw material take equal pains to ascertain its amount and its location? There are two principal reasons. The first is that timber has always been so cheap and so plentiful that it was almost certain that the supply would be adequate for the wood using industries for a time at least. The second reason is that anything that has had to do with the woods has been left to untrained and relatively uneducated men. It has been supposed that only men who have been born and brought up near the woods, really knew anything about them, and that these men had some occult sense denied to the dwellers in the cities, by which they could find their way in the forest and tell how much timber there was per acre by simply looking at it.

Now that fire and the axe have destroyed so much of our available timber supplies, and the multiplication of wood using industries calls for larger and larger quantities of wood each year, it is absolutely necessary to take account of what we have left, and as competition becomes keener only those businesses can succeed which are run with accurate knowledge of all the factors and not by guess work. The successful manufacturer to-day does not guess what his costs are, he KNOWS, and the lumberman or pulp man can no longer guess how much wood he has for the future, he must know. And, just as the up-to-date manufacturer hires trained accountants, chemists, salesmen, so the lumbermen are coming to employ trained foresters and logging engineers. If you are the owner of timberlands you need to know the following facts:

Where are your limits located?

Are your boundary lines located correctly?

How much of the area is water, swamp, burn, windfall or cut-over?

How much merchantable timber is there?

Just where is it located?

Can you afford to log it at present prices?

Is it growing at a profitable rate, or standing still or dying?

What is the rate of growth?

Is a new crop coming on, and if so, when will it be ready to cut?

For how long a time will your available supply last?

What are the fire risks?

What is the drainage, are the streams drivable, what will it cost to improve them?

How long are the hauls?

How much will it cost to log each section?

The above are not matters of guess work or opinion, but facts which need to be accurately ascertained and should be determined by men who know their business and have been trained to it. If you are ill you do not send for a quack or a bone-setter, but for a qualified physician. You do not ask the office boy to audit your accounts. You employ a chartered accountant, and so, if you wish correct information about your timber lands you need a forest engineer.

Essential Information for a Woods Manager

Just as a general cannot hope to plan and carry on a campaign successfully without accurate maps and information about the country in which he is fighting, so a woods manager cannot hope to carry on intelligently and successfully his logging operations without accurate maps and information about his woodlands. With these he can plan his operations in advance, can check up his annual cut, can tell where to place his jobbers and have right under his hand all the information necessary for carrying on his work. He is not dependent on his woods foremen, and does not have to keep on an unsatisfactory man because he is afraid of losing the information stored in that man's brain. He can keep his records up to date, know just what lands have been cut over and what amounts of timber he can expect from them in future and what he has on hand. He knows just where his boundary lines are and thus avoids the danger of trespassing on his neighbors.

Early in 1905 the Laurentide Company under a new and progressive manager, realized how scanty was the information on hand about its limits and started out to get posted. There was only one map of its holdings and that was very inaccurate. No maps that were either complete or accurate could be obtained from the Government, which even to this day has nothing which can be called a map of its limits under license. There was no record of boundary lines, nor of the amount of timber, not even of the areas which had been burnt over, and during the first month of work trespasses on other companies to the amount of several thousand dollars were discovered and also trespasses of other holders on the company.

In planning this work there were two courses open, either to put on a large number of parties and finish the work up quickly, or to use fewer men and spread the work out over a number of years, beginning with the territory being logged and that likely to be cut over soon and gradually extending the work to the whole area owned. The latter method was chosen and has justified itself as the crews at work gradually gained in experience and knowledge of the country and of working conditions so that the cost of the work was reduced.

The mapping work was done by trained civil engineers and the estimating and other forestry work by trained foresters. The average party consisted of ten men with the usual camping outfit, dog sleds being used in winter and canoes in summer.

Provisions were teamed into the woods as far as possible. In the case of one section they were hauled on horse sleds over one hundred miles. A main camp was established as near the centre of a working district as possible, where the provisions were stored and where a cook made beans and bread which were sent out daily to one or more branch camps, the parties working for the branch camps doing the rest of the cooking for themselves. Good outfits and the best of food were provided and the health of the men well looked after, and in ten years of work, beyond minor axe cuts there was only one accident, and that from the accidental discharge of a revolver. There was one case of snow blindness and two of pneumonia, all of which recovered.

The limit of error in the mapping work was set at one in three

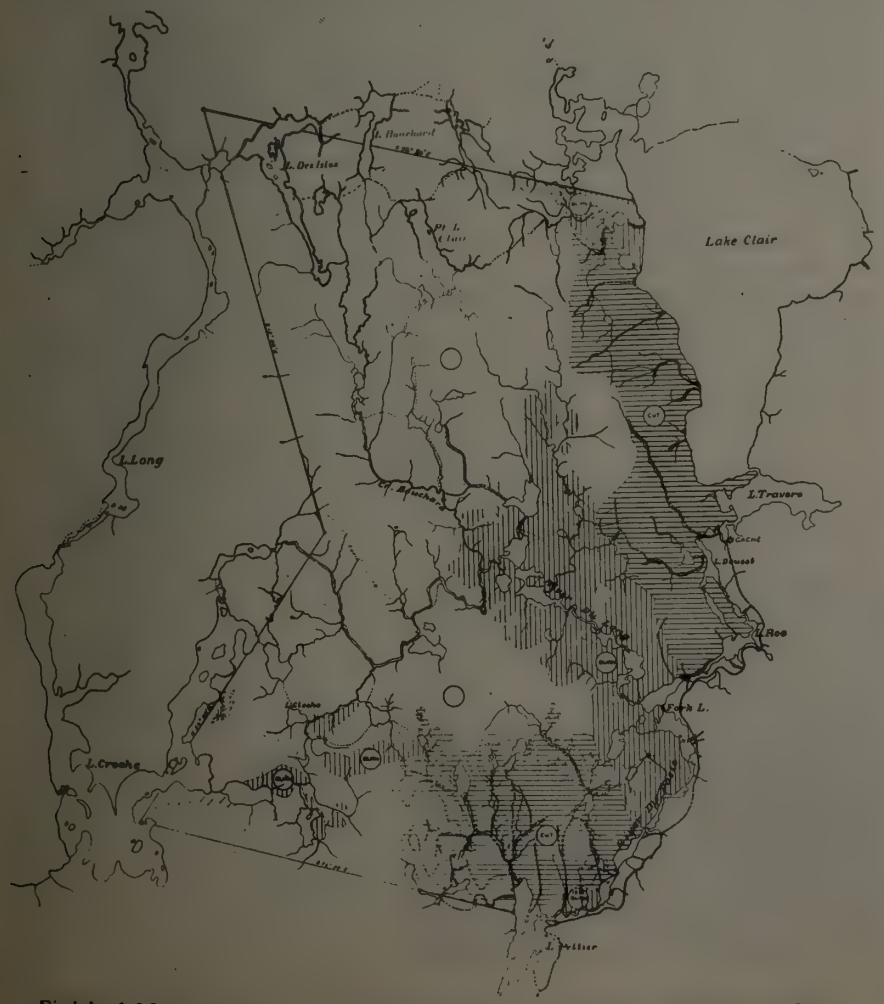
hundred, and when errors larger than this occurred the work was at once done over and the error eliminated.

Work was carried on all through the year, with the exception of the month of June, which was used for vacations on account of the black flies. Summer work showed no difference in cost over winter work, but work done in November and April was the most expensive, owing to the inability to travel on lakes and rivers while the ice was forming and melting.

Boundaries of limits were run first, then circuits were run of fifteen to thirty miles around, checking on the starting points, and using the larger streams, lakes and the portages, and then all the detail inside these circuits filled in. Boundaries of cut-over lands, burns, swamps, lakes, green timber and windfalls were run so that the areas of these could be accurately known. After the field maps were collected tracings of them were handed over to the foresters for the estimation of the timber and its description. By having accurate maps the estimators could lay out their work in advance so that they worked from camp right back to camp again and did not waste any time going to and from work, and by having the drainage mapped, showing the topography of the country, they laid out their estimating work so as to get average conditions in the stands of timber which cannot always be done in the gridiron system of estimating. The average area mapped was fifty square miles a month, that estimated was 65 square miles per month, using a four-man party, and the total was twenty-five hundred miles.

Information Shown on Maps

When the field work was finished a large map covering the whole territory on a scale of two miles to the inch was made which showed all the drainage and the boundaries of our limits and those of all the other holders in the St. Maurice Valley, this map covers practically the whole drainage basin of this river. A second map on the same scale shows the timber conditions over our own limits. A set of maps on a scale of three-quarters of a mile to one inch, each showing a limit, was made, and on these were put all the water, portages, roads, trails and camps and these are blue printed for any employees of the woods departments who wish to travel in the forest. A second set on the same scale shows all the information of the first set and in addition the timber conditions, or lack of them, i.e., boundaries, all water, roads, trails, portages, camps and dams, boundaries and areas of burns, swamps, windfalls, settlers' farms, cut-over and timbered areas. Dates of fires and cuttings are given and amounts of timber which can be taken from uncut timber. Together with these maps are full records of each limit, and both maps and records are kept up to date by surveys made each spring after the cutting is finished.



Finished Map of Limits, Showing Drainage and Timber Conditions. Smal Arrows Show Windfall; Uncolored, Merchantable Timber; Vertical Section Lining, Burnt; Horizontal Section Lining, Cut-over.

Logging Waste Checked Up and Reduced

For several winters and in different sections all over our limits, a crew of two men followed the choppers, and as each tree was felled they measured the height of the stump, the diameter at the stump and at each thirteen and a half foot cut, both inside and outside the bark and the length of the top left, and from these measurements the total merchantable content of each tree was calculated and the results averaged. A set of tables was prepared for white and black spruce, balsam and white pine, showing the total board feet and the total cubic feet and cords in trees of different diameters and heights so that when a certain number of trees were found on an area, by using this table, the total amount of wood which could be cut was easily calculated. In this study the enormous waste caused by cutting high stumps and by leaving large tops in the woods was clearly shown, and the necessity for a careful inspection of cutting operations was demonstrated. The first year that such an inspection service was introduced there was a probable saving of over fifteen thousand dollars worth of timber.

The age of trees was also studied and the rate of growth determined for different species and different conditions. Areas which had been cut over were carefully xamined to find out how much timber was left and what its probable rate of growth would be, so that the amount of timber which could be cut at different future dates could be calculated and also its probable financial value. The results of these studies might well make the owners of timber lands take a little thought for the future, as it was definitely proved that under present methods of cutting to a diameter limit as imposed by the Quebec Government, all of the best and fastest growing timber is cut and the undersized timber which is left is generally supressed and weak or diseased, so that when the larger and stronger trees are removed, those left blow down, or are so shaded by the large hardwoods left that they make very little growth and the hardwoods quickly seed in the openings in the stand and make a forest which is largely without the soft woods which are at present much more valuable. It was found that on large areas of cut over lands the probable amount of timber which would be available after thirty years, spruce and balsam, would hardly pay to go after, if located on any but the most accessible areas. Cutting for softwoods as at present practiced is really a system which helps the hardwoods to increase and multiply, and those coniferous trees which are left must struggle against the most adverse conditions.

Logging Inspection Service Instituted

As a result of the work mentioned above, the logging department of this company instituted a thorough inspection service of its cutting operations. Burnt timber which had never before been used was cut and utilized. The percentage of balsam used in the mill was largely increased. Trees which had previously been left in the woods on account of a small piece of heart rot were cut and brought to the mill and the rot split out, the good part used and the bad part burnt under the boilers. Where tops of less than six inches diameter had been left in the woods they were taken down to four inches and many other economies were introduced. All these improvements were so evident when the facts became known that it shows how necessary it is to have an accurate basis of knowledge in carrying on any sort of work.

The average cost of the field work for the surveys given above was $10.98 per square mile or not quite two cents per acre, and of this cost 77 per cent. was labor. The average cost of provisions, including freight and portaging, was thirty cents per day per man. The estimating of the timber cost six dollars per square mile, or .0093 cents per acre. This latter was the cost of calipering all trees six inches and up in diameter breast high over three per cent. of the area in merchantable timber.

All the drives on the Upper St. John River were reported safe on May 7th. Driving conditions have been ideal this spring with plenty of water in the brooks.

The Adams River Lumber Company, Chase, B. C., have launched a new steamer, a stern wheeler, which will be used for towing and for carrying freight and passengers between the company's camps and the mill headquarters.

On May 10th a boom of logs on Lake Deschenes, ten miles west of Ottawa on the Ottawa River, containing 175,000 logs, broke loose during a severe gale and were driven down the river towards the Chaudiere dam. News of the break was telephoned to Ottawa and the sluices were opened, allowing the logs to go through and averting a jam. The sight was an interesting spectacle to many onlookers as they watched the great quantities of timber crashing over the Chaudiere Falls and shooting down the river. A boom was stretched across the river several miles below the Falls and the logs were captured.

The Growth of Spruce in New Brunswick

Information Secured by Forest Students Showing Rates of Growth of Spruce and Fir in Diameter, Height and Volume

By R. B. Miller

THE subject of the growth of trees, especially of spruce and fir, in diameter, height and volume, is one of the vital questions connected with the survey of the Crown Lands in New Brunswick, and one which must be handled separately from the work of cruising or estimating. Not only are the estimates based upon volume tables made in connection with such a study, but all predictions of future growth require some such scientific basis. The method heretofore has been simply to bring in a cross section of a tree on the stump, counting the rings, and assume that this one tree is a model or sample of the whole forest. At the present time there are two such sections in the Crown Land office at Fredericton, one of a spruce probably two feet in diameter and not over 100 years old, and the other ten inches in diameter and possibly 200 years old. What makes the difference? The first is a white spruce selected under ideal conditions of growth, while the second is a black spruce from a very dense stand in the Miramichi region, from which there are requests to cut undersized material for pulpwood. It is apparent to anyone that neither of these trees can be taken as a criterion of growth on the Miramichi—just as well say that two men picked out of a crowd are ideal or representative men.

The object of this article is to present a preliminary study which was made from the stem analysis of 165 spruce trees, the majority being from the Tobique region and a few being taken from second growth stands on the college forest near Fredericton, the latter measurements being collected from time to time, as made by forestry students. The data are not held to be either exhaustive or conclusive, because such a study would involve the stem analysis of a thousand or more trees carefully selected from the various quarters of the province. Neither is it advocated that stem analysis is the best method of securing such figures. In many cases it is impossible, because of the expense, and the cutting of logs is done at the coldest season of the year, when the taking of the notes is well nigh impossible. Besides, the office work involved in working up the final figures requires much time—time which can be secured from students in the prosecution of certain studies, but not from an office crew to whom you pay wages. In this connection it may be mentioned that Mr. T. W. Dwight, of the Dominion Forestry Branch, has originated a method of taking stem analysis, which cuts down very greatly the field measurements and decreases the office work at least one-half. The accuracy of the method as compared with the old method of stem analysis has not been tried out for typical cases, but it seems possible to secure by means of it all necessary data and in a very much shorter time.

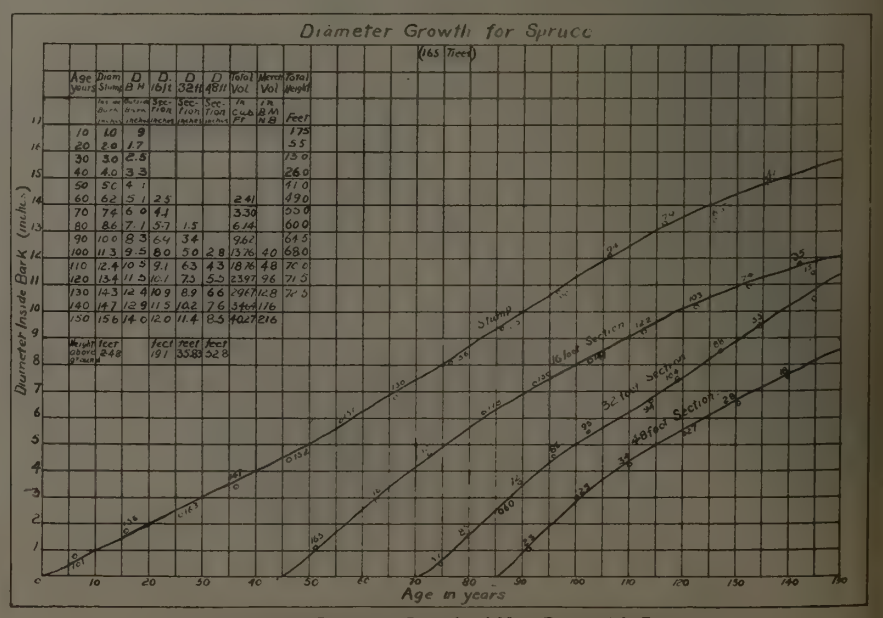
Method of Securing Measurements

The data for the trees from the Tobique region were taken by a forestry student under the direction of R. R. Bradley, of the New Brunswick Land Company. Owing to the cold weather when following the choppers, the results were not entered directly on the stem analysis sheets, but long strips of wrapping paper and a fountain pen were used. Starting on the stump, the student took its height in feet and its diameter inside the bark and the thickness of the bark. He counted the rings in ten year periods from the outside and holding the strip of paper along the average radius, made a mark with the pen at every tenth ring. These actual distances could be scaled with a ruler later and the results entered on regular stem analysis sheets. Going to the top of the first log he did the same, measuring its length in feet, also the length of the top which was left. He also took the diameter of the tree at a point four and one-half feet above the ground (breast high or D.B.H.), and noted any waste in high stumps or in the top which was left. In this operation it happened that all logs were cut to a uniform length of sixteen feet or 16.5 feet, which made his work, as well as the office work, very much easier. Of course, the decade measurements for each section had to be kept separate on his strip of paper, the stump being designated "stump," and the other sections or logs as one, two, three, etc., so that it was an easy matter to take the strips of paper and transfer the results to the regular blanks. One deficiency was found in the figures, namely, that the D.B.H. of each tree was not taken in tenths of inches, a very necessary point, since otherwise it is not easy to establish the relationship between the diameter inside the bark on the stump (D.I.B.) and the D.B.H. outside the bark. This relationship had to be secured in another way and it will be noted on our final curves that there is no regular D.B.H. curve, the results in the D.B.H. column being secured from taper measurement on a large number of trees.

How Stem Analysis is Conducted

As to the work of stem analysis on the college lands—a crew of three men is best—a pole man, a ring counter and a tallyman to record the figures called out by the other two men. If trees are not already felled and cut into log lengths, two additional men would be required for this work. The trees after being felled are cut up into eight foot or sixteen foot lengths, depending on whether they are to be used for cordwood or logs. The other men begin immediately on the stump counting and measuring rings. Where plenty of student labor was at hand, others were assigned to limbing up the tree and piling the brush so as to make a clean operation. The poleman calipers the tree at breast high and measures off the log lengths, also calling out length of tip and other necessary measurements. The ring counter finds the average radius at the top of each log and the stump, and counting the rings from the outside in decades, holds his ruler along a pencil line and calls out to the tally man the distance from the centre to every tenth ring, also recording the odd rings in the centre, and the distance to them. In Mr. Dwight's method, rings are both counted out and measured out from the centre, odd rings being disregarded, since their measurement is usually in tenths anyway, and the plotting in the office of straight ten year periods is very much quicker. Before finishing the analysis, notes are made as to the tree class, that is, whether the tree is a "leader" or is a crowded one in the stand, merchantable length of the tree, length of crown, etc., and the crew moves on to another. Sheets for black spruce and white spruce should be kept separate or separated in the office.

This process requires some time, but the data secured are very valuable since they form the basis for volume tables and for computation or growth in diameter, height and volume. The front of the sheet contains the age of each section, its length, length of tip, etc., so that the contents of the tree in both cubic feet and board feet can be easily computed, as well as the stem form factor, and the growth per cent., providing the number of rings at breast height for the last ten years are measured and counted. On the back of the sheet we have the complete life history of the tree in ten-year periods, from stump to end of last section. As is well known, a tree lays on a certain shell or volume each year on top of that previously there, so that for a tree 100 years old (ten decades) we have ten interior volumes and the measurement to every decade mark represented by the radius measurement, which can be doubled for diameter. Our final curves then, while they are supposed to be for only 165 trees, are in reality for a very much greater number, because there are all the little trees inside of the others, or at least their volume, which is what the forester is interested in. So that, if every tree were 100 years or at the end of every section. This is shown by our final curves



Curves Showing Diameter Growth of New Brunswick Spruce.

which have dots beside which is written 147, 152, etc. This means that that dot or point is determined from the average of 147 or 152 points, the greater number of dots representing greater accuracy. Probably, if the entire number of dots along any curve were totalled, the number would be more than 1,650, because some of them represent not decades but the distance grown in three, four, five, etc., years. Just how the average point or dot was secured is quite another story.

Working Out Tables and Curves

The next step is the working up of the figures on the sheets so that the information desired can be obtained. It can be shown graphically by curves, or, after the curves are drawn, can be put into the form of a table. Probably the first thing desired will be to make volume tables. This presents no difficulty since the contents in cubic feet, or as given by the New Brunswick rule, can be averaged on the basis of similar diameters and heights, evened off by a curve if the results do not run regularly, and put into the form shown by the table for spruce in cubic feet. This table can be used for estimating pulpwood on a tract of spruce, using 90 cubic feet as a cord. Its results are fairly accurate for 165 trees, but we do not claim for it any more than that; it would be much better if it were for 1,000 trees. It seems, however, to run fairly close to a similar table in Cary's Manual, taking corresponding diameters and heights and should be discarded when more trees have been measured. Anyone using it had better check it by measurements on down trees, as a factor of safety. "Safety first" is a good motto for volume tables as well as other things.

The securing of the final curves for growth in diameter, height and volume takes longer and represents the winter's office work of the Junior class of five men during one term, in the year 1915. The diameter growth inside the bark on age is shown for four sections, stump 16 foot, 32 foot and 48 foot sections, and each of them had to be plotted separately before transferring them to the final sheet. These curves were not drawn by chance, but represent almost mathematical averages, the final dot being plotted from its two co-ordinate distances. This means considerably more labor, but much greater accuracy, as it was found that we could not rely on the results read off from a curve made at random.

What is the Value to the Lumberman?

What do these curves show and of what value are they to the lumberman? A single illustration read from them will show this, although the average New Brunswick lumberman might doubt the figures. However, he laughs best who has the figures—at least until more reliable information than the lumberman has yet produced can be submitted. The main thing we are interested in here is how long does it take for a 16-foot log, say 8 inches at the top end, to grow from the ground, not the stump? Taking the line from 8 on the left and running over until it strikes the 16-foot curve and then down until it strikes the bottom line, you read "100 years." To get a second 16-foot log eight inches at the top end takes, from the 32-foot curve, about 122 years from the ground, and for the third 16-foot log or on the 48-foot curve somewhere between 140 and 150 years—say 145 years.

The table in the upper left hand corner of the same sheet on which are the curves, has simply been made by reading off results shown by the curves and tabulating them. It shows the height of a spruce tree at different ages, as well as its diameter on the stump and its D.B.H. That is, at 70 years on the stump, it has a diameter of 7.4 inches and a height of 55 feet. It also shows the volume attained in a given number of years, that is, that at 100 years it will have a volume of 13.76 cubic feet (taking about seven trees to make a cord of pulpwood) or by the New Brunswick rule it should scale 40 board feet. It should be remembered that these figures cannot be applied to the individual tree any more than mortality tables can be applied to the individual. They represent the average of the 165 trees for which the study was made; some trees will do better and some worse, but they should show the performance of the average tree. Compared with figures obtained by Mr. Elwood Wilson on the growth of spruce in Quebec, by a different method, they show almost similar results, that is, in diameter about an inch or over in ten years, or to be exact a diameter on the stump of 11.3 inches in 100 years, a little better than an inch in ten years.

Volume Table for Spruce

(Cubic Feet)

Diameters Breast High (inches) \ Total height (feet)	55	60	65	70	75	80	85	90
9	6.4	7.5						
10	9.5	11.0	13.0	14.5	16.0	16.9		
11	13.0	15.0	17.3	19.5	21.2	22.5	25.0	
12	16.6	19.0	22.0	24.5	26.5	28.0	31.6	
13	21.0	23.7	28.8	30.0	32.0	34.0	38.0	
14	25.0	28.0	31.6	35.3	38.1	40.1	45.0	
15	29.3	33.0	36.6	40.7	43.5	46.3	51.7	53.6
16		38.0	42.0	46.3	48.2	52.6	59.0	61.4
17			47.5	52.0	55.0	59.0	66.1	68.5

Volume Table for Fir—165 Trees

Diameter Class Inches	Average DBH Inches	Number of Trees	Average Merch. Height (feet)	Average Volume Cubic Feet	Average Vol. feet BM NB Rule
5	5.2	12	21.6	2.95	
6	6.1	15	28.0	4.95	
7	7.1	26	29.9	6.76	
8	8.0	17	31.4	8.66	
9	9.0	28	33.6	11.75	41.4
10	10.1	26	36.4	14.41	60.2
11	11.2	13	37.8	14.88	71.0
12	11.9	14	38.5	18.8	93.0
13	13.0	11	43.0	19.0	109.0
14	14.0	3	45.1	20.0	124.0

The Palmer-McLellan Shoe Pack Company, Limited

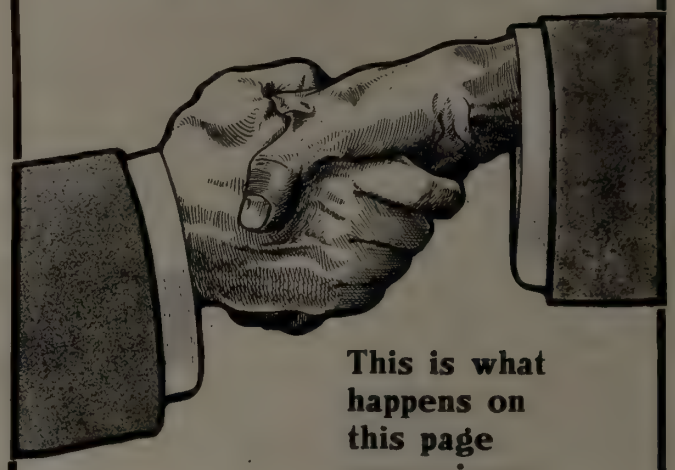
The Palmer-McLellan Shoepack Company, Limited, Fredericton, N. B., are one of the several large eastern firms catering to the lumbermen's needs in footwear. The company was founded in 1912 by the late John Palmer, whose long connection with the shoepack manufacturing business made him known from coast to coast. Mr. Palmer was the first man to make shoepacks in Fredericton, N. B., and was the originator and founder of the first Oil-tanned Leather and Shoepack Company. Associated with Mr. Palmer in the founding of this company was Mr. W. A. McLellan, financial and manufacturing manager. The present officers of the company are Messrs. W. A. McLellan, J. E. Palmer and J. H. Richards. Mr. Palmer is the son of the late Mr. John Palmer, and Mr. Richards has been connected with the lumber industry in New Brunswick for many years. The factory shown in our illustration is a modern one in every respect and has a capacity of 600 pairs a day. A modern tannery is operated in connection with the factory and over one hundred employees are employed. In addition to the full lines of waterproof shoepacks and sporting boots, the company manufacture a line of workmen's boots, specially suitable for the lumber trade. All goods are put out under the "Palm-Tree" design, with the "Palmer" name as the trademark, which has now become favorably known throughout Canada.

Plant of Palmer-McLellan Shoepack Company, Limited, Fredericton, N. B.

Mr. Buyer

Are you in the market for a special bill of lumber? Would you like to pick up a real good second-hand planer or perhaps some logging equipment? Have you a vacancy in your plant for a filer or other employee? If you answer "Yes" to any of these, advertise on this page. It is the "Master of Ceremonies" and will introduce you to the man you want.

The Master of Ceremonies



This is what happens on this page every issue

Mr. Seller

You are looking for the man who is looking for you—you have for sale what he wants. All that is needed is an "Ad" on this page to bring you together. Appeal to this "Master of Ceremonies" and send us a small ad. today. What can we sell for you—or perhaps we can find you a job.

Send along your ad.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch. each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Sawdust Wanted

Wanted to contract for sawdust. Apply M. Brennen & Sons, Hamilton, Ont. 9-10

Maple and Hickory

Wanted, Maple and Hickory Axles, dry. Jackson Wagon Co., St. George, Ont. 8-11

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Wanted to Buy

750,000 ft. 2 in., 2½ in., 3 in. and 4 in. log run Birch. Terms 75 per cent. cash on shipment, balance on arrival. Apply P. O. Box 643, Montreal, Que. 9-12

Wanted

We are in the market for a large quantity of 2-in. Spruce Plank 4 in. and up wide, 8 feet and up long. Good merchantable stock. Kindly write us your lowest price. Box 334, Canada Lumberman, Toronto, Ont. 5-t.f.

Wanted

Several cars 16/4 Birch, No. 2 common and better grade. Must be dry and ready for immediate shipment. Write us your lowest price and full particulars. Box 333, Canada Lumberman, Toronto, Ont. 5-t.f.

For Sale–Lumber

For Sale

Seven cars round Rock Elm timber, 12 to 20 in. diameter top end, 20 to 50 feet long. Choice stock. Hall Bros., 174 Mutual St., Toronto, Ont. 10-13

For Sale

500,000 Western Ontario White Pine Logs. Can be sawn to your order. Those interested please write Hall Brothers, 174 Mutual St., Toronto, Ont. 9-12

Hemlock Ties

FOR SALE—Considerable quantity of hemlock ties suitable for Electric Railways, Sidings, etc., ready for immediate shipment. Monteith Bros., Rosseau, Ont. 6-10

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal

GEO. C. GOODFELLOW,
Montreal, Que.

For Sale

65,000 Feet GOOD DRY B. C. FIR

2½ to 5 in. thick by 6 to 12 in. wide. 60 ft. to 78 ft. long. Immediate delivery. George Kersley, 224 St. James Street, Montreal. 7-10

For Sale–Machinery

Machine For Sale

Two second-hand McGregor-Gourlay Q. Y. Planers and Matchers, one 9-in., one 15-in. wide; in good condition, ran every day till October, when fast feed Matcher was installed. Located in Saskatchewan. Box 384, Canada Lumberman, Toronto, Ont. 8-11

Producer Gas Engine

For sale, second hand 45 H.P. Producer Gas Engine with gas producer, air pump for starting, blower, and small gasoline engine complete and in good condition. Burns pea coal, could be operated at a cost of about $1 per day. Will be sold at a very low price.
Canadian-Warren Axe & Tool Company, Ltd.,
7-10 St. Catharines, Ont.

Machinery for Sale

Second-hand saw mill engine, Corliss type, in perfect condition. A snap for quick sale. Box 400, Canada Lumberman, Toronto, Ont. 10-10

Timber Limits and Mills

Timber limits for sale in the District of Algoma, also a Band and Gang Saw Mill. For particulars apply to Geo. Niebergall & Son, Parry Sound, Ont. 11-13

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

FOR SALE
Woodworking Machinery

The following second-hand machines have been placed with us for sale:
1 Woods No. 32 Matcher; 1 Goldie 10-in. Moulder; 1 Goldie 24-in. Matcher; 1 Cowan 42-in. Sander; 1 Jackson Cochrane 36-in. Sander; 1 Egan 36-in. Single Surfacer; 1 McGregor Gourlay 2-drum 30-in. Boss Sander; 1 Egan 30-in. 2-drum Sander; 1 CMC 8-in. 4-side Sticker.

P. B. Yates Machine Company, Limited,
10-t.f. Hamilton, Ont.

For Sale

Following Second-hand machinery
Water Wheel, 4 ft., with 5 in. shaft 14 ft. 2 in.
Eight Gates 20 in. wide, depth 3 ft. 8 in.
Draft tube 14 ft. to elbow (elbow 2 ft. 2 in., diameter of draft tube 4 ft. 6 in.)
Rope Drive, big pulley 6 ft. 3 in., face of pulley 2 ft. 8 in.
Small Pulley 3 ft. 2 in., face 2 ft. 8 in.
Friction Clutch, 6 standards and boxes, also rope drive idler.

Apply Brome Lake Electric Power Co.,
10-10 Waterloo, Que.

Machinery For Sale

Refuse Burner, 24 ft. diam. 100 ft. to spark arrester; all grate bars, 4 base doors, lined with fire brick; in good condition.

Smoke stack 7 ft. x 130 ft. to spark arrester, a1 condition.

Three Boilers, 6 ft. x 16 ft.; 70 4-in. tubes, 2 fire doors, 2 draft doors, fronts in a1 condition.

One No. 8 Buffalo Forge Co. Blower.

One Dean Duplex Steam Pump; 2—14 x 14 steam end; 2—12 x 28 water end, valves and piping.

All angle iron frames and galvanized roofing for large fire room.

All or any part at bargain prices.

Box 390, Canada Lumberman, Toronto, Ont. 10-12

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

SAW MILL FOREMAN open for position. Eighteen years' experience. Has had good success in handling men. Can furnish best references. Box 403, Canada Lumberman, Toronto, Ont. 10-13

EXPERIENCED LUMBERMAN wants position. At present employed as sales manager. Can furnish A1 references. Reason for change, company going out of business. Box 401, Canada Lumberman, Toronto, Ont. 10-11

DOUBLE BAND SAW FILER wants position, first-class references.

BAND MILL FOREMAN wants position, first-class millwright, and can handle men to good advantage. Box 359, Canada Lumberman, Toronto, Ont. 6-11

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

INSPECTOR WANTED—A man capable of inspecting both hardwood and softwood, and shipping same. State references, experience and salary expected. Box 394, Canada Lumberman, Toronto, Ont. 9-12

Business Chances

For Sale

To close an Estate, the valuable Lumber Mill known as the Picnic Island Mill at Little Current, Ont., Georgian Bay, is offered for sale. Capacity about twenty million feet of lumber per season. Extensive docks with sixteen feet of water and booming capacity for about fifteen million feet of logs.

Picnic Island, which is freehold property, consists of thirty-seven acres, containing the mill and twenty dwelling houses for employees. Superior drying grounds. Can ship by rail or water. For further particulars write,

James Battle, Thorold, Ont.
Administrator Estate of Late John Conlon,
or
Thomas Conlon, 44 Church St.,
10-10 St. Catharines, Ont.

Sawmill

For Sale—Complete equipment. Plenty available jack pine. Owner retiring. C. R. Allison, 514 Traders Bank Building, Toronto, Ont. 10-10

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

Miscellaneous

Timber Limits For Sale

Berths No. 2 and No. 4 Nipissing, and Berth No. 4 Gurd. Hemlock, Birch, Pine and Spruce. Would sell berths separately. Close to Lake Nipissing. Great opportunity for jobbers on Nipissing berths. For particulars address Box 381, Canada Lumberman, Toronto, Ont. 7-10

Pocket Telephone for Woodsmen

Forest Officer R. B. Adams, of Missoula, Mont., has invented a portable telephone for the use of patrolmen of the National Forests. The outfit, made of aluminum, weighs only two and one-half pounds; the one formerly used weighed ten pounds.

A field man equipped with the new telephone, a few yards of light emergency wire and a short piece of heavy wire to make the ground connection, can "cut in" anywhere along the more than 20,000 miles of forest service telephone lines and get in touch with the headquarters of a supervisor or district ranger. Removal of the insulation from a few inches of the emergency wire is all that is necessary to make contact with the line wire.

The instrument does not ring the bell of the receiving telephone, but instead causes a screeching sound from a small megaphone-shaped apparatus, known as a "howler," at the ranger station telephone. If the field man needs to talk with some one elsewhere on the line the ranger station instrument can be used to ring up the person wanted.

Forest officers say the portable 'phone is especially valuable in reporting fires and other emergencies, with the least possible delay.

Maple for Cross-Ties

Ten years ago maple was practically unknown as a railway cross-tie, being included in the list of woods that decayed too quickly for this purpose. Treating with creosote renders it immune to decay and it now figures quite largely under the head of "miscellaneous hardwoods," while in some regions it constitutes a considerable percentage of the ties treated. As clear hard maple is too valuable for flooring and other purposes to be used for ties, the tops and smaller trees are utilized for treatment. Maple takes creosote treatment fairly well, being, in this respect, very similar to beech and red oak. It does not treat as uniformly as some of the other woods, but absorbs creosote sufficiently well to become fully protected against decay. As with most other woods which do not take full penetration, it is best to bore and adze maple ties before treatment.—American Forestry.

Douglas Fir is Useful Wood

In the "Illustrated London News" recently, there appeared a picture of the H. M. S. Simulation, a battleship constructed of wood, which, after serving various purposes known only to those in charge of naval operations, is shown stranded at Mudros, Isle of Lemnos, formerly the base for naval and military operations in connection with the Dardanelles. It appears that the dummy battleship was constructed at Belfast, the material used being Douglas fir, mainly from British Columbia.

Making artificial silk from sawdust and other lumber waste is the latest experiment of the United States Forest Products Laboratory at Madison, Wis. The use of artificial silk made directly from wood is increasing by leaps and bounds. Originally its principal use was in the manufacture of braids and trimmings, but recently the manufacture of hose from artificial silk has become an industry of vast importance. Other uses for artificial silk are woven goods of all kinds, linings, tapestries, etc., neckties, ribbons, sweater coats, etc. About five and one-half million pounds of artificial silk are used annually in the United States. There are several methods of manufacture, but that from wood pulp is usually made by treating the wood pulp with caustic lye, after which it is dissolved in carbon disulphide. This is then diluted with more caustic lye to form a viscose which is allowed to age for some time. It is then forced through dies to form threads which are hardened by a treatment with sulphuric acid, ammonium sulphate, and sodium borate, or formic acid. After washing and drying, the silk is ready for use. The laboratory is investigating the artificial silk problem as a possibility for utilizing wood waste and has on hand a variety of articles made from this material .

The establishment of a $4,000,000 ship building and ship repairing plant in or within a few miles of Vancouver may be one result of the passage of the government's shipping measure now in course of second reading at the Capital. Although many marine construction companies both at Vancouver and Victoria have definitely indicated their intention to proceed immediately with the construction of deep sea craft under the bond guarantee proposals of the government, none have yet considered launching upon a programme of this magnitude.

Union Lumber Co.

Limited

White Pine Cuts

MILNET (Sellwood Jct.)—1915 cut

100,000—2 x 4 and up 10/16—No. 3 cuts and better
50,000—6/4 x 4 " " " "
50,000—1 x 7 " " " "

SPANISH—Bone Dry

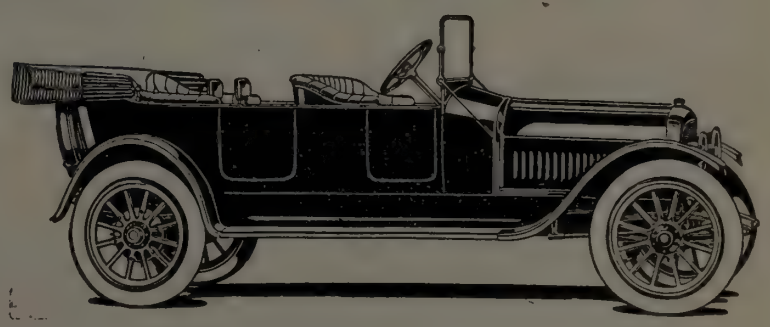
18,000—2 x 4 and up 10/16—No. 2 cuts and better
(80 per cent. No. 1 cuts and better)

17,000—5/4 x 4 and up 10/16—No. 2 cuts and better
(66⅔ per cent. No. 1 cuts and better)

Union Lumber Co., Limited

701 Dominion Bank Building
TORONTO, CANADA

HERE'S A SNAP!



We will exchange this Five Passenger Jackson Car, fully equipped with Starter, Electric Lights, Slip Covers, Spare Tire, etc., in splendid condition, for Pine, Hemlock or Spruce Lumber.

Box 399
Canada Lumberman
Toronto, Ont.

Review of Current Trade Conditions

Ontario

The country trade in Ontario has been rather quiet during the past fortnight on account of unsatisfactory weather conditions. Now that improved weather is in sight, conditions are a little better. People who have been anticipating building operations are now finding a little more time to attend to them. Up till now the farming trade has been held back by the lateness of the seeding season, which is about three weeks behind time. The farmers have been so busy with their work that they have not been able to think of anything in the way of building. A few of the farmers have recently been making their appearance on the market and it is expected from now on that their demand will be more active. Some of the small towns are comparatively quiet, others are fairly busy. Conditions this year cannot be compared with previous years at all, on account of the lateness of the season. On the whole, wholesalers who have been about the country during the past fortnight report that trade is better than it was two or three weeks ago.

In the larger manufacturing towns conditions are not showing any important change. Building permits are very low and there is not much prospect of a great volume of business in the near future. At Hamilton, the trade is busier than at most points, but even there the trade is spotty, being active one week and quiet the next. Brantford trade is improving a little, while at London there is not much to report. In nearly all the larger centres the trade is chiefly made up of orders for sorting up stocks wherever they have been depleted.

The hemlock trade is quieter, its activity during March and April having declined in May. Prices are unchanged. Shingles are strong, XXX B.C.'s being quoted at $3.35. The trade is altering so as to favor XXX and XXXXX and manufacturers are apparently stopping the production of XXXX.

Eastern Canada

The lumber trade at Montreal is quiet so far as the soft wood section is concerned, but there is an active demand for hard woods, growing out of the revived activity in the piano and furniture industries. In the general local trade the quietness is the result of lack of building operations. The United States trade continues on a fair scale. Since the opening of navigation a small amount of lumber has been shipped to the United Kingdom and freight rates have again risen, 375s. being quoted by the steamship companies and very little space being available at that figure. Exporters are predicting 500s. unless the Government comes to their assistance.

There is very little change to report in connection with the export trade at St. John, N.B. There are plenty of enquiries from Great Britain, but the problem of making deliveries is still as difficult as ever to solve, as freight rates continue very firm at 360s., and practically no vessels are offering except those furnished by the Admiralty. All the mills are now sawing, largely on English deals, with one or two mills operating for the American market. Local conditions at St. John show a little improvement. The American market is still quite firm. Lath are firm and unchanged. Shingles are rather quiet.

The market for spruce at Boston continues very firm and the demand is increasing. The quotation on frames by rail to Boston is firm at $28. For 9-in. frames $29 is required, and for 10-in. $20, while 11-in. and 12-in. are placed at $31. Random is in active demand and price advances are expected. At present, the range in quotations is as follows:—2 x 3, $21.50 to $22; 2 x 4, $22.50 to $23; 2 x 5 and 2 x 6, $21.50 to $22; 2 x 8, $25 to $26; 2 x 10, $26.50 to $27; 2 x 12, $27.50 to $28.

The demand for spruce boards is improving with the betterment in the weather, and sales are now quite extensive. Dry covering boards, planed on one side, 5 ins. and up wide, 8 ft. and up long, are bringing $22. At New York, the demand for spruce is steady and prices are firm. Boards are bringing the highest prices in their history.

The demand for hardwood at Boston continues good and prices are firm. Several advances in quotations have lately been reported. The demand is fairly well distributed, with maple, birch and plain oak getting a little the best of it. The hemlock situation at Boston is improving steadily. Eastern clipped boards, 10, 12, 14 and 16 ft., are firm at $23.

The shingle market is improving at Boston. Some manufacturers are holding out for $3.60 as their lowest figure for white cedar extras. For clears the usual price now is $3.20 and for second clears $2.40. Red cedar shingles are also very firm, as much as $4 having been quoted for the best brands of extras. The demand for lath is improving steadily.

United States

The regularity with which reports upon trade conditions in the United States refer to nothing else but prosperity is becoming an old story. The Federal Reserve banks made a statement public recently and not a single unsatisfactory condition was reported in business or industry throughout the whole of the United States. Building operations in the cities and larger towns continue to show increases. In the country districts, however, the building operations have not shown so much increase as might have been expected, as weather conditions have not been favorable. Ordinary grades of lumber for building purposes have been affected by this situation. Manufacturers are not now looking for any large demand from the rural districts until the summer has advanced considerably. In the manufacturing centres, building operations are quite active.

The southern pine industry has been affected rather seriously of late by the operations of parties sending out lists of transit cars containing stocks at low prices. It is expected that a strong effort will be made by the association to reduce this evil. There are plenty of orders on file for southern pine and the outlook for a greater demand is encouraging.

On the Pacific Coast, trade conditions are fairly satisfactory. The cargo trade is being restrained by lack of vessels, but the outlook in the markets reached by rail delivery promises to offset the cargo shortage. Stocks at west coast mills are steadily decreasing. Assortments at many points are badly broken. An especiallysatisfactory feature from the United States point of view is the fact that Canadians are so completely absorbing the lumber production of British Columbia and the latter are not attempting to market their production in the United States to any great extent.

The hardwood situation continues on a very satisfactory basis in all respects. Many mills report considerable decrease in their stocks on hand. This is particularly the case in regard to oak, poplar and chestnut.

An important feature of the lumber trade situation today is the increasing demand for low grade material for box making. Fibre pulp has advanced in price sufficiently to curtail the use of the fibre container and box makers are benefitting in proportion. The wooden box manufacturers are busier now than they have been for many months and are using up large quantities of low grade lumber. Automobile manufacturers are also buying much low grade material to use for crating their cars so that they may be shipped on gondolas. An average automobile crate requires approximately 1,000 feet of lumber and this new demand is absorbing millions of feet of low grade stuff.

Great Britain

The most important question in connection with the lumber trade in Great Britain today is the remarkable difficulty in doing any business in White Sea goods. The tonnage question still presents a practically impassable barrier, and so far as anyone can foresee at present, is likely to continue so during the rest of the war. Sales do not seem to be possible, either c.i.f. or f.o.b., as shippers are unable to find vessels any more than the buyers can. The outcome is a deadlock.

The spruce market still retains its cheerfulness. Prices are exceptionally high and further advances are reported almost daily. Spruce is in great demand in many districts and as deliveries are fairly satisfactory, the trade is placing great confidence in it. Lumbermen in the United Kingdom are wondering when some kind of a check will be placed upon what they consider to be the extortionate freight rates charged by vessel owners. The timber trade is completely in shipowners' hands and other trades are in a similar fix. Rates from the White Sea, for instance, for the United Kingdom, will soon reach 400s. at the present rate of going.

The London market has been quiet of late. It is reported that high prices are putting an end to anything in the shape of speculative dealing. Quotations for spot goods continue very firm, and there appears to be no prospect of cheaper wood in the near future. There is, however, an increased quantity of stock going into consumption, and a fair amount of activity in general work.

At Liverpool and Manchester there has been quite a falling off in the demand of late as a result of consumers not caring to buy at the present abnormally high prices. Such prices are certain to cut off the production of every article that is not a necessity. A little fresh stock continues to arrive, but prices continue to advance and stocks remain about steady. The government demand and the great

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

scarcity of freight room are combining to keep up values of soft woods and higher figures are being quoted continually. Several small c.i.f. sales are reported at Liverpool recently. The freights on these parcels have been in the vicinity of 340s. from the St. Lawrence and lower ports. Spruce arrivals are rare and prices remain firm. the last quotation reported having been £29 10s. c.i.f. for an ordinary specification. Oregon planks are very scarce and prices are advancing. Oregon longs have gone off the market. There have been no arrivals of birch for some time. Planks are very scarce at £31 to £32 per standard for Halifax and St. John stocks.

At Manchester, prices continue to alter from day to day, always with an upward tendency. Recent quotations are about as follows:—spruce £30 for scantlings; floorings £31 10s. to £32 c.i.f.; pine 1st, 3 x 11, about £56.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Trade Report –U. S. Market Strong

St. John, N. B., May 6; (Special to the Canada Lumberman):—Very little change has taken place in the foreign markets during the past two weeks. From the British market come plenty of chances to sell good parcels of deals, but how or when deliveries can be made remains to be seen. Tonnage seems to be even more scarce than a month ago. Rates for British ports remain firm at 360 shillings, with practically no boats available, excepting those supplied by the Admiralty, who, in fact, are the only heavy purchasers at the present time. The orders being shipped out of St. John to the Allies contain a very large percentage of scantlings 3 x 4, 5 and 6 in., for trenching, and spruce boards for huts, etc. Prices for these sizes remain firm around about $16 for scantling and boards. All the mills are now sawing, largely on English deals, with the exception of Messrs. Stetson, Cutler & Company, and the Miller Estate, who are sawing for the American market. Locally, conditions show some improvement, but not very marked. Very few houses are being erected, and seemingly there is no improvement ahead for the near future in this direction. Some factories are quite busy on some large orders for the McAvity plant and for the Sugar Refinery additions. These two large operations are being carried on by Messrs. Grant & Horne, contractors, and are the only two large works being erected. It is to be hoped that many such plants will be erected during the coming year, as they will be a stimulus to trade both in erection and operation.

The American market remains in a good firm position, and it is to be hoped it may continue so for the coming year. Prices are unchanged from our last quotation.

Laths still hold a very firm position, and at present show little change for any decrease in price.

Shingles are still dull and are at least one dark spot on the market.

The drives at the head of the St. John River are progressing very favorably, but will need some rain before long, as we have been without any rain for a month, and the river is now at a standstill. Bank logs are coming along freely and their prices are unchanged during the last two weeks.

Hardwood Moving Well at Montreal

Montreal, May 12th (Special to the Canada Lumberman):—Except for the hardwood section, trade is quiet. For hardwoods there is an active demand, due to the revival in the piano and furniture industries. For a long time the hardwood business was very dull, but it has now taken a decided turn, accompanied by a better market for veneers.

The slackness in the general local trade is owing, of course, to the comparative inactivity in building. The permits show how this has declined. During April the total was $435,805, a decrease of $538,086, while for the four months values were $919,225, a falling off of $946,602.

Orders from the United States are on a fair scale, but have slackened a little in consequence of an embargo on the Williams Line. There is a congestion of cars at Albany, and the railway companies decline to receive further lumber at that point. Application is to be made to levy an additional 2c. per 100 lbs. on lumber going by this route, when the embargo is lifted.

With the opening of navigation, a small amount of lumber has been shipped to the United Kingdom. As was expected, rates have again risen, 375s. being quoted by the steamship companies, and even at that there is little space available. It is predicted by some exporters that unless the Government comes to the rescue, 500s. will be asked before the season is over. Another tramp has been chartered to load from this port, and advices from Quebec state that a tramp has loaded there. A very large quantity could be shipped from Canada were boats available, but at present there seems to be no hope of an improvement in the situation.

Sulphite continues to be a strong market, and is likely to continue so for some time. The mills are working at full pressure, and are able to sell all their production. Ground wood has also advanced, while the demand for newsprint is still very large. Owing to the activity in the pulp markets, pulpwood is in very good request.

Box making is slow. One firm is very busy on an old order for shell boxes, but another company which was formed mainly for the purpose of manufacturing this class of box, and which secured one of the early orders, is disposing of its machinery. Another box-maker, who, for a while was very busy on Government work, has closed his factory for the time being. The Munitions Board is very strict in inspecting the work, and the lumber is now inspected before it is made up into boxes, in addition to the ordinary examination after the boxes are completed.

French Government Loading Steamers at Parrsboro

Parrsboro, May 6th; (Special to the Canada Lumberman):—A fine three-masted schooner of 424 tons register was launched at Port Greville, N. S., a week ago today. This is the first of a fleet of eight schooners, ranging from four hundred tons upward, which will be built along the Parrsboro shore this season. The new vessel has all the latest improvements in outfit, and is said to be one of the best vessels ever built in this vicinity. She will take a cargo of piling to New York and on her return will load deals for the United Kingdom.

The scarcity of trans-Atlantic tonnage continues and appears to be getting more pronounced. Only one deal vessel—a schooner—has sailed from this port up to the present. Usually at least two or three steamers are loaded and away before this date. Now none is loading and there is no immediate prospect of any arriving. Several schooners are expected shortly, but something larger is urgently needed. One Parrsboro shipper has sold two large cargoes to the French Government for immediate delivery on the condition that the government shall provide the carriers. It is expected that the two French steamers will arrive this month. Their coming will help to relieve the tension, and may lead to a solution of the tonnage problem.

Five American schooners have loaded lumber here this spring for United States ports. Two of the vessels were built more than fifty years ago, and the youngest or newest was over thirty years old. This is a practical illustration of the scarcity of bottoms, and may be regarded as a proof that other freights are more profitable than lumber freights. Apparently only vessels unfit for other trades can be got to carry lumber, although there has been a big advance in lumber freights. Of course, the coatsing rates are low in comparison with trans-atlantic prices, and they are also low when compared with freight from the West Indies and South America.

The breaking of a boom at Portapique recently set adrift lumber valued at $10,000, belonging to a Parrsboro operator. A considerable portion of the lumber was recovered.

North Shore Conditions Favorable

Thessalon, Ont., May 1st; (Special to the Canada Lumberman): The past winter was a favorable one for woods operations on the North Shore. There was abundance of snow and frost. The ice on the lakes was excellent and the lumbermen got their logs at a reasonable cost. The weather for driving could not be improved upon. Water in the rivers and lakes is very high and the drives are progressing splendidly. All the drives and running streams will be out very early. The ice in the inland lakes had not gone out a day or two ago; consequently these drives had not got under way as yet, but any quantity of water behind them will come along rapidly as soon as the ice clears away. The water on the Mississaga and Spanish rivers is very high, so much so that there has been danger of the booms at the mouth giving way. The lumbermen have taken the precaution to have storm booms stretched outside in case anything of this sort should happen.

The mills are all running at full capacity. There appears to be an abundance of men for both the mills and the drives.—Algoma.

THE HARRIS ABATTOIR COMPANY, LIMITED

TORONTO, ONT.

MR. LUMBERMAN:

When you are next purchasing supplies of any of the products mentioned below, we would appreciate your enquiry so that we may quote prices.

We know that we can give you satisfaction, as regards "prices," "quality of goods," and "service."

With reference to "service," we are prepared to give delivery weekly by refrigerator cars to practically every section of Ontario, Quebec, and the Maritime Provinces. It will pay you to get in touch with us before placing your order.

Long Clear Bacon,	Domestic Shortening,
Barreled Pork,	Pure Lard,
Barreled Beef,	Cured Meats,
Butter,	Eggs,
Cheese,	Sausages,
Mincemeat,	Vegetables,
FRESH MEATS,	LIVE STOCK.

Agencies at:—

Sudbury, Ont.	Montreal, Que.	Halifax, N. S.
Soo, Ont.	Quebec, Que.	Stellarton, N. S.
Haileybury, Ont.	Campbellton, N.B.	Sydney, N. S.
London, Ont.	St. John, N.B.	Glace Bay, N. S.
Ottawa, Ont.		

THE HARRIS ABATTOIR COMPANY, LIMITED

Jones Underfeed Stoker Installations

The Jones Underfeed Stoker Company, Limited, of Toronto, are installing three new stokers for the burning of combination fuel—paper mill refuse and coal—for the sulphite mill at the E. B. Eddy plant, Hull, P. Q. This makes 23 stokers they now have installed in the Eddy plant. They have also recently supplied six stokers to Price Bros., of Quebec, for their Kenogami mill.

A Monster Melting Pot

The melting pot represented in the accompanying illustration has a capacity of 35 tons and is claimed to be the largest in the Dominion of Canada. The great mass of molten metal contained in this pot when it is in operation is a sight worth seeing. The Canada Metal Company of Toronto make use of this pot to mix their raw material in the production of shrapnel bullets and babbitt metals. The process, from the ingot metal to the finished products, illustrates forcibly the value of taking every precaution to secure metals containing the necessary percentage of each metal to give efficiency. The old fashioned way of taking tin, antimony, etc., melting and pouring into moulds and calling it babbitt metal may have passed muster many years ago, but is not suitable for present-day requirements.

The Canada Metal Company have the most modern appliances for making and testing their babbitt metals before they are approved as satisfactory for the special purpose for which they are intended. They have a well-equipped laboratory on the premises, which is presided over by a metallurgist who tests everything thoroughly before it goes to the large melting pot. After the first melting process everything is again tested in the laboratory, by the chemist, in order to make absolutely sure that the alloy is perfect. When the babbitt metals are ready for use and before they are passed as "O.K." they are put through a severe test on a friction testing machine. Unless this test gives satisfactory results in every detail the metal is rejected.

For shrapnel bullets the alloy must be absolutely perfect and it is only by melting a large quantity at a time that a perfect and uniform quality can be guaranteed.

Enterprise Steel Ranges

One of the best known manufacturing firms turning out steel ranges for logging and contractors' camps is that of the Enterprise Foundry Company, Sackville, N. B., who are known to practically all readers of the Canada Lumberman by reason of the excellent steel ranges which they turn out and which are to be found in many parts of Canada. For logging camps there is nothing better in the way of steel ranges to be had, than the "Enterprise Camper," turned out

Plant of The Enterprise Foundry Co., Sackville, N. B.

by this company. In fact, it is exactly designed to meet every requirement in this class of work. The "Enterprise Camper" combines large capacity, generous dimensions, durability and perfect operation with compact construction. It burns both wood and coal, taking a stick of wood 32 inches long. It has an extra large oven which is fitted with a strong, well-braced door, opening level with the oven bottom. It will handle the cooking operations for 60 to 100 men. This range is made of the highest quality bessemer steel and fitted with

Canada Metal Company's Monster Melting Pot

SUPPLIES

Everything in the Grocery line that's needed for the Camps—we are ever on the look out for goods that will meet your requirements and now have on hand a number of splendid lines which you can without doubt use to good advantage in these times of rapidly advancing prices for all food products. Here's a little list. If you notice anything that you can use we shall be glad to hear from you.

Greek Valencia Raisins, 50 lb. Boxes	6½
California " " "	7¾
Fine Filiatra Currants, Cleaned	11¾
California Evaporated Peaches 50s	3¾
California Standard Apricots 25s	9½
Choice Natural Figs 28s	7⅛
Gallon Rhubarb	1.75
" Apples	2.75
" Lombard Plums, Heavy Syrup	3.25
" Pie Peaches	2.25

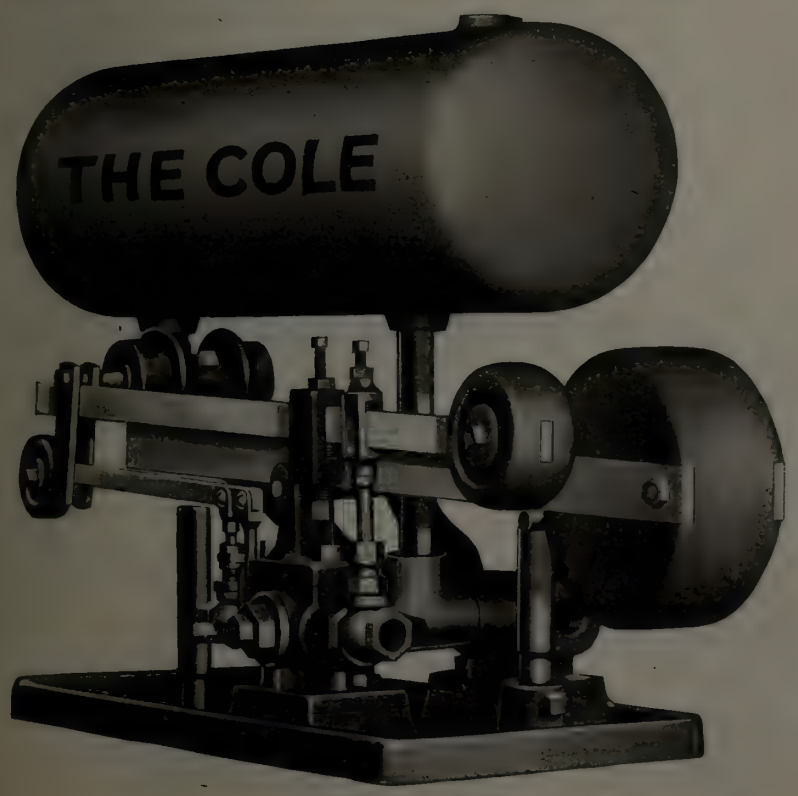
H. P. ECKARDT & COMPANY

WHOLESALE GROCERS

Church St. and Esplanade, TORONTO

Increased Circulation

and a Hotter Kiln



A Cole Steam Trap on your steam line will give greatly increased circulation, a hotter kiln and effect a big saving in fuel.

The Cole takes care of all condensation and returns it to your boiler as feed water at a high temperature. **Hotter than is possible by a pump.**

Send us particulars of your steam plant and let us show you the saving a Cole Steam Trap can work in your plant.

Geo. W. Cole Co.

838 Dundas St. - Toronto

The "Cole" for Coal Economy

exceptionally heavy castings: The "Enterprise Camper" is turned out in two important sizes. No. 924 measures, with reservoir and shelf, 61 in. x 33 in. on the top. Its oven is 24 in. wide, 25 in. deep and 15 in. high. No. 1030 has a top measurement with reservoir and without shelf of 62 in. x 33 in. Its oven is 30 in. wide 25 in. deep and 15 in. high. In connection with these ranges the company can also supply a detachable copper reservoir and large water front if required. The company will be pleased to send illustrated circular and prices to anyone making enquiry.

Cole Tilting Steam Traps

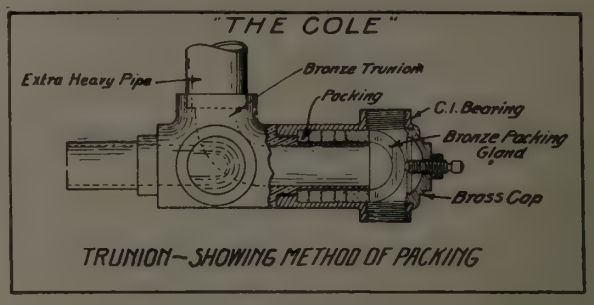
One of the accompanying illustrations represents a battery of "Cole" Tilting Steam Traps receiving condensation from dry kilns and heating systems. These traps are automatically equalizing the different pressures and returning the condensation to a return trap above the boiler, whence it is returned into the boiler much hotter than it could be accommodated by a pump.

In most woodworking plants fuel is not an article of much expense, but it costs money to handle wood fuel, and there is therefore

A Battery of Cole Tilting Traps

good reason for avoiding handling two or three times the amount required. The principal saving in woodworking plants which is claimed by the use of the Cole Tilting Steam Traps, is in removing air from the coils with the water, which, it is claimed, cannot be done without a tilting steam trap or vacuum pump. A vacuum pump is of use, it is held, only when carrying very low pressure. In woodworking plants the chief essential is heat, and the only way to make more heat is to carry higher pressure. This can be accomplished by the use of a Cole trap, which at the same time removes all air and water and holds the steam in the coils, increasing the heating capacity and creating perfect circulation, also permitting the spray pipe in the kiln to be opened without breaking the vacuum.

The makers of the "Cole" steam trap claim that it removes the air better than float or expansion traps, because, when the trap is discharging into the boiler the system stops circulating. As soon as this is accomplished the steam, air and water separate. The water, which is heaviest, falls to the bottom; the air, which is heavier than steam, settles on top of the water. As soon as the trap returns to its filling position again the water rushes into the empty chamber. The air follows the water and escapes through an automatic air relief valve on the trip. Steam reaches the outside of the heating coils and does its work. On the other hand, if the steam is allowed to go through a continuous float trap or extra trap, or to drip out through



TRUNION—SHOWING METHOD OF PACKING

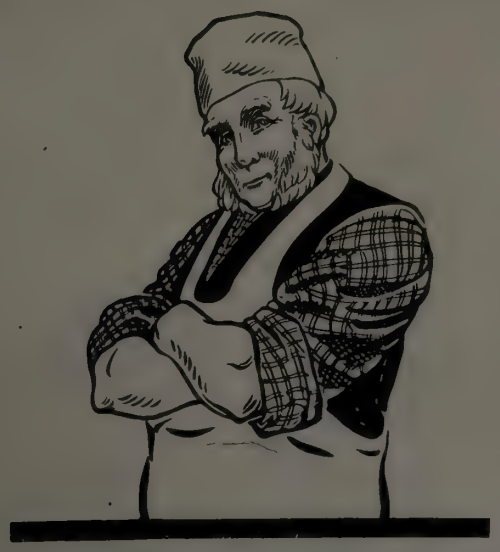
the valve, it may escape with the water and the air stay in the pipes. It is a well-known fact that results cannot be obtained with air in the steam pipe.

An important feature in connection with "Cole" steam traps is the system of packing as illustrated herewith. Our readers should note the offset in the bronze trunion where the packing makes a joint, as well as the ordinary friction joint. The packing is allowed to expand without causing friction.

Moose Head Brand Products

Lumbermen in all parts of Canada are familiar with the "Moose Head Brand" shoepacks, larrigans, moccasins and sporting boots, manufactured by John Palmer Company, Limited, of Fredericton, N. B. This company was established in 1877 and is under the able management of Mr. Chas. K. Palmer, president and general manager, who has been connected with the company for over 25 years. Associated with Mr. Palmer is Mr. Wm. M. Todd, secretary-treasurer, who has been with the concern ever since he was a boy. In 1912 a new and thoroughly modern factory and tannery were erected, which consists of three floors, 226 ft. by 50 ft. Every part of this building is now occupied by the 135 employees of the firm. In the tannery, over 200 sides of waterproof, oil-tanned leather are turned out daily, and are made from heavy packers' steer hides, under the company's own particular process, the product when completed being known as "Skowhegan" leather. From this leather the "Moose Head Brand" moccasins and larrigans are produced, all being hand sewn and made on new roomy lasts, so as to allow the foot to be fitted with ease. Everything in oil-tanned waterproof summer and winter footwear is manufactured by this company and its lines are to be found not only throughout North America, but in many other lands as well.

John Palmer Company's Plant, Fredericton, N. B.



Napoleon Said :

"An Army Marches on Its Stomach."

This is just as true of men in your lumber camp as of an army. Men doing strenuous work of any kind should have wholesome food made of

Cream of the West Flour

the hard wheat flour that is guaranteed for bread

All the strength and nourishment of the wheat kernel is retained, making the flour very nutritious.

It is being used now by many lumbermen throughout Canada.

We want YOU to try it.

THE CAMPBELL FLOUR MILLS CO., LIMITED

TORONTO

Paul F. Gauvreau
84 St. Peter St., QUEBEC, Que.

PETERBORO

W. J. McAuley & Co.
B-24 Board of Trade Bldg., MONTREAL, Que.

C. E. Choat & Co., HALIFAX, N.S.

H. E. RAINS, Special Maritime Representative, 42 Lawrence St., HALIFAX, N.S.

Jenckes Boilers

We make a Specialty of

Horizontal Tubular Boilers

for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

Sherbrooke Montreal Cobalt So. Porcupine St. Catharines Toronto Vancouver Nelson

Excellent Facilities for Handling Orders

One of the requirements that every lumberman expects when he places an order with a wholesale firm is to have it properly filled and handled with greatest rapidity. In order to give this desirable service the firm must have the necessary space, the proper facilities and an up-to-date system. A Toronto house that possesses all these features and is, therefore, able to give their patrons a most satisfactory service is H. P. Eckardt & Company, whose fine warehouse is located at the corner of Church Street and Esplanade.

A journey through their fine building impresses one with the fact that a close study has been made of the question of service. The warehouse, from top to bottom, is arranged with one end in view, and that is the handling of orders with despatch and thoroughness. A big array of lavor-saving devices are in evidence. There is a large freight elevator with a capacity of two tons, a smaller one for light goods and passengers, while another labor saver is the lowerator, running from the top floor, which works automatically, carrying goods down to the shipping department on the first floor by gravitation. Here orders are assembled and loaded on the waiting drays in the covered driveway. This latter is a feature that will appeal to dealers as it allows goods to be loaded in the worst of weather without damage, while tarpaulin protects them when being delivered.

Each floor has a space of approximately 13,000 square feet, so that there is plenty of storage for a large stock. On the top floor are located the tea packing and coffee departments, where their Ludella Tea is packed and Monarch Coffee is roasted and packed. This plant is equipped with the very latest and most approved machinery which it is possible to procure. Tea and coffee are strong Eckardt attractions. There is also a labelling department on this floor where they label their Monarch brand canned fruits, vegetables and salmon. On the third floor is located the broken package room, where small orders are assembled and packed. The basement is used almost entirely for the storage of dried fruits, and here is located the fruit cleaning department, which is one of the strong features of their dried fruit business.

The offices and sample rooms are located on the first floor and are spacious, bright and airy, finished in oak and marble that pleases the eye and presents a most business-like appearance. To the right as you enter is the personal office of Mr. H. P. Eckardt, the general manager, in a position where he can keep an eye on the workings of the business, easily be located—and direct the co-operative spirit which is manifested in Eckardts. The story of this spirit is simple enough, Mr. Eckardt is ready at all times to go over in detail any and every important question that may come up with the buyers, salesmen and managers of the business.

The Monarch line which is put out by the Eckardt people is admitted to be a top notcher, in a distinctive class; and is a main attraction of this progressive and aggressive house.

Fir "Twopan"

Canadian Western Lumber Co., Ltd.

Fraser Mills, B.C.

Canada's Largest Lumber Manufacturing Plant

Mixed Car Shipments
containing
Doors, Mouldings, 3 Ply Panels and guaranteed quality X X X B.C. Red Cedar Shingles

PROMPT SHIPMENTS

Fir Timbers
and
Dimension Flooring, Ceiling, Finish, Casing, Base and Interior Trimmings

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EDGINGS

Ontario

The Thessalon Lumber Company, Nesterville, Ont., commenced operations for the present season on May 4th.

Lewis Fick & Son, Simcoe, Ont., recently lost their planing mill by fire. The building and machinery were destroyed.

The Canadian Hardwoods, Limited, Deseronto, Ont., have changed the style of their name to the Dominion Hardwoods, Limited.

M. L. Stearns Limited, L'Orignal, Ont., commenced operations at their sawmill on May 1st, giving employment to about 100 men. The company have a large supply of logs on hand.

The Pigeon River Lumber Company's plant at Port Arthur, Ont., resumed operations on May 1st, giving employment to about 250 men. The company report that they expect a busy season.

The Abitibi Power and Paper Company are laying out a small town near the site of their plant at Iroquois Falls, Ont. The scheme provides for a number of dwellings, each on its own lot, with provision for sewers, paving, etc.

The Cobourn Lumber Company, Limited, Lucknow, Ont., has been incorporated with capital stock of $40,000, to carry on business as saw millers and dealers in lumber, etc. The chief party interested is Moorehouse Mitchell.

The Hope Lumber Company's mill at Thessalon, Ont., commenced operations for the season during the last week of April, with a full crew of employees. The company have installed a soda tank for dipping their lumber as it is transferred.

The Dale Planing Mill at Fort William, Ont., was recently damaged by fire. The building had not been used as a planing mill for some time, but was occupied by the Pigeon River Lumber Company. It is estimated that the damage will amount to between $2,500 and $5,000 on the building and machinery.

Hodgson Bros.' Chemical Company, Limited, Lindsay, Ont., have been incorporated. They report that they are now erecting their factory and expect to have it running by the first of July. The plant will be equipped for the manufacture of charcoal, wood alcohol and acetate of lime, having a capacity of 20 cords per day.

The Charlton Saw Mill Company's plant at Collingwood, Ont., was totally destroyed by fire recently. The mill was constructed in 1872 by Messrs. Kanady, McDougall & Company. Shortly afterwards the name of the firm was changed to Christie Kerr and Company, Mr. Kanady still being largely interested. Subsequently it became the Toronto Lumber Company, the chief parties interested being Messrs. Christie Kerr and Jas. Playfair, Sr. The plant was next operated by S. C. Kanady for a few years, after which it stood idle for some time and was purchased subsequently by Robert Emerson. A few years later it was sold to Messrs. J. & T. Charlton, who in turn were succeeded by the Charlton Saw Mill Company.

Eastern Canada

The Carter Saw Mill at Welsford, N. B., was badly damaged by fire recently. There was no insurance.

The York & Sunbury Milling Company, Gibson, N. B., commenced operations for the season on May 1st.

J. Therrien, lumberman, Montreal, P. Q., recently lost part of his stock by fire. The loss was covered by insurance.

Lemieux, Fils & Cie, lumbermen, Auckland, P. Q., have been registered. Those interested are J. Lemieux, T. S. Lemieux, J. Breault and D. Mongeau.

The Provincial Lime Company, Limited, has been incorporated with head office at Brockville, N. B., and capital stock of $10,000, to carry on the business, among other things, of manufacturers of lumber, etc.

The mill owned by the Little Bonaventure Lumber Company at Little Bonaventure, P. Q., has been purchased by R. N. LeBlanc. The plant is ready for operation and will turn out long lumber and shingles.

Omer Bergeron, St. Clothilde, P. Q., is about to start work on the erection of a sawmill to take the place of the one which was recently destroyed by fire. The building will be of frame construction and tin roofing and is to cost $5,000.

The Riordon Pulp & Paper Company, Montreal, P. Q., report that they expect to start sawing lumber at their mill at Calumet, about May 15th, and that they are assured a sufficient supply of labor. Driving conditions have been good this spring.

A part of the lumber yard of Mr. Julien Therrien, Papineau Avenue and DeMontigny Streets, Montreal, has been destroyed by fire. The fire, which started in one of the sheds, burned a large number of doors and sash, and also damaged some lumber.

Albert Caron, St. Adalbert, P. Q. (Co. L'Islet), has awarded a contract for the erection of a sawmill. The general contractor is Achille Dechene. The building will be of frame and brick construction with concrete foundation and work will be commenced in June.

Alexander Watson Limited, has been incorporated with head office at St. John, N. B., and capital stock of $24,000, to carry on business as general timber and lumber merchants and to deal in lumber, timber, logs, etc.. Those interested are A. Watson, I. F. Archibald, F. R. Taylor and O. Ring, all of St. John, N. B.

A complete sprinkling system for fire protection is being installed at Victoria mill by Fraser Limited, Fredericton, N. B. An 8-in. main and two hydrants are being placed near the mill, which will be available when the city water mains are extended to that district. Water will be pumped from the river through the mill.

The Wayagamack Pulp and Paper Company, Limited, Three Rivers, P. Q., are putting up a one-storey brick extension to their furnace room, 150 x 125 feet. The general contractors are Nobert and Dugre, St. Georges Street, Three

Rivers, and the engineers are T. Pringle and Son, 20 St. Nicholas Street, Montreal. The extension is to cost $11,000.

The St. Maurice Paper Company, 524 Board of Trade Building, Montreal, have commenced excavation work in connection with their pulp and paper mills at Cap Madeline, P. Q. The general contractors for the plant are Geo. A. Fuller and Company, Limited, Read Building, Montreal, and the engineer is E. G. Barratt, Woolworth Building, New York.

Miller Extracts Limited, have been incorporated with head office at Montreal, P. Q., and capital stock of $200,000 to carry on business as lumbermen and manufacturers of and dealers in lumber, timber, wood, pulpwood, paper, etc. Those interested are G. W. MacDougall, L. Macfarlane, Wm. B. Scott, A. K. Hugessen and J. G. Cartwright, all of Montreal.

At the annual meeting of the firm of Price Bros. & Company, Limited, Quebec, P. Q., it was reported that the net profits of the company during the past year amounted to about $393,000, and that the bank indebtedness was reduced by more than $600,000. These results were made possible by the high prices for paper and sulphite. The company reports that the outlook for the future is most encouraging.

Western Canada

The Hartnell Lumber Company, Hammond, B. C., have erected a large shingle dry kiln.

The Ladder Lake Lumber Company, Big River, Sask., commenced operations for the season early in May.

The Silverton Lumber & Power Company's mill at Silverton, B. C., will be operating during the present season.

Mr. E. Macintosh and Mr. Rogers, of St. Elmo, B. C., have entered into a partnership and will operate the St. Elmo shingle mill.

The Morehart Broderick Lumber Company, Limited, Estuary, Sask., have been succeeded by the Imperial Elevator & Lumber Company.

The Trethewey Saw Mill near Clayburn Station, B. C., is nearly completed and is expected to be in operation towards the end of May.

The Nicola Valley Pine Lumber Company are operating their plant on two ten-hour shifts this season and are turning out about 130,000 feet per day.

The Finger Lumber Company, The Pas, Man., have purchased 93 square miles of spruce timber limits on the Carrot River from the Prince Rupert Lumber Company.

The Prince Albert Lumber Company, Prince Albert, Sask., commenced operations for the present season on May 2nd, with a force of 150 men, which was increased to 500 shortly afterwards.

The Vancouver Island Marine Limited, has been incorporated with head office at Victoria, B. C., and capital stock of $250,000, to carry on business as lumber merchants, and dealers in timber, lumber, etc.

A despatch from Golden, B. C., states that negotiations are under way for the disposal of the Palliser Lumber Company's mill at Palliser, and its removal to Golden in connection with the A. J. Maguire project.

The Far West Investment Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $25,000, to carry on the business among other things of timber and lumber merchants, sawmill owners, loggers, etc.

The Direct Manufacturing Company, Limited, has been incorporated with head office Vancouver, B. C., and capital stock of $25,000, to carry on business as manufacturers of and dealers in lumber of all kinds, including wood pulp, paper, etc.

A considerable amount of lumber was destroyed by fire in the lumber shed of the McGibbon & Hodgson Lumber Company at South Vancouver, B. C., on May 2nd. Fortunately there was no damage to the main building although the shed was destroyed.

P. F. Mullen & Company, Limited, have been incorporated with head office at Vancouver, B. C., and capital stock of $10,000, to carry on business as sawmill owners, loggers, lumbermen and merchants, and manufacturers of and dealers in lumber, timber, lath, shingles, sash and doors.

The Cook & Craig Lumber Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $45,000, to carry on business as manufacturers of pulp and paper, lumber, and timber products; also timber merchants, sawmill owners, loggers, lumbermen and millmen, etc.

The Macken-Knight Lumber Company has been formed at Chilliwack, B. C., by W. L. Macken and T. P. Knight. The firm have taken over the lumber yard and business of the Abbotsford Timber & Trading Company at Chilliwack and have made arrangements for handling the cuts of several neighboring mills.

Sealed tenders are being received by the Minister of Lands for British Columbia until May 31st, 1916, for the purchase of Licence X536, to cut 2,363,000 feet of fir, cedar and hemlock on an area situated on Redonda Island, west shore of Homfray Channel, New Westminster District. Two years will be allowed for the removal of the timber.

It is reported that the McLellan Lumber Company's plant at Ladner, B. C., which has been closed down for a year and a half, has been taken over by the Toronto debenture holders and that a new company will be organized, after which the mill will be operated again. The company have valuable timber limits on Jervis Inlet and on adjacent islands. The plant will give employment to between 40 and 50 men and has a daily capacity of 150,000 feet.

F. W. Avery, Ottawa, well known as one of the group of successful Ottawa lumbermen, died at the General Hospital in Montreal on May 11th after an operation. The late Mr. Avery was born in New York in 1852 and came to Canada in 1878. He was vice-president of the Canadian Lumbermen's Association in 1909.

On account of the difficulty in securing steamers, the International Paper Company, Portland, Me., will be obliged this year to use barges for shipping pulpwood from the Maritime Provinces to Portland. They have just chartered 6 large barges and will put them on the route between Chatham, N.B., and Portland, probably running them in tows of three.

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A Speedy Application of Egyptian Liniment Might be the Means of Saving the Life of Your Most Valued Horse

IT'S always wise to keep a little Egyptian Liniment ready for an emergency. It is easily and quickly applied and always proves a sure cure for the many ailments of horses.

It is the only liniment on the market that **will stop bleeding at once.**

Free samples and literature sent on request

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Wholesale Lumber and Timber

SHELL BOX STOCK

White and Red Pine, Spruce

Hemlock, Birch, Maple

Railway Ties, Fence Posts, Etc.

Prompt shipment. Satisfactory stock. Good service Write for Prices.

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J. L. Englehart, Chairman
W. H. Maund, Secy.-Treas.

Office of Chairman

Denis Murphy
Fredk. Dane

Toronto, April 17th, 1915.

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Rossing Machines

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We are very glad to subscribe that your machines are doing very good work along Lines. We are forwarding your letter to our C. E. & S. of M., S. B. Clement, North Bay, who may be enabled to furnish you further information and assistance of interest.

Thank you for the courtesy.

Yours truly,
J. L. Englehart,
Chairman.

Investigate the Moreau Barker

The accompanying letter is only one of many we can show. They all tell the same story of time saved, money made and complete satistac-tion.

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The Steam Tension Band Mill

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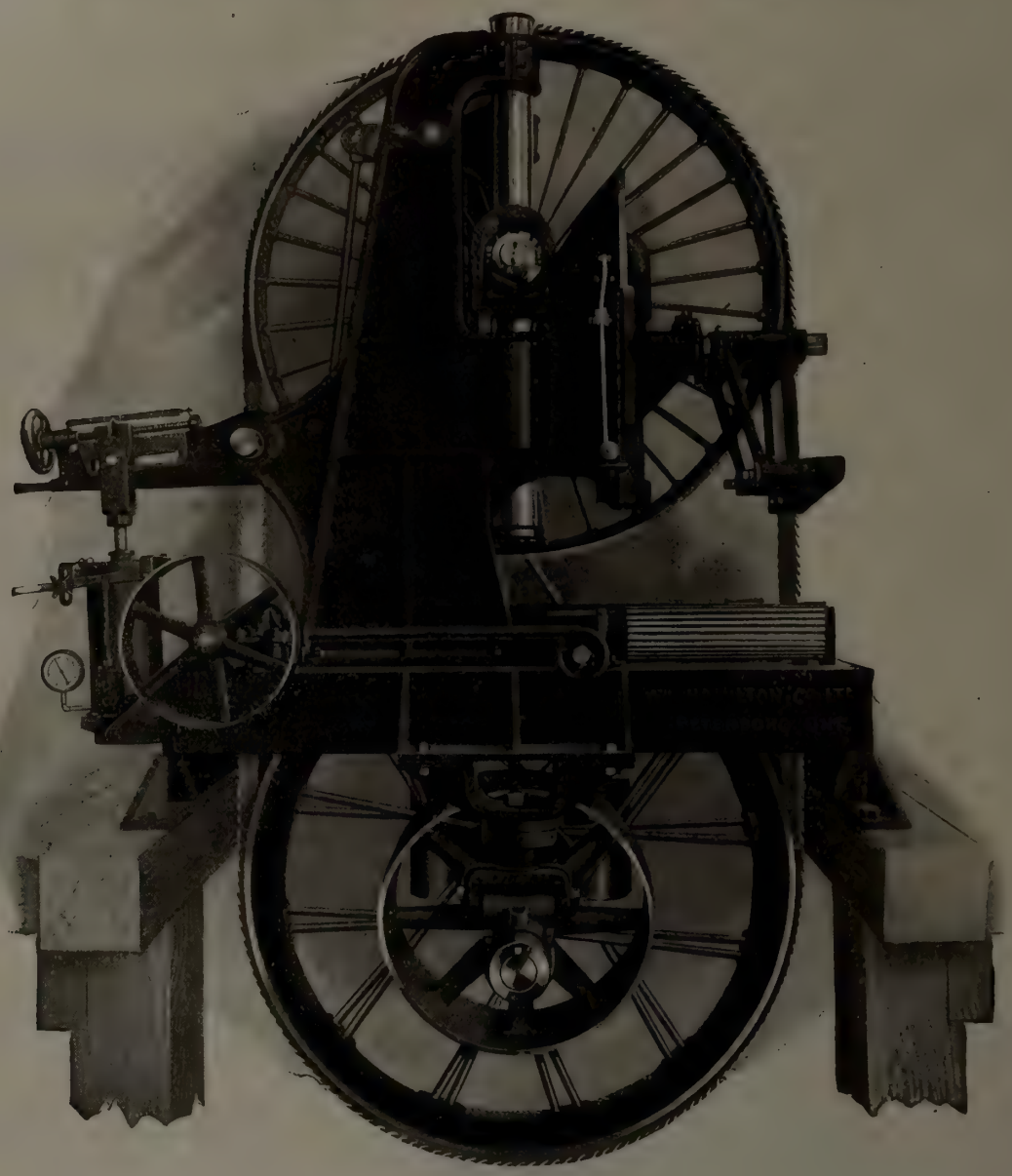

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(2) Unbreakable saw guide raised and lowered by steam—**first used on our machine.**
(3) Great saving in saws—actual tests have proven saws have a longer life on this machine.
(4) Both top and bottom wheels instantly aligned by screw adjustment.
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(7) Built by expert workmen in a plant that has been manufacturing high grade sawmill machinery for sixty years.

May we send you a list of satisfied users?

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Peterborough, Ontario

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A number 3 Hubbard Oven, 31 square feet of tile baking surface, occupies floor space of 5 ft. x5 ft. 6 in. Height over all, from 5 ft. 7 in. to 6 ft. 4 in. Shipping weight ***only*** 2,100 pounds. Also made in 4 other sizes.

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* * *

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* * *

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* * *

For Drives, Rotaries, Edgers, Lath and Shingle Machines, or any kind of Transmission work, there is nothing better than Dunlop **"Gibraltar Redspecial"** Belting.

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We feel sure that if you were to try **"Gibraltar"** Belting your testimony, also, would be most complimentary to our product.

NO LOAD TOO HEAVY

DUNLOP "GIBRALTAR" BELTING

NO SERVICE TOO EXACTING

D. 26

Dunlop Tire & Rubber Goods Co., Limited

SEAL OF QUALITY SEAL OF QUALITY

DUNLOP
RUBBER HOSE

1894-1916 **Truly-Canadian**

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J. 28

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Five-Saw Lath Mill

Messrs. P. Payette & Co.,
Penetanguishene, Ont., Can.

Dear Sirs. — I thought I would drop you a line and let you know of the record Lath-Cut we made on your machines on June 29th, 1910.

We made 128,350 four-foot laths, 1½ in. x ⅜ in., counted, tied and piled, in ten hours steady cutting from mill-run, and from slabs and edgings we had saved out, in order to keep the machines cutting their full capacity.

We used your No. 1 Four-Saw Bolter, and your No. 2 Five-Saw Lath-Mill, and had two Lath-Shovers and two Lath-Tiers, in order to keep up this speed.

This shows extremely well for your Lath Machines, not only for the tremendous cut, but they ran the full ten hours without a bearing getting hot or any stoppage whatsoever, and making first-class laths.

I therefore take great pleasure in recommending P. PAYETTE'S LATH - MACHINERY, to any person requiring up-to-date machinery.

I remain,
Yours sincerely,

D. J. MacMILLAN
Lath-Maker for C. Beck Mfg. Co.
Penetanguishene, Ont.

A Few of the "400" who use Payette's Lath-Machinery

Graves, Bigwood Co., Byng Inlet, Ont.
Victoria Harbor Lumber Co., Victoria Harbor, Ont.
Georgian Bay Lumber Co., Waubaushene, Ont.
Colonial Lumber Co., Pembroke, Ont.
Theo. A. Burrows, Grand View, Man.
Wm. Milne & Sons, North Bay, Ont.
C. Beck Mfg. Co., Penetanguishene, Ont.
Manley Chew, Esq., Midland, Ont.
Chew Bros., Midland, Ont.
James Playfair Co., Midland, Ont.
McFadden & Malloy, Spragge, Ont.
Pembroke Lumber Co., Pembroke, Ont.
Petawawa Lumber Co., Ltd., Pembroke, Ont.
Firstbrook Box Co., Ltd., Penetang, Ont.
Gres Falls Lumber Co., Three Rivers, Que.
Foley Bros. & Northern Coast Co., Scot, Ont.
Spanish Mills Lumber Co., Ltd., Cutler, Ont.
Spanish Mills Lumber Co., Spanish Station, Ont.

Four-Saw Bolter

P. Payette & Co.

Engineers and Machinists

Penetanguishene, Ont., Canada

your vacation

Get away to happiness—away to the nerve-resting, pine-scented, sleep-giving air of the Muskokas.

You must rest from the brain fag of business, Mr. Lumberman—you must have a change of air,—and the children must come off the hot, dusty city streets. Where better to go than to the sweet, pine-laden air of Lake Rosseau.

Cut out business for a while—get away up into this glorious north country, and have a look at the world as it was when young. Lakes Joseph, Rosseau and Muskoka, with their hundreds of pine-clad isles, have been preserved in all their primeval grandeur. The hand of man has changed Muskoka very little, except to dot the region with plenty of comfortable hotels, where comfort and moderate charges are the watch words. Golfing, fishing, canoeing, sailing, motorboating, tennis—you can have your favorite game and play it better in the bracing pine-laden air of these famous lakes.

Wonderful Air, Wonderful Scenery

Being over 1,000 feet above sea level, the cool, clear air of Muskoka is laden wih the curative odors of pine and balsam, and is wonderfully exhilarating. The beautiful vista of islands folding back in seemingly endless profusion, amidst sparkling lakes, is a sight never forgotten. Malaria, Mosquitos, Hay Fever Unknown.

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Canada's finest summer hotel, in the heart of the marvelous Muskoka Lakes. Every holiday recreation offered—on the golf links, in the ball-room, on the bathing beach, on the water, in the woods or on cool shady verandahs—to say nothing of the splendid cuisine and comfortable bed-rooms (all outside rooms).

Write to-day for hotel list and general literature to **Muskoka Navigation Co., The MacLean Building, Toronto.**

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Wheels That Make Good —Aloxite Wheels

ALOXITE Wheels will not draw the temper nor case-harden the saw.—Aloxite Wheels hold their shape, give a uniform depth to the gullet and cut the teeth at the right angle. Aloxite is hard and tough, cuts rapidly, accurately and shows long life.

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Make Your Requisition Read Aloxite Saw Gummers

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BEARDMORE

Run over in your mind the qualities you must have in a belt for satisfactory service in a hard drive.

Pulley Grip
Unusual Strength
No Stretch
Great Pliability

Only a belt comprising **all** these features could possibly stand the hard usage usually found in the lumber mill.

Beardmore Belts

give you this service under all conditions. Every piece of leather is carefully inspected and tested before being used, and only the best sections of packer steer hides enter into Beardmore Belts. You get a belt endorsed by science and experience as the best for every power transmission.

Write us for prices, etc.

Beardmore Belting Co.

Limited

Toronto - Montreal

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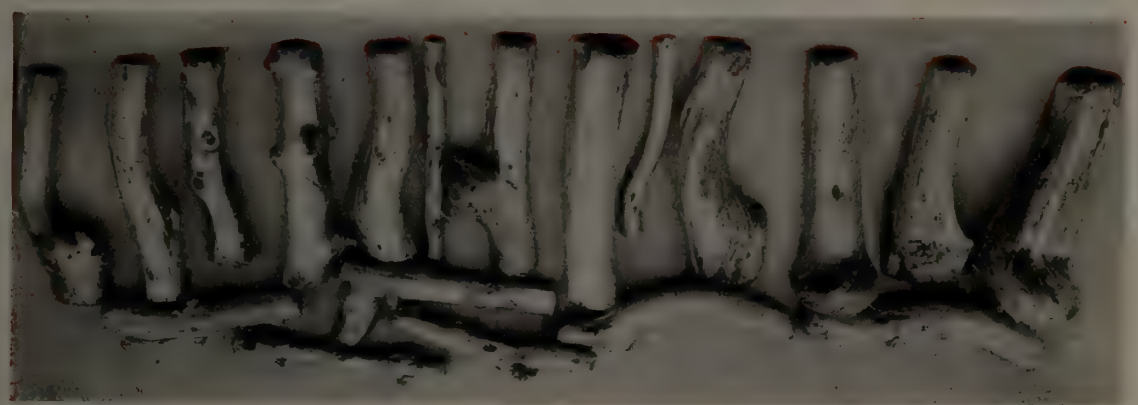
MADE IN CANADA *MADE IN U. S. A.*

Will Save You 10-20% Wood and Reduce Your Cost of Barking 50-80%.



SAMPLES OF WOOD BARKED WITH OUR DRUM

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	Size	No.
Escanaba P. & P. Co., Escanaba, Mich.	8′ x 20′	1
Marinette & Menominee P Co., Marinette, Wisc.	8′ x 20′	2
Spanish River P. & P Co., Espanola, Ontario	8′ x 20′	1
Marathon Paper Mills Co., Rothschild, Wisc.	10′ x 30′	1
Island Paper Co., Menasha, Wisc.	10′ x 30′	1
Nekoosa-Edwards P Co., Port Edwards, Wisc.	8′ x 20′	2
Ontario Paper Co., Thorold, Ont.	8′ x 20′	1

Machines on Order

	Size	No.
Riordon Pulp & Paper Co., Haileybury, Ont.	10′ x 30′	1
Pejepscot Paper Company, Great Salmon River, N. B.	8′ x 20′	1
Spanish River Pulp & Paper Mills, Sault Ste. Marie, Ont.	8′ x 20′	5
New York and Dominion Corp., Roverbal, Quebec	10′ x 30′	1
Nekoosa-Edwards Paper Co., Port Edwards, Wisc.	10′ x 30′	2
Rhinelander Paper Company, Rhinelander, Wisconsin	10′ x 30′	2
Thilmany Pulp & Paper Co., Kaukauna, Wisc.	10′ x 30′	1

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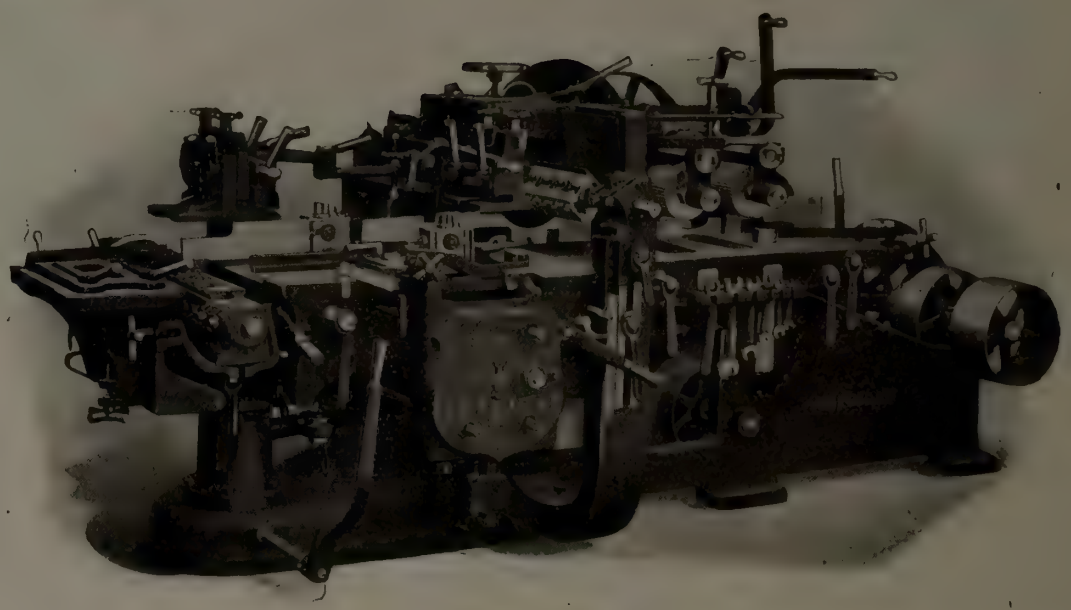
Direct Attached Motor

here are three new ones—American No. 444 Cabinet Surfacer; American No. 26 Fast Feed Outside Moulder, and American Combination Roll and Endless Bed Feed Sander.



All Slip-On Heads

Nothing on the market can compare with them. Write for the big pictures, or consult our Canadian Representatives:

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506 Foy Bldg.
32 Front St. West, TORONTO, ONT.
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Equally effective on heavy or light stock, on short or long pieces—Two machines in one

American Woodworking Machinery Co.

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Turn Waste Into Profit

with a

Jones Underfeed Stoker

Let the Jones Underfeed Stoker take care of the problem of waste in your mill. They are installed in Dutch Ovens under your boilers in such a way as to utilize all refuse in conjunction with a small proportion of coal for the production of steam.

You not only save in disposing of your waste but actually turn it into money by a saving in your fuel.

18 JONES UNDERFEED STOKERS AT
ST. LAWRENCE PULP & LUMBER CORPORATION,
CHANDLER, QUEBEC.

Six 500-horsepower Edge Moor water tube boilers were Jones Stoker equipped in 1914. The view above shows the fronts of the special Dutch ovens which are arranged for burning their mill refuse. The chutes which deliver the waste to the opening in the tops of the oven are above the floor and do not appear in this picture. The refuse makes up a substantial part of the fuel used. This same type of furnace has been installed by us in a large number of paper mills and other plants having a combustible waste product.

This saving is by no means a small item. We have records of many Jones Underfeed Stokers making a saving of from 50% to 75% and even as high as 99% of fuel costs. We shall be glad to send you the details.

Big Savings In Fuel

The working system of Jones Underfeed Stokers is extremely simple. They are substantially built throughout and above all ***sure in operation.***

The installation of these Stokers does not preclude the use of coal as a regular fuel, if this is desired, at any time. In fact by investigating, you will find the same equipment will burn coal alone more efficiently than coal can be burned by any other system of firing.

We have a lot of interesting matter to put before you regarding this system and only want a line from you to acquaint you with the proposition.

May we have that line?

Jones Underfeed Stoker Co., Limited

National Trust Building, TORONTO

A union pipe coupling which is at all times an efficient union.

THE DART UNION

will not leak, does not have to be watched, costs nothing to use again, has no replacement or upkeep expense and will give you service enough to save you treble what it costs you.

Have Dart Unions Been Used in Your Plant?

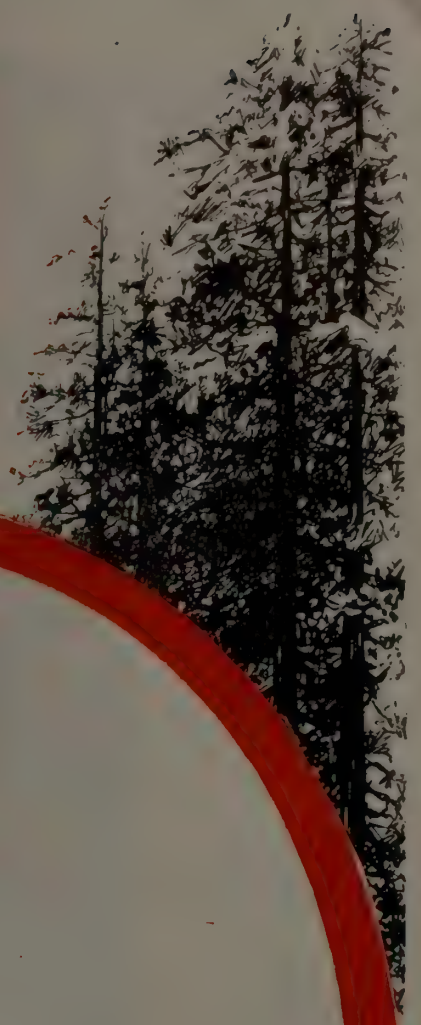
If not say so and let us send some for you to try out or if you prefer to buy just order from your jobber.

Dart Union Co., Limited

Toronto

The Adams Engine—

The Lumberman's Favorite



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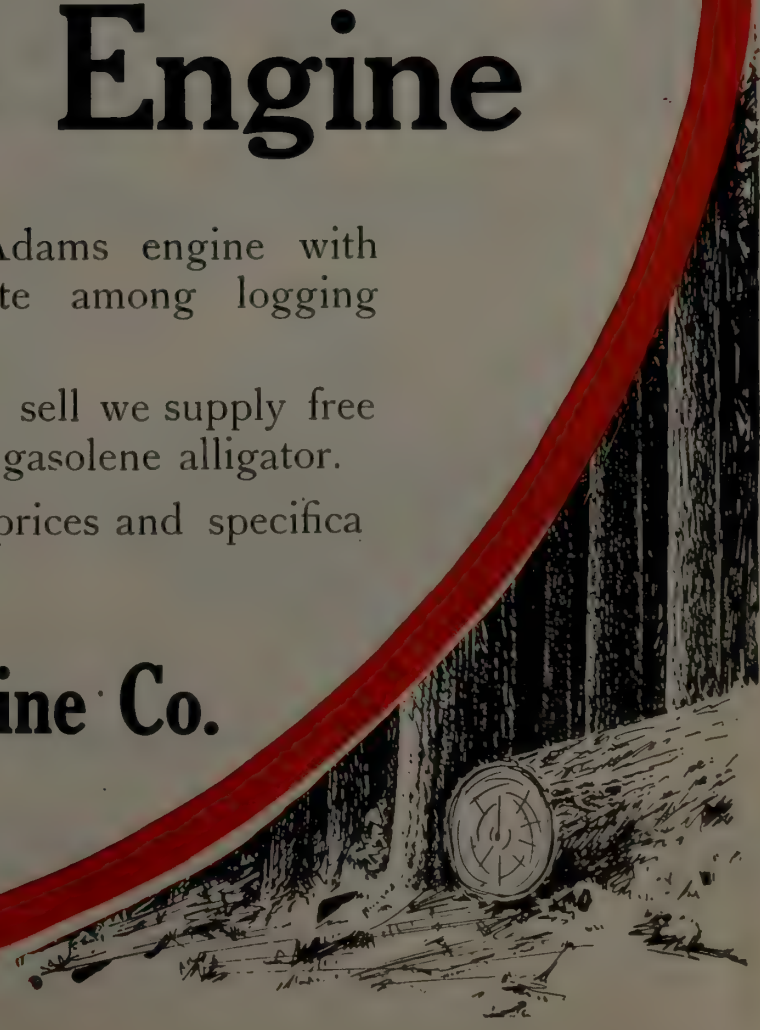
This powerful single cylinder Adams engine with warping gear is a great favorite among logging operators.

With every Adams engine that we sell we supply free a working blue print of an efficient gasolene alligator.

We shall be pleased to send you prices and specifica tions. Write us.



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Canadian Made Locomotives

There is no need to go outside of the Canadian market in order to obtain the best logging locomotives. We have been specializing in this line for fifty years. You will find the design of our locomotives complete and the sturdy construction equal to every test of the severe service of logging operations.

Repair parts can always be had on the shortest notice.

This engine is 13½ ins. x 18 ins. and weighs 35 tons.

Grey Iron Castings—any size or shape—ordinary or intricate—made promptly. New foundry, splendidly equipped We would be pleased to quote on castings—singly or by contract. We also make drop forgings of all descriptions.

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Canadian Locomotive Company, Limited, Kingston, Ont.

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"Maple Leaf" Brand

Stitched Cotton Duck Belting

Excels all others in economy, strength, efficiency and true running, whether for transmission of power or conveying. A test recently made at McGill University, Montreal, of a 6-ply **"Maple Leaf"** belt, a light double leather, and a 6-ply rubber belt, showed that our **"Maple Leaf"** Belt stood a breaking strain 50 per cent. greater than the leather, and 25 er cent. greater than the rubber belt.

"Maple Leaf" Main Drive Belts

Are the Best on the Market

"Maple Leaf" Belt Dressing is the best for all kinds of belts.

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Cuts Pulp Wood and Cuts Expenses

The Ryther Multiple Saw Slasher

not only cuts pulp wood but cuts expenses.

It pays for itself quickly by its efficiency, its low cost of maintenance and repair, and its low cutting costs.

Will cut over 1,000 logs per hour into absolutely uniform lengths.

Our catalogue explains it in detail.

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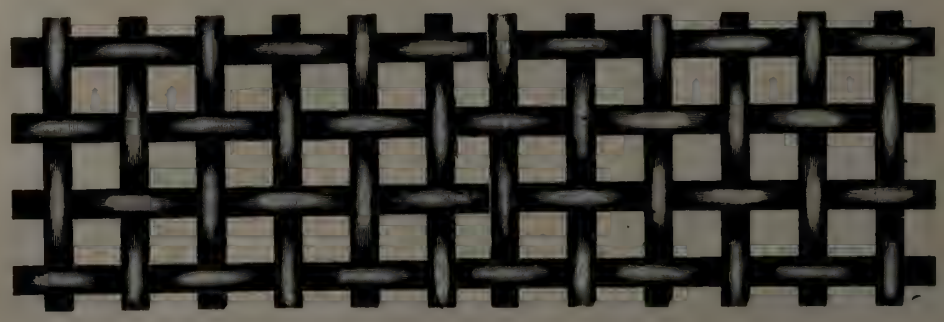

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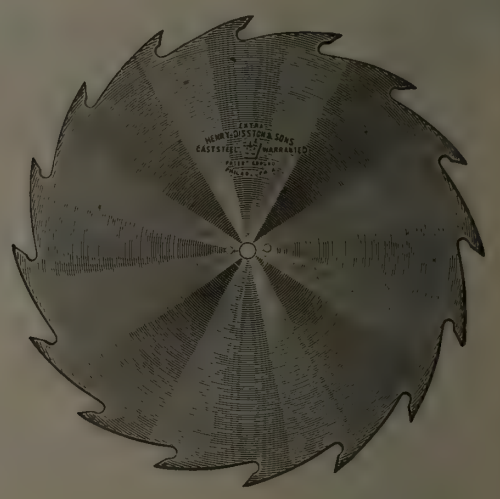

have been made from steel made by us in our own plant since 1855. More than sixty years experience in the manufacture of saw-steel coupled with a study of operating requirements extending over three quarters of a century have resulted in saws of highest excellence.

In tension—, set—and edge-holding qualities Disston Saws are as near perfection as the world's foremost saw-makers can make them.

Where quality means economy, the proper test is service.

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No. 91 Matchers Give You the Best From Every Board at the Fastest Speed Your Men Can Work.

Can You Ask More of A Planer and Matcher?

In one Southern Mill two Yates No 91's replaced nine machines of various makes, decreased manufacturing costs 30% the first year and improved grades 35 to 40%.

Let us show you that it will do as much for you. Our Book A 91 will help you. Write for it to-day.

UNTIL a new race of human beings is developed, it probably will not be necessary to increase the speed capabilities of this matcher, for equipped with an Automatic Feeding Table the "91" now takes care of stock faster than the most expert operator can properly judge it and get it to the machine.

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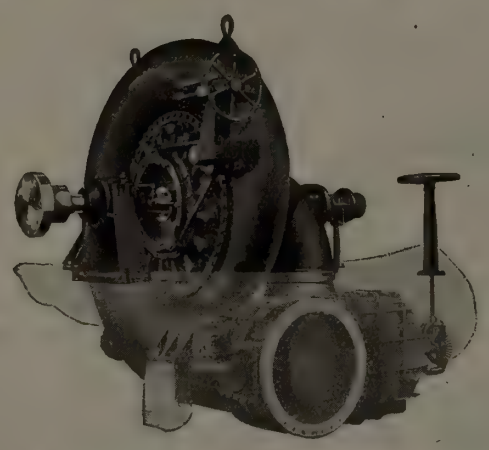
Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Smith Hydraulic Turbines

for driving the

Paper Mill and Pulp Grinder



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Our particular claim for these turbines is service, the kind of service that responds to the demand

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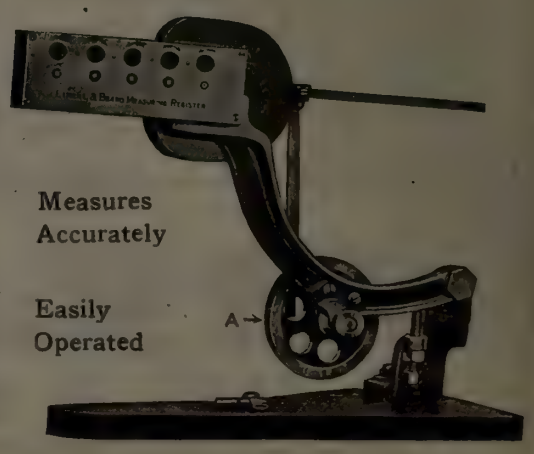
Solidly constructed; no parts to get out of order; fully guaranteed to give accurate results if operated according to instructions.

A labor saver that saves you money. Write for explanatory booklet.



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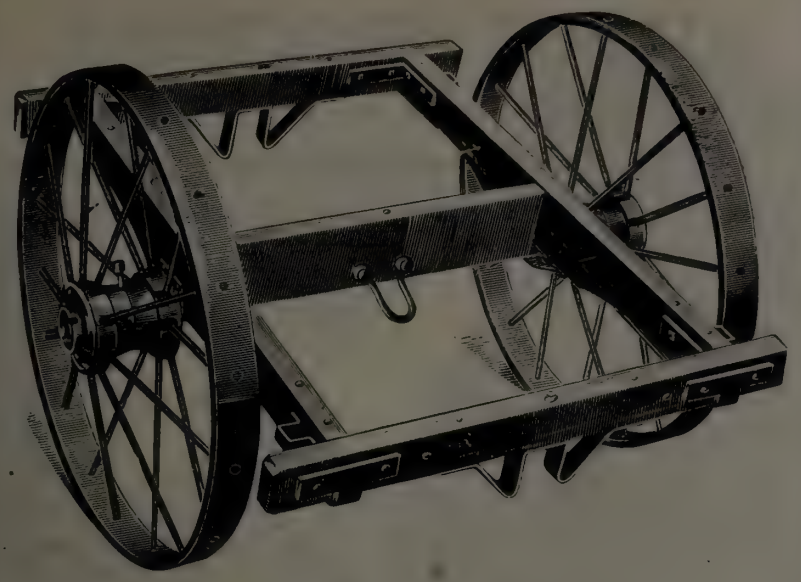

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The front gearing is detachable and may be used with eight or twelve hind gearings. It is a double-header, nuts on axles being kept tight with Steel Cotter Keys.
Oil cups on the wheels and the fact that there is no resetting of tires saves any amount of trouble.
The old wooden-wheeled truck is a back number in comparison with this. It will pay you to write for our general catalogue which describes these trucks in detail, and pick out the style you want now.

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Always fresh and flavoury and yields splendidly in the cup. Far more economical than dusty, dried-up bulk tea, and it always has that famous flavour. We supply many large lumber firms.
Let us quote you.

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Every time you tie a bundle of laths with yarn you lose.
Every time you tie a bundle of laths with Laidlaw wire you win. It's good for everybody right down the line. The mill man likes it because it saves him money. The dealer likes it because he receives his laths in good condition. The contractor likes it because a solid, well tied bundle is easier to handle and there are no broken bundles to invite theft.

DO IT THE LAIDLAW WAY, whether it's bundling wire for flooring, lath or box shooks, wire bale ties for baling pulp, wire for car stakes. Lowest prices.

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Gutta Percha & Rubber Company
Turner Brothers Canada, Limited

HARDWOOD VENEER DOORS
Wilson Bros.

INSURANCE
Lumber Insurers General Agency

INTERIOR FINISH
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Canadian Western Lumber Company
Chicago Lumber & Coal Co.
Christie Woodworking Co.
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Georgian Bay Shook Mills Ltd.
Muir, Kirkpatrick & Sharpe
Southern Lumber Company
Stout Lumber Company
Terry & Gordon
Valley Lumber Company
Wilson Bros.
Wisconsin & Arkansas Lumber Co.

KNIVES
Disston & Sons, Henry
Peter Hay Knife Company
Simonds Canada Saw Company
Waterous Engine Works Company

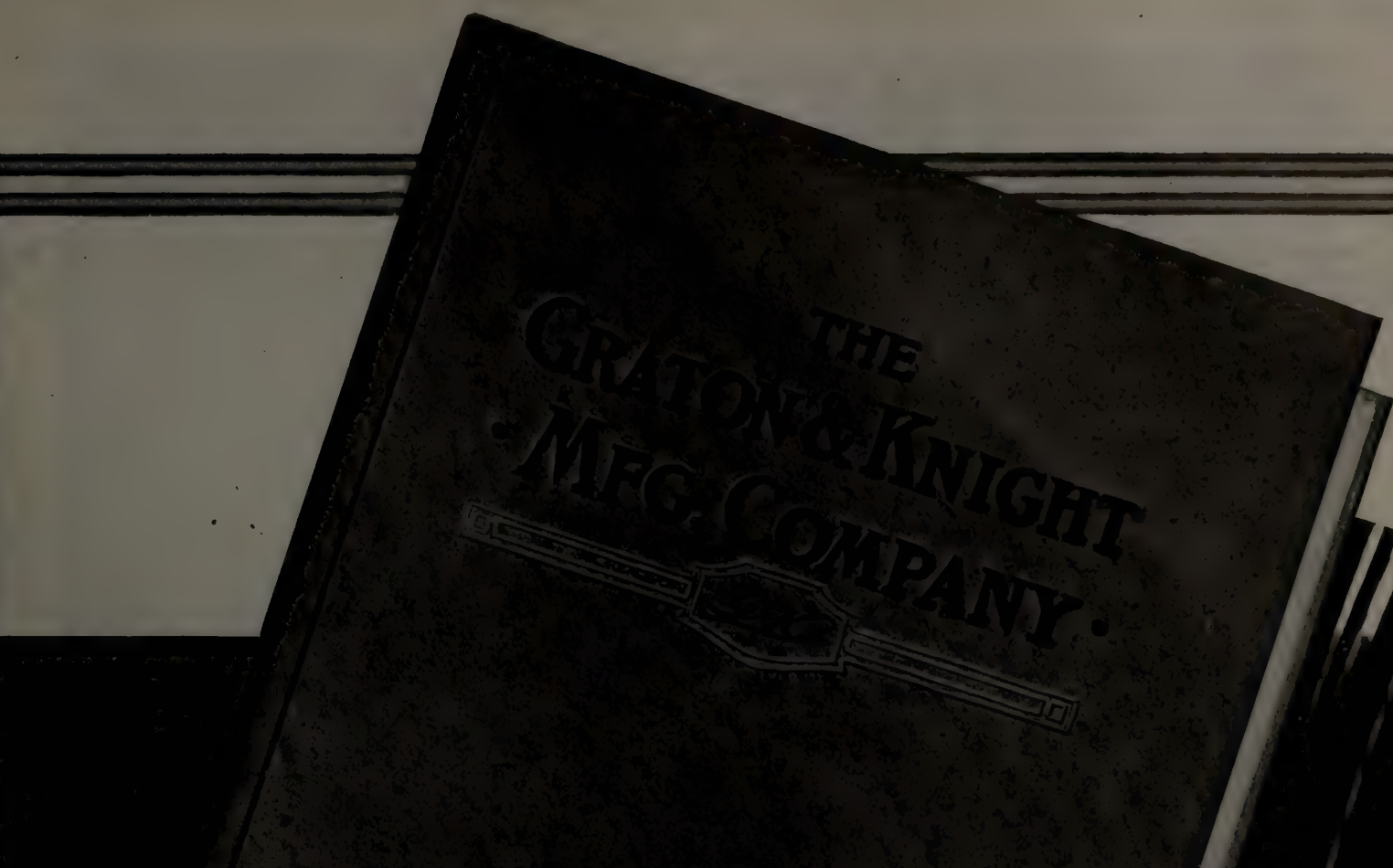
LATH
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Austin & Nicholsin
Bartram Bros.
Beck Mfg. Company, C.
Chicago Lumber & Coal Co.
Christy-Moir Company
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Fesserton Timber Company
Fraser Limited
Fraser-Bryson Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Georgian Bay Lumber Company
Harris Tie & Timber Company
Graves, Bigwood & Company
McGibbon Lumber Company
Miller Co. Ltd., W. H.
Muir, Kirkpatrick & Sharpe
Murray & Gregory
New Ontario Colonization Company
River Ouelle Pulp & Paper Co.
Southern Lumber Company
Stout Lumber Company
Spencer, C. A.
Terry & Gordon
Valley Lumber Company
Victoria Harbor Lumber Company
Wisconsin & Arkansas Lumber Co.

LATH MILL MACHINERY
McLennan Foundry & Machine Works, Limited.

LAUNCHES
Adams Launch & Engine Company

LOCOMOTIVES
Canadian Locomotive Company
Climax Manufacturing Company
Jeffrey Manufacturing Company
Montreal Locomotive Works

(Continued on page 162)



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REVISED CATALOG illustrating and describing our complete line of products:—
Leather, Belting, Lace Leather, Packings, Strapping, Automobile Leathers, Halters, Shoe Supplies, and other leather specialties.

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The Graton & Knight Mfg. Co.

Oak Leather Tanners and Belt Makers

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St. John Quebec Montreal Ottawa Toronto
Hamilton Vancouver Victoria

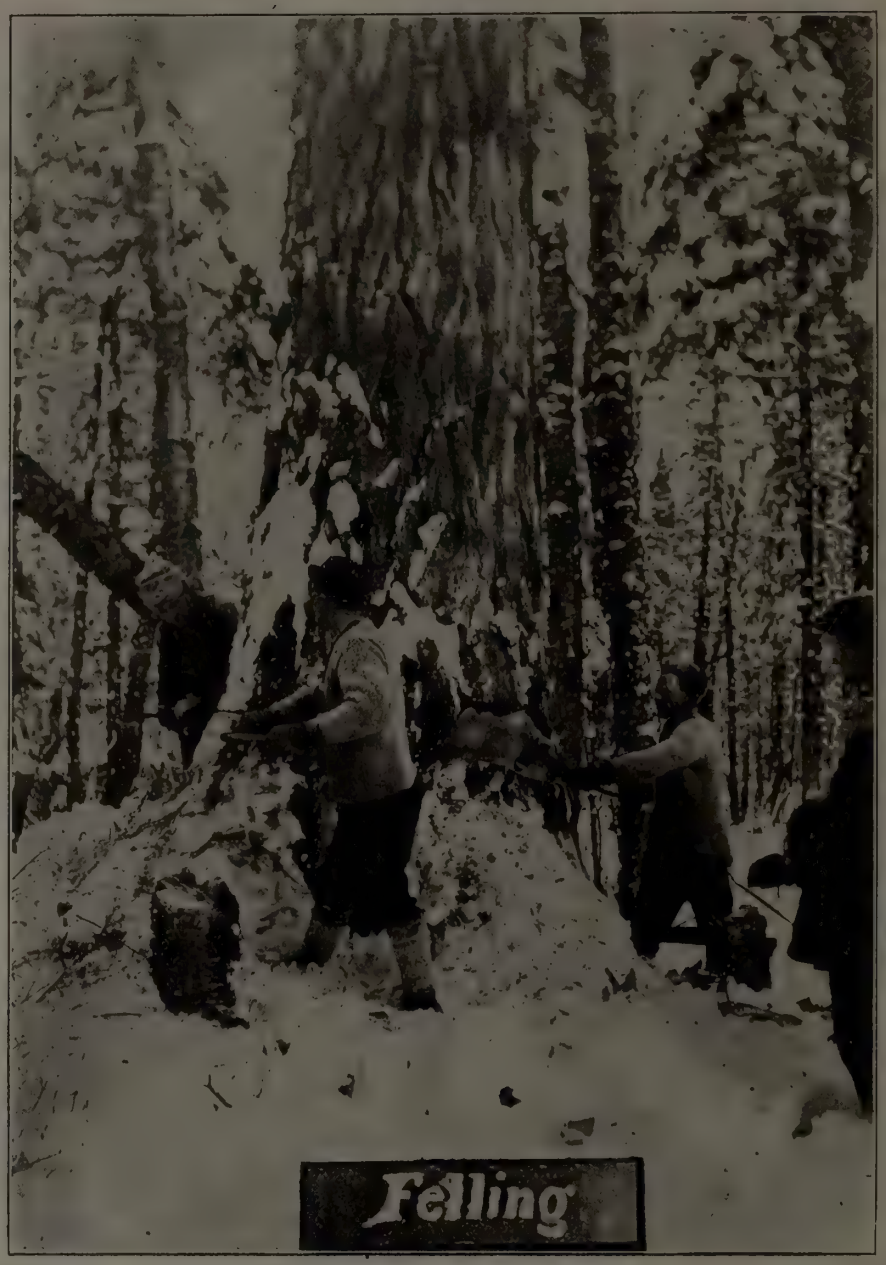
ONTARIO
Canada's Banner Province

Ontario's timber resources are unrivalled.

No other country possesses such a variety of hard and soft woods.

Ontario forests are adjacent to the greatest waterways of the world—the mighty rivers and lakes provide unusual facilities for the lumberman.

Three Transcontinental Railways across the Province eliminate transportation difficulties.



Ontario's wood working industries, using 34 different kinds of wood, provide a ready market for the lumberman. Eighty-two per cent. of wood used in the Ontario industries purchased within the Province.

Ontario leads in production of hardwoods, cutting twice as much as Quebec, second on the list.

Ontario has unlimited quantities of Spruce and other soft woods suitable for the pulp and paper industry.

Tremendous pulp areas are yet untouched.

Ontario's pine producing areas outclass those of any other country in the world, both in extent and quality of the timber.

Exporters to the European markets should investigate the opportunities Ontario offers for the supply of Dimension Timber, Pit Props, Poles, Shook Boxes, Etc.

For maps of the Province and timber regulations apply to

Honorable G. H. Ferguson,
Minister of Lands, Forests and Mines,
Parliament Buildings, TORONTO, CANADA

A Typical LEVIATHAN Main Drive, Installed at the Plant of The Riviere du Loup Pulp Co., 24 in. x 6 ply, 81 Feet in Length.

Installed June, 1911, Perfect Condition Today

Base your Judgment on Service Rendered and LEVIATHAN & ANACONDA are your logical choice

During the thirty-five years that we have been making belts, we have never deviated from our original policy of producing the very best belts: belts that transmit every ounce of energy produced by the engine, that are strong, durable, pliable. With the minimum stretch and that cost the least for up-keep; in other words, belts that give the most efficient service at the lowest possible cost.

LEVIATHAN ELEVATING TRANSMITTING CONVEYING BELTING

And Leviathan and Anaconda are not affected by extreme atmospheric changes, and will give excellent service under the most severe conditions

LEVIATHAN ELEVATING TRANSMITTING CONVEYING BELTING

Let them prove their merits in your mill to your own satisfaction

Main Belting Co. of Canada, Limited

Montreal - Toronto

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LOGGING CARS
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LOGGINC CHAINS
Columbus Chain Company

LOGGING ENGINES
Dunbar Engine & Foundry Co.

LOGGING & MACHINERY EQUIPMENT
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Hamilton Company, William
Ryther & Pringle Company
Waterous Engine Works Company

LOGGING LOCOMOTOIVES
Canadian Equipment Co.

LUMBER
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Arkansas Lumber Company
Arkansas Soft Pine Bureau
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Bathurst Lumber Co.
B. C. Lumber Commissioner
Canadian Western Lumber Company
Chicago Lumber & Coal Co.
Christie Woodworking Co.
Conger Lumber Co.
Cottton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Eagen, W. T.
Edgar Lumber Company
Estate of James Davidson
Fassett Lumber Company
Fesserton Timber Company
Fraser Limited
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Garrett Lumber Company, T. H.
Georgian Bay Lumber Company
Goodday, H. R.
Harris Tie & Timber Company
Hart & McDonagh
Hayden Westcott Lumber Co.
Hettler Lumber Co., Herman H.
Harquail Company, Ltd., J. & D. A.
J. B. Brand
John S. Eagles & Co.
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McLennan Lumber Company
Montreal Lumber Company
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Murray & Gregory
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Stout Lumber Company
Summers, James R.
Terry & Gordon.
Trout Creek Lumber Company
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Victoria Harbor Lumber Company
White & Son, Chas. T.
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Wisconsin & Arkansas Lumber Co.

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LUMBERMEN'S FOOTWEAR
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Packard Motor Car Company

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Auger & Son
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Blair & Rolland
Bourgouin, H.
Cleveland-Sarnia Sawmills Company
Donogh & Company, John
Eagle Lumber Company
Fesserton Timber Company
Forest Mills of B. C., Limited
Fraser-Bryson Lumber Company
Fraser Limited
Gordon & Company, George
Gillies Bros. Limited.
Graves, Bigwood Company
Harris Tie & Timber Company
Hart & McDonagh
Hettler Lumber Co., Herman H.
Hocken Lumber Company
Long Lumber Company
Mason, Gordon & Company
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Spencer, C. A.
Summers, James R.
Terry & Gordon
Watson & Todd, Limited

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Garlock Packing Company
Gutta Percha & Rubber Company
Turner Brothers Canada, Limited

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Chew Bros.
Conger Lumber Co.
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Oliver Lumber Co.
Partington Pulp & Paper Co., Ed.
Rideau Lumber Co.
White & Son, Chas. T.

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Sturtevant Company, B. F.

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Canadian Blower & Forge Company
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Pink & Company, Thos.

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Perrin & Company, W. R.

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McLaren Limited, D. K.

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Hamilton Company, William
Waterous Engine Works Company

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American Barking Drum Co.
Boving Hydraulic & Engineering Co.
Hamilton Company, William
Jeffrey Manufacturing Company
Riordon Pulp & Paper Co.

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Darling Bros.
Hamilton Company, William
Smart-Turner Machine Company
Waterous Engine Works Company

RAILS
Gartshore, John J.

RAILWAY EQUIPMENT
Canadian Equipment Co.

RIDGE CAP METAL
Metallic Roofing Co.

ROOFING
Metallic Roofing Co.
Turner Bros. Canada, Limited

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Plymouth Cordage Company
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Batts Limited
Haeberle Lumber Company

SAWS
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Campbell Bros.
Disston & Sons, Henry
Hoe & Company, R.
Shurly-Dietrich Company
Simonds Canada Saw Company
Wood & Son, Fred

SAW SHARPENERS
Rogers & Company, Samuel C.
Waterous Engine Works Company

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Jeffrey Manufacturing Company.
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Mereen-Johnson Machine Co.
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Oxford Foundry & Machine Co.
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Waterous Engine Works Company
Yates Machine Co., P. B.

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Canadian Western Lumber Company
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McGibbon Lumber Company
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Robt. McNair Shingle Co., The
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Miller Co. Ltd., W. H.

SHINGLE & LATH MACHINERY
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Long Manufacturing Company, E.
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(Continued on page 166)

Pink's Lumbering Tools

The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

Long Distance Phone, No. 87

Send for Catalogue and Price List.

Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants.

The Thomas Pink Company, Limited

Manufacturers of Lumber Tools

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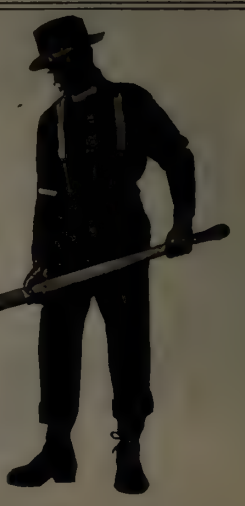


MADE IN CANADA

It's a Pink anyway you take it, and it's the best Peavey made

TURN YOUR 'WASTE' WOOD TO ACCOUNT

Every Saw Mill in Canada should have a small SODA PULP PLANT to take care of its Slats, Tops, Bottoms and 'Waste' Wood. Contracts for long periods of years can be obtained.

For full information, apply—

BECKER & CO.

LIMITED

64 Cannon Street, LONDON, E. C., England

WHO HAVE IMPORTED NINETY PER CENT. OF THE CANADIAN PULP SUPPLIED TO EUROPE SINCE 1899.

GREAT BRITAIN DEMANDS MORE CANADIAN WOOD PULP

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

Plymouth Lathyarn

Gives maximum yardage, strength and durability.

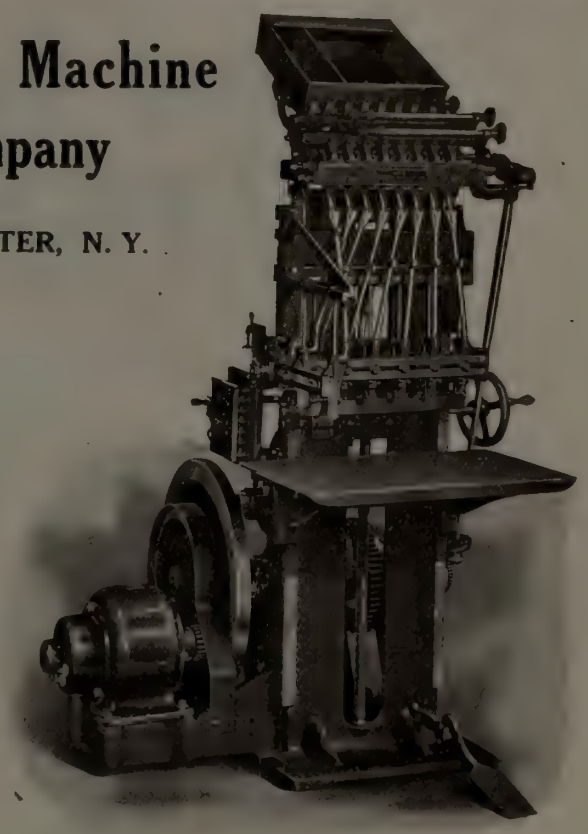
Use it and save money.

PLYMOUTH CORDAGE COMPANY
NORTH PLYMOUTH, Mass. WELLAND, Ont.
INDEPENDENT CORDAGE CO , LTD.
TORONTO, ONT. — CANADIAN AGENTS

Makers also of Manila rope for every purpose.

Morgan Machine Company

ROCHESTER, N. Y.



Manufacturers of—

Nailing Machines,

Lock Corner Box Machinery,

Box Board Matchers,

Box Board Printing Machines.

Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the **Morgan Machine Company** for latest developments in machinery for the Box Industry.

Morgan Machine Company

ROCHESTER, N.Y.

KHAKI KIT KITCHEN

Made in sheet-metal, covered with khaki waterproof duck, interlined with asbestos, size when closed 7 x 7½, with belt loops. Every outfit contains enough "canned heat" to cook nine hot meals. Extra cans of heat can be obtained at $2.50 per dozen wholesale. Write at once for samples, catalogues, and full details. Shipments now.

Retail at $5.00 each. Price to Dealers $30.00. Samples $3.00 each

A. Harry Wolfe

Canadian Government Contractor

Unity Building, MONTREAL
or from your local jobber.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing ...	27 00	29 00
1 x 8 common and dressing ...	27 00	29 00
1 x 10 common and dressing ..	31 00	32 00
1 x 12 common and dressing ..	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ...		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft. ...		16 00
2 x 4 to 12, 10 and 16 ft. ..		20 00
2 x 4 to 12-in., 12 and 14 ft. ...		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet: 8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain..		31 50
Fir flooring, 1 x 4, edge grain..		35 00
Fir flooring, 1 x 4, flat grain ..		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 25
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	40 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1st and 2nds, 4/4	42 00
Birch, No. 1 com. and bet., 4/4	35 00
Birch, 1st and 2nds, 6/4 and 8/4	45 00
Birch, 1st and 2nds, 10/4 and 12/4..	52 00
Birch, 1st and 2nds, 16/4	55 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4..	34 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet...	28 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	32 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1st and 2nds, 4/4	40 00
Hard Maple, common and better, 4/4	30 00
Hard maple, 12/4 & 16/4, 1sts and 2nds.	46 00
Red oak, plain 1st and 2nds, 4/4....	66 00
Red oak, plain, No. 1 com., 4/4.....	40 00
Red oak, plain No. 2 com. 4/4.....	32 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain 1sts and 2nds, 4/4.	68 00
White oak, plain, No. 1 com., 4/4....	40 00
White oak, plain, No. 2 com., 4/4....	32 00
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	66 00
Red and White oak, plain, No. 1 com. 5/4 and 6/4	43 00
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00
Red and White oak, plain, 1sts and 2nds, 8/4	72 00
Red and White oak, plain, No. 1 com. 8/4	48 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00
White oak, ¼ cut No. 1 common	57 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$52 00	54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ...	29 00	30 00
Pine, No. 1 dressing shorts ...	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ...	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips ...	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips ...	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips ...	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	25 00	26 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x 10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11' ...	17 50	18 00
1"x 3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12 ..	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16' ...	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles:		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	70	75
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00

Birch Planks

1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00

Cuts and Better

4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00

No. 1 Cuts

1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00

No. 2 Cuts

1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in.. 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in.	25 00
1-in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00

No. 1 Barn

1 inch	31 00	45 00
1¼, 1½ and 2-in.	36 00	45 00
2½ and 3-in.		45 00
4 inch		50 00

No. 2 Barn

1 inch	28 00	36 00
1¼, 1½ and 2-in.	30 00	36 00
2½ and 3-in.		38 00

No. 3 Barn

1 inch	21 00	28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00	25 00

Box

No. 1, 1, 1¼, 1½, 2-in.	22 00	25 00
No. 2, 1¼, 1½, 2-in.	19 00	23 00

Mill Culls

Mill run culls, 1-in.	19 00
1, 1¼, 1½ and 2-in.	20 00
No. 2	17 00 18 00

Lath

No. 1, 32-in. pine	1 80
No. 2, 48-in. pine	4 35
No. 1, 48-in. pine	4 85
No. 3, 48-in. pine	3 85
Hemlock Lath 48 in.	3 80

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1. E.			
	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8..	14 00	17 00	20 50	21 50
2 x 10	18 00	18 50	21 50	22 50
2 x 12	18 00	19 00	23 50	23 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	21 50
2 x 4, 10, 18, 20	23 50
2 x 6, 8 to 16	21 50
2 x 8, 8 to 16	21 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	29 50
2 x 10 and 2 x 12; 8-16 ft.	26 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	28 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	30 50

No. 1 Common Boards

4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50

Flooring

4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00

Shiplap—Finished

6 inch	22 50
8, 10 and 12 inch	23 50

Siding

6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	24 50

Lath

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	27 00
3 x 8 in.; 8 to 16 ft.	24 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.....	27 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	29 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	20 50
2 x 4 in.; 12 and 14 ft.	21 50
2 x 4 in.; 10 and 16 ft.	22 50
2 x 4 in.; 18 and 24 ft.	23 50
2 x 4 in.; 22 and 24 ft.	24 50
2 x 4 in.; 26 to 32 ft.	26 50
2 x 10 and 2 x 12 in.; 10 to 16 ft....	23 00
2 x 10 and 2 x 12 in.; 18 and 20 ft. ..	25 00
2 x 10 and 2 x 12 in.; 22 and 24 ft. ...	26 00
2 x 10 and 2 x 12 in.; 26 to 32 ft. ...	28 00
2 x 14 in.; 10 to 16 ft.	28 00
2 x 14 in.; 18 and 20 ft.	30 00
2 x 14 in.; 22 and 24 ft.	31 00
2 x 14 in.; 26 to 32 ft.	33 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	24 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	25 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	26 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	27 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft. ...	27 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	27 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	28 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	28 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ..	23 00
No. 2 Shiplap, 6 in.	22 00
No. 2 Shiplap, 8, 10 and 12 in.	23 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 75

LATH

Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ⅜ x 1⅜ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$94 00
Uppers 5/4 to 8/4	92 00
Uppers 10/4 to 12/4	97 00
Selects 4/4	84 00
Selects 5/4 to 8/4	82 00
Selects 10/4 to 12/4	92 00
Fine common 4/4	61 00
Fine common 5/4	65 00
Fine common 6/4	65 00
Fine common 8/4	67 00
No. 1 Cuts 4/4	51 00
No. 1 Cuts 5/4	57 00
No. 1 Cuts 6/4	59 00
No. 1 Cuts 8/4	61 00
No. 2 Cuts 4/4	32 00
No. 2 Cuts 5/4	43 00
No. 2 Cuts 6/4	45 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	33 00
No. 3 Cuts 6/4	34 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	46 00
Dressing 5/4 x 10	51 00
Dressing 5/4 x 12	52 00
No. 1 Moulding 5/4	58 00
No. 1 Moulding 6/4	58 00

Continued on page 168)

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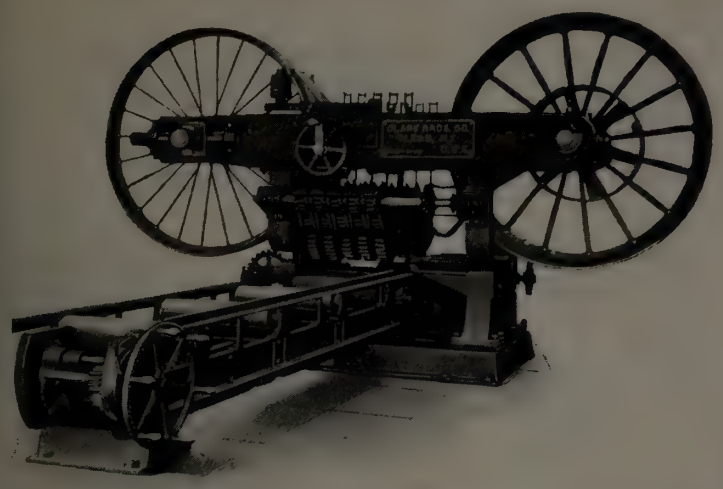

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50—1-13/16 in. diam. high speed drills, No. 5 taper shank, (all new).

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No. 1 Barn 1 x 12			48 00
No. 1 Barn 1 x 6 and 8			34 00
No. 1 Barn 1 x 10			36 00
No. 2 Barn 1 x 6 and 8			32 00
No. 2 Barn 1 x 10			34 00
No. 3 Barn 1 x 6 and 8			26 00
No. 3 Barn 1 x 10			27 00
Box 1 x 6 and up			23 00
Box 1 x 10			25 00
Box 1 x 12			26 00
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The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	37 - 39	24 - 26	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in...	96 00	98 00
Selects, 1 to 2 in.	85 00	88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	70 00	74 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	37 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 00	34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 00	30 00
No. 3, 1 x 8	28 00	29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		23 50
Spruce, 8 in. and under dimen.		27 00
10 and 12 in. random lengths, 10 ft. and up	25 00	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	23 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	23 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	20 00	21 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	21 00	22 00
1½-in. spruce laths	4 15	4 25
1½-in. spruce laths	3 85	4 00

New Brunswick Cedar Shingles

Extras	3 40	3 50
Clears	2 90	3 00
Second clears	2 40	2 60
Clear whites	2 25	2 30
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.	3 60	3 75
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear	3 50	3 60

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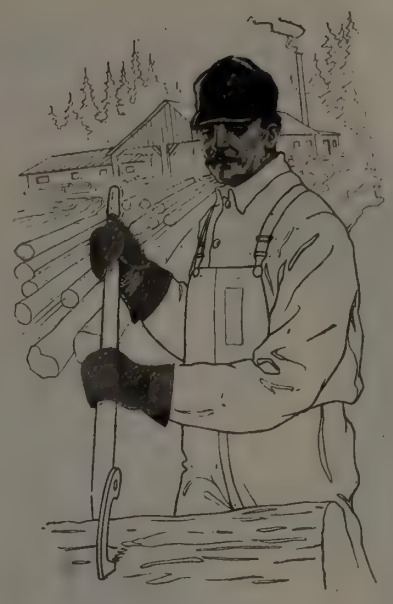

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The offices of James D. Lacey & Company contain a scientifically ordered body of international timberland information, records and reports which would be a revelation to you if you have never inspected them. Having taken 36 years in the gathering, it is by far the largest and most accessible resource of its kind in existence.

Naturally, as nearly everyone who contemplates the purchase or sale of timberlands turns to us sooner or later, our fund of information is being augmented from day to day.

The full benefits of this resource may be shared by you if you contemplate anything which has to do with the surest, safest and most profitable investment of today—timberlands, well purchased.

Send for our booklet, "Pointers."

James D. Lacey & Co.

INTERNATIONAL TIMBERLAND FACTORS

EST. IN 1880

CHICAGO
1750 McCormick Building

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THE E. LONG MANUFACTURING Co. LIMITED
SAW MILL MACHINERY
ORILLIA, CANADA

No. 2 Lath Machine

WE have brought out our No. 2 Lath Machine with the view of meeting that ever increasing demand of mill men in Canada for a light, medium capacity Lath Machine, that will turn out a first quality product.

Made with a one piece frame just as our larger No. 3 Machine. All the parts are strongly constructed and have that easy accessibility that we have made a feature of all E. Long Company Machines. We believe this very feature has done a great deal to make the machines so popular with the trade.

Just as with our larger machine, the saws are adjustable for ordinary lath or for pickets, staves, etc. In fact this machine will turn out work an exact counterpart of the No. 3 Lath Machine, except in quantity. We shall be glad to give you further details and prices.

SEND FOR CATALOGUE No. 102.

The E. Long Manufacturing Co.

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Orillia, - - Ontario

Everything for the Sawmill

Chains of all kinds
Bull Wheels and Conveyors
Bandmills—6′, 7′, 8′, 9′, 10′
Steam Log Deck Equipment
Edgers—Light, Medium and Heavy
Trimmers—2-Saw and Automatic
Circular Saw Frames
Live Rolls and Drives
Circular Gangs
Power Plants
Filing Room Tools

MADE IN CANADA

PERFECT SATISFACTION

Waterous Sawmill Machinery is a guarantee of efficient service in every department of your mill. You will be pleased with the work it turns out, the man who operates it will like the way it works. That's why more than 80% of Canadian sawmills are using

WATEROUS EQUIPMENT

Whether you operate a portable outfit or a 150,000 ft. capacity mill, Waterous Sawmill Equipment will satisfy your every requirement. All the **time-saving** and **muscle-saving** improvements that modern sawmilling demands are embodied in our machines. At the same time even our very lightest outfits are built with a sturdiness and wear resisting thoroughness that has become proverbial.

An exact knowledge of Canadian sawmill practice, 70 years' experience and exceptionally fine manufacturing facilities as regards equipment and trained men, are combined to turn out—

The Best Sawmill Machinery for Canadian Use

We build every machine from the haul up to the sorting table, and the power plant to drive it with. No matter what you are cutting we can give you an outfit that will produce results with the best possible economy of time and labor. Send for our catalogues.

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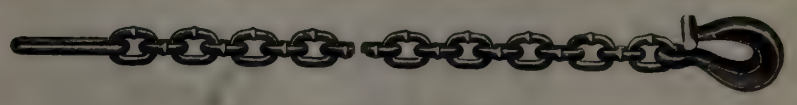

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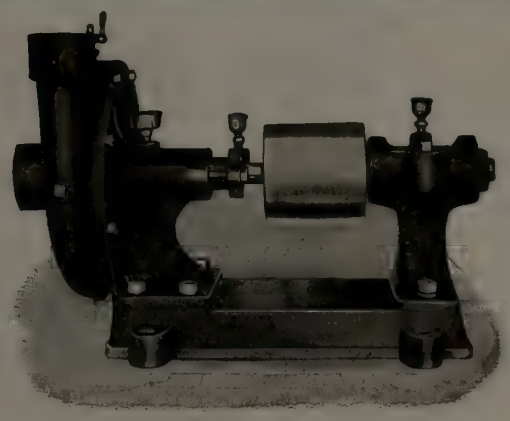

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let us figure on your needs.

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J. M. T. Steam Specialties

J. M. T. Steam goods have been designed to meet present-day needs. They are made of high-grade materials only and the workmanship is finished and thoroughly dependable.

Whether you need stop valves, safety valves, ejectors, injectors or any other steam goods, you can select your requirements from the J. M. T. line with the full assurance that they will serve you well.

Prices, etc., sent on request.

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COSTS LESS PER DAY

AMPHIBIA BELTING

COSTS LESS PER DAY

Put Good Belting

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Good Machines

Your machines are expensive, and naturally you expect them to turn out the quality and quantity of work commensurate with their cost.

Then why harness them with belting which cannot begin to do them justice?

Use

"AMPHIBIA"

Planer Belting

and get the most work from your machines, in the quickest time, at the lowest cost per day of service.

Try a sample run of "AMPHIBIA" Planer and prove its merits.

"Leather like gold has no substitute."

Sadler & Haworth

Established 1876

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For 40 Years Tanners and Manufacturers of the Best Leather Belts

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"AMPHIBIA"

The FLEXIBLE WATERPROOF BELT

"AMPHIBIA"

Geo. Gordon & Co., Limited

Cache Bay, Ontario

RED and WHITE PINE

Cross Arms, Shaped, Bored and Painted

3¼ x 4¼ x 3′ 6″	2000 pcs.
3¼ x 4¼ x 4′	1600 "
3¼ x 4¼ x 6′	2300 "

Cross Arm Material D 4 S

3¼ x 4¼ x 4′	12000 pcs.
3¼ x 4¼ x 6′	9000 "

All Selected Norway.

Dressing done on short notice. ***Send us your inquiries.***

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

QUALITY LUMBER

Several of the best saw mills in Ontario are now making lumber for us from some of the choicest logs produced last winter. These mills are sawing and grading to our order, and our products this year will be better than ever. When you want "Quality" consult us.

Choice Small Log Mill Run White Pine Lumber, White Pine Lath.
Choice Close Grained Muskoka Hemlock.

We will quote special prices on following lines of dry stock to clear:—

1 x 5 & up No. 2 Hemlock, extra good
4 x 4 Small Log Mill Run White Pine
4 x 5 Small Log Mill Run White Pine
1 x 10 Small Log Mill Run White Pine
4 x 5 Small Log Mill Run Spruce

Don't forget that we are Headquarters for all British Columbia Woods.
T. & G. Quality Brand B. C. Red Cedar Shingles, surpassed by none.
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Fir Bill Stuff up to 90 feet.

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This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited
Fassett, Que.

SPRUCE

50,000	-	2 x 4—10/16	-	No. 1 Spruce
45,000	-	2 x 8—12/16	-	"
25,000	-	2 x 10—12/16	-	"
13,000	-	2 x 12—12/16	-	"

HEMLOCK

100,000	-	1 x 4 and up 6/16	-	No. 2 Hemlock
150,000	-	2 x 6 " "	-	"
50,000	-	2 x 4 "	-	"
20,000	-	1 x 4 and up 10/16	-	No. 1 Hemlock
20,000	-	2 x 6 " 10/16	-	"
50,000	-	2 x 8 14	-	"

PINE

1 Car	-	1 x 4 12/16	-	Mill Run White Pine
1 "	-	1 x 5 "	-	" "
1 "	-	1 x 6 "	-	" "

The Long Lumber Company

HAMILTON, ONT.

Pine and Veneered Doors

Our pine and veneered doors for domestic and export trade are made on the principle of "Not how cheap, but how good."
Our guarantee of faultless workmanship and choice materials goes with every door.

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HIGH GRADE

BRITISH COLUMBIA WOOD PRODUCTS
FIR, CEDAR, SPRUCE and WHITE PINE

Fir and Spruce Ladder Stock. Fir and Larch Flooring, Ceiling, V Match, Siding, Trim and Mouldings. Fir Tank Stock. Fir and Cedar Silo Stock, Barn Boards, etc. Red Cedar Shingles. Dimension Timbers of all kinds.

SOFT BRITISH COLUMBIA MOUNTAIN WHITE PINE
THE KING OF ALL SOFT PINES

This stock is particularly suitable for Sash and Door Work, Pattern Lumber, Piano Keys, and all work requiring a soft, straight, close grained Pine. Free from shake and should not be confused with the Coast and Hard Pine

Let Us Quote You The Price and Grades Are Right

Ontario White Pine. Norway and Jack Pine, Spruce and Hemlock Lumber and Bill Stuff, Lath, Shingles, Posts, Ties and Hardwoods

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Eastern Office
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Bldg., TORONTO, Can.

LUMBER

Announcement!

Murray & Gregory, Limited, have been established at St. John, N.B., since 1866, manufacturing Lumber principally for the British, West India and Home markets.

In connection with their business there, they have a Woodworking and Glass Works and supply all wood and glass materials used in building.

With the extension of the Chaudiere Branch of the Quebec Central Railway during the past two years, into their Timber Limits in Quebec, they have built mills at St. Camille, Bellechasse Co., and Lake Frontier, Montmagny where they are now manufacturing Spruce and Pine Lumber for the British and United States markets.

In Quebec, they are manufacturing and dealing in both Peeled and Rossed Pulpwood.

To individualize their Quebec products, they have adopted as their trade mark on Lumber, Logs and Pulpwood, a Trident which will stand always for "the best."

The Head Office of the Company is at St. John, N. B.
The Quebec Office at St. Camille, Bellechasse Co., P.Q.

Bartram Brothers

Cable Address, "Bartram"
Code, ABC 5th edition.

Ottawa, Canada

Limited

1915 Cut

Stock on Hand unsold, May 15th, 1916

Norway Mill Run

1 x 4/5 x 10/16	735,697
1 x 6 x 10/16	203,016
1 x 8 x 10/16	9,424
1¼ x 4 x 10/16	30,292
1¼ x 5 x 10/16	17,798
1¼ x 6 x 10/16	5,143
1¼ x 7 x 10/16	30,521
2 x 4 and up x 10/16	3,900
2 x 5/7 x 10/16	9,900
2 x 6 x 10/16	3,295
3 x 4/6 x 10/16	19,484
3 x 7 and up x 10/16	96,976
4 x 5 x 10/16	6,179

Norway Culls

1 x 4 and up x 6/16 No. 1 and 2	328,012
1 x 4 and up x 6/16 No. 1	391,618
1 x 4 and up x 6/16 No. 2	369,098
1¼ x 4 and up x 6/16 No. 1	31,359
2 x 4 x 6/16 No. 1	3,950
2 x 4 and up x 6/16 No. 1	3,308
2 x 4 and up x 6/16 M.R. Outs	26,656

White Pine, Good

1 x 4 and up x 6/9	1,512
1 x 4 and up x 10/16	5,825

White Pine Mill Run

1 x 4/5 x 10/16	109,256
1 x 7 and up x 10/16	88,550
1 x 10 x 10/16	2,098
1 x 12 x 10/16	9,442
1¼ x 4 x 10/16	4,651
1¼ x 5 x 10/16	2,165
1¼ x 6 x 10/16	3,371
1¼ x 7 x 10/16	7,771
2 x 4 and up x 10/16	4,311
3 x 4 and up x 10/16	117,841
4 x 5 x 10/16	1,562

White Pine Culls

1 x 4 and up x 6/16 No. 1	5,579
1 x 4 and up x 6/16 No. 2	107,913
2 x 4 and up x 6/16 No. 1	5,680
3 x 4 and up x 6/16 No. 1	69,397

Spruce Mill Run

1 x 3 x 8/16	85,000
1 x 4 x 8/16	199,197
1 x 5 x 8/16	254,226
1 x 6 x 8/16	387,930
2 x 4 x 10/16	139,142
2 x 5 x 10/16	222,175
2 x 6 x 10/16	186,544
2 x 7 x 10/16	94,415
2 x 8 x 10/16	29,253
2 x 9 x 10/16	12,570
2 x 10 x 10/16	40,693
3 x 6 x 10/16	200,823
3 x 7 x 10/16	80,887
3 x 8 x 10/16	53,192
3 x 9 x 10/16	55,842

Spruce Culls

1 x 4 and up x 6/16	143,921
2 x 4 and up x 6/16	175,103
3 x 3 and up x 6/16	200,000
3 in. 5th Quality	85,000

Lath Mill Run

1½—32 in. R. Pine	538,000
1½—32 in. W. Pine	187,000
1¼—48 in. Pine and Spruce	90,000

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Watson & Todd Limited
OTTAWA
DRY 1½" NORWAY

1915 CUT 1½" SPRUCE

In Good Shipping Condition
Send us your enquiries

The
Harris Tie & Timber Co.
Ottawa - Canada
Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

ESTABLISHED 1855
THE McGIBBON LUMBER CO.
OF PENETANGUISHENE
Manufacturers of and Dealers in
Lumber, Lath, Shingles, Etc.
HEMLOCK BILLSTUFF a Specialty of which we have the Best Assortment on Georgian Bay.
Don't wait to write. Phone us your requirements.
All stock sized or matched if required.
Our Yards are Unequalled for Drying Lumber

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Wholesale Lumber Dealers and Selling Agents for
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Mills at
DESCHENES - - - QUEBEC
White Pine
Red Pine
Spruce
Lumber and Lath

California White Pine
California Sugar Pine
and Arizona Soft Pine
Best Stock for Factory and Pattern Lumber
Ask **LOUIS WUICHET**
Room 716 Railway Exchange, CHICAGO, ILLINOIS

River Ouelle Pulp & Lumber Co.
Manufacturers of
SPRUCE
Lumber Lath Pulpwood
Head Office and Mills at:
St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of Quebec City
Also Mills at:
Crown Lake, Powerville Riv. Manie
On Nat. Transcontinental Ry.

White Cedar Shingles

We offer for Immediate and Spring Shipment
dry stock 1915 cut in all grades.

Our production is the largest in Canada.

Our Shingles are uniform in quality, being well manufactured and graded.

White Cedar Shingles are Good Shingles

Prices and Terms alike to all buyers

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Birch
Beech
Maple

If you are interested in Hardwoods, you will be interested in us.

We are manufacturing high quality Hardwood Lumber, sawing and grading according to National Hardwood Association Rules.

The Logs are cut from our own soil-right Lands, and particular attention given to quality.

Our Mills are located on Canada Eastern Branch and Transcontinental Branch of the Canadian Government Railway, and in the heart of the best forests in New Brunswick.

Our Head Office in St. John will answer all enquiries.

Edward Partington Pulp & Paper Co.

ST. JOHN **Limited** **N. B.**

The best that money can buy

FRASER F QUALITY

10 modern band mills to serve you

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Rough or Dressed

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Spruce Laths

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Manufacturers of

SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

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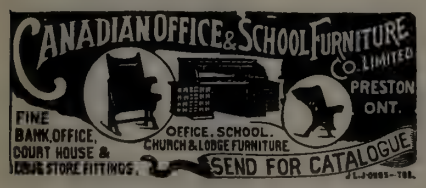
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Prices on application

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Good Grades — Right Prices — Prompt Shipments

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Birch
Basswood
Maple
Elm
Beech

All Thicknesses

Also full line in

White, Red

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Jack Pine

All grades and sizes.

Get in touch with us for prices

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Manufacturers and Strictly Wholesale Dealers in Lumber

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Toronto

WE Buy, Sell and deal in all kinds of Lumber and Timber in Canada and United States: Spruce, White Pine, White and Basswood, Ash, Cedar, Douglas Fir, Beech, Birch, Walnut, Cherry, Chestnut, Cottonwood, Hemlock, Maple, Norway Pine, Short and Long Leaf Yellow Pine, Oak, Redwood, Birch, Maple and Oak Floorings, Pulpwood Ties, and Cedar Poles.

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HAEBERLE LUMBER CO.

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White Pine, Norway, Yellow Pine, Hemlock Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties,

Yellow Pine Timber a Specialty, Interior Trim Mill Work.

NIAGARA FALLS, N.Y.

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Eastern and Southern Lumber

We are at all times in the market for dry WHITE PINE, DIMENSION SPRUCE, SPRUCE BOARDS, HEMLOCK BOARDS, LATH and CLAPBOARDS.

Advise us of your Market Prices and Stocks

A. H. Richardson Lumber Co.

176 Federal Street, BOSTON, MASS.

SPRUCE BIRCH HEMLOCK

Merchantable	100,000'	1" Spruce
"	100,000'	2 x 4 Spruce
"	300,000'	2 x 5 and up to 8" Spruce
100,000'		1" Birch
300,000'		3" Birch
100,000'		1" Hemlock

Prompt shipments

J. A. LAFERTÉ

Room 38-9

55 St Francois Xavier Street

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HARDINGE

Watchman's Clocks

Write for details

SIGNAL SYSTEMS CO.

205 Stevenson Bldg., TORONTO

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Sawed Hemlock
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White Pine Lath
Bass and Poplar Siding

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Pine and Hardwood

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Technical Training Thoroughness Experience

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FOREST ENGINEER
Timber Estimates and Valuations.
Topographical and Logging Maps.
Forest Management and Operations.
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111 Mountain Hill, QUEBEC

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Is prepared to make reports, and estimates on all classes and kinds of Timber, together with Maps, and cost of operating, also sell or buy for you.
25 years practical experience in woods operations and cruising.
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2 Dale Street, Liverpool, and Seaforth Road, Seaforth, Liverpool, England

We are Buyers of
Hardwood Lumber
Pine and Spruce
Veneers (3 or more ply) Handles (all descriptions)
Staves Hoops
Headings
James Webster & Bro., Ltd.
Bootle, Liverpool, England
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Dashwood House 9 Broad St. E.C.

"Well Bought is Half Sold"

The following are a few lots of choice Bone Dry

HARDWOODS

we have to offer :

1 car 2" No. 1 Common and Better Hard Maple
1 car 6/4 " " " " "
1 car 1" " " " " "
100 M' 1" No. 3 Common Hard Maple
100 M' 1" No. 2 Common Birch
100 M' 1" No. 3 " "
75 M' 5/4 No. 1 Common and Better Basswood
3 cars 1" No. 1 Common and Better Soft Elm
4 cars 1" No. 2 " " Black Ash

In addition the following :

150 M' 1 x 4—10/16' No. 1 Jack Pine
100 M' 1 x 5 "
50 M' 1 x 8 "
1 car 3 x 9 "
6 M' 8 x 8—10/16' Com. White Pine
18 M' 10 x 10 "

Let us have your inquires.

Graves, Bigwood & Co.

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Pine and Hemlock Lumber

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Mills : Byng Inlet, Ont.

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No. 5 New Britain, chain.
M 190 Cowan hollow chisel.
Galt upright, compound table.
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Smart foot-power.

Sanders
36" Egan double drum.
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8" belt sanders (wood frames).

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10" Clark-Demill four side.
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36" American double surfacer.
30" Whitney pattern single surfacers.
26" revolving bed; double surfacers.
26" Goldie & McCulloch single surfacer.
24" MacGregor-Gourlay planer and matcher.
24" Major Harper planers and matchers
24" revolving bed, single surfacers.
24" single surfacers, various makes.
24" Crescent pony planer.
20" Dundas pony planer.
18" Little Giant planer and matcher.
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12" Crescent jointer with safety head.
12" Galt pedestal jointer.

Saw Tables
Preston variable power feed.
M138 Cowan power feed.
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No. 3 Crescent universal.
No. 2 Crescent combination.
12' Defiance automatic double cut-off.
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6½' Crescent iron frame swing.
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42" Fay & Egan power feed.
38" Atlantic, tilting frame.
36" Crescent pedestal.
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28" Jackson Cochrane bracket.

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Fay & Egan 12-spindle dovetailer.
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40" MacGregor Gourlay band resaw.
Rogers vertical resaw.
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Galt blind-slat resaw.
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Egan sash and door tenoner.
Pedestal tenoner, double heads and copes.
No. 6 Lion universal wood trimmer.
6-Nail box nailer, Meyers patent.
20" American wood scraper.
4-head rounding machines.
24" wood frame equalizer.
M63 Cowan spindle carver.
16 Cowan veneer press screws.
Iron frame, 3-block sawmill.
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48" 3-saw edger.
26" Hart automatic knife-grinder.
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Prices, Descriptions and full particulars on request.

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IMPERIAL Trade! Have you given this phase of the World-War consideration The recent action of Sweden regarding the Export of Wood Pulp to the United Kingdom has roused British interests to look to Canada for a greatly increased supply; the demand for Canadian Wood Pulp will increase in the same ratio to the supply and every Saw Mill in the Dominion should have a small SODA PULP PLANT to take care of its Slats, Tops, Bottoms and "Waste" Wood. Contracts for long periods of years can be obtained. For full information apply—

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Full supply of Seasoned Lumber always on hand.

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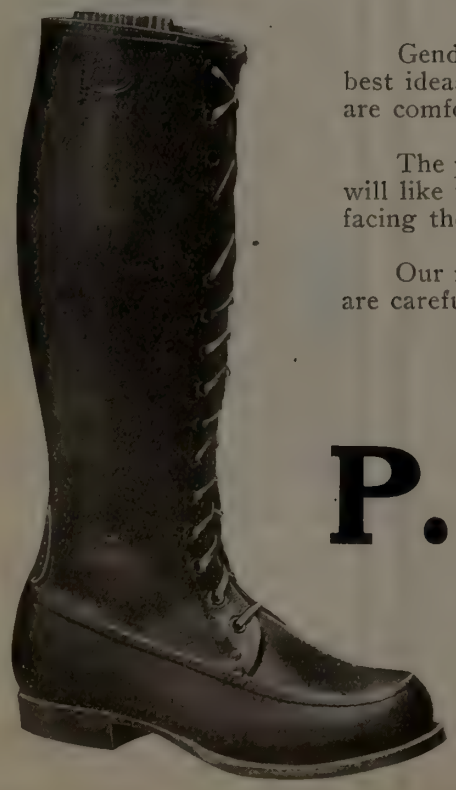
THE P.T. GENDRON SHOE PACK CO. MIDLAND GENDRON MIDLAND ONT. CAN.

Made in Canada



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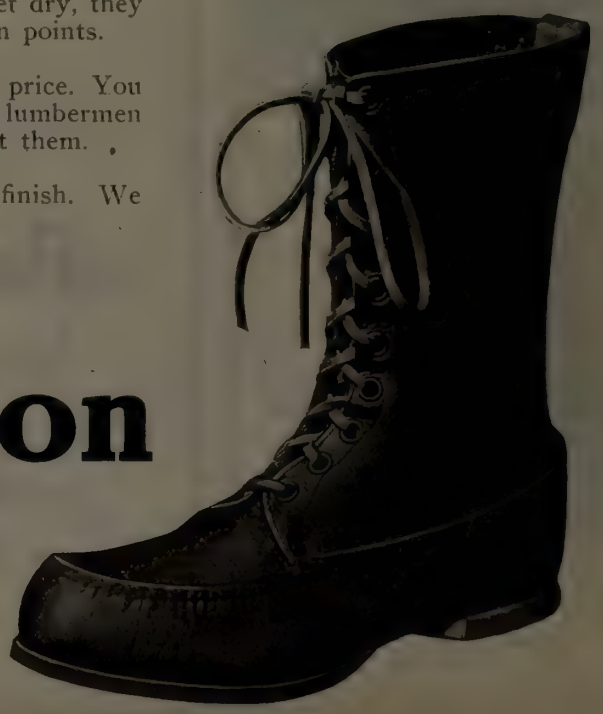
Our manufacturing process is thorough from start to finish. We are careful with every pair.

Send for our catalogue and prices.



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Railway Ties and Pulpwood
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We specialize on cutting to order all sizes of

Dimension Timber

Also in Dressing in car or mixed lots 1", 2" and 3" to customers' specifications.

Complete stocks always ready for prompt shipment.

We are the Largest Producers of Railway Ties in the Dominion

Austin & Nicholson
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The illustration shows a corner of our yard piled with structural timbers. We can promptly load your order onto flat cars in our yard. If you need good timbers in a hurry, give us a trial order.

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"IT WILL NOT DO

To say that the manufacturer has not interests to protect by contract in the goods after he has sold them. They are personally *indentified* and *morally guaranteed* by his *mark* and his *advertisement.*"

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All stock bearing the Arkansas Soft Pine Trade Mark is manufactured and sold exclusively by the following companies:

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Arkansas Lumber Company, Warren, Ark.
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Eagle Lumber Company, Eagle Mills, Ark.
Edgar Lumber Company, Wesson, Ark.
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Everything in Timber

Car and Cargo lots only

Douglas Fir, Pine, Hemlock, Spruce, Yellow Pine and Oak

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100,000′ 10 x 10 Hemlock—
heavy to 12′ & 16′ lengths
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Dry Hemlock and Spruce all sizes

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100 M. feet 1 x 4 in. and up W. P. Wormy Culls dry, about 50 per cent. 10 and 12 in.
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A Large and Selected Stock of
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Orders filled carefully and promptly shipped.

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Mills Now Sawing

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FOR EVERY CLASS OF TIMBER

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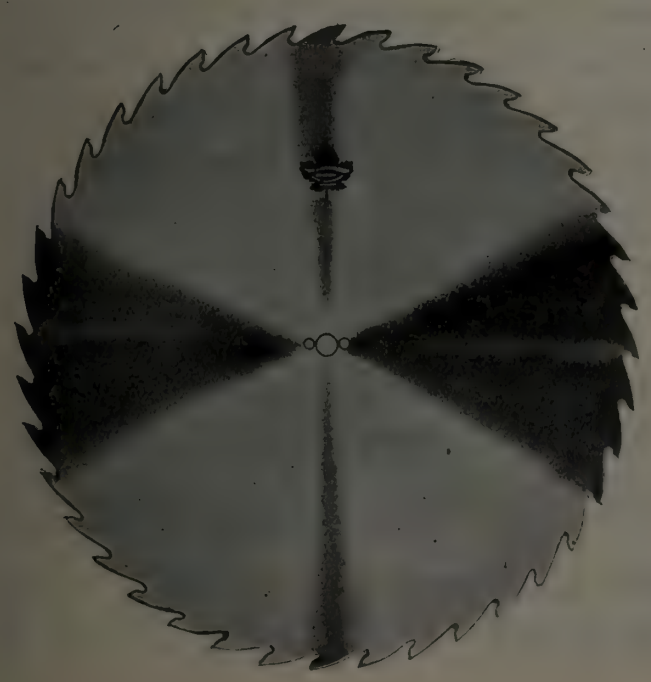
PLEASE NOTE.—We pay cash against all documents, and take the whole of the Delcredere risk on Buyers.



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are saws that cut smoothly, evenly and quickly;
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That have been the standard in Canada for 50 years

"MAPLE LEAF"

RELIABLE **SAWS** **EFFICIENT**

We know just what your requirements are. We have been catering to the needs of the lumberman for half a century. Our ability to satisfy you is borne out by our long record of service.

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Our two branches at Hull, Que., and Vancouver, B. C. besides carrying a full range of cross-cut saws, bits, holders, etc., are fully equipped to handle repairs, for the convenience of our many customers in these vicinities. Immediate deliveries and carefulness assured.

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Mainland Lumber & Shingle Co.

Head Office: Dominion Building, Vancouver, B.C.

Notify the Retail Trade that they have begun operating their new mill at

Fir, Cedar **WESTHOLME** **British Columbia** **Spruce, Hemlock**

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Heavy Timbers a Specialty With Us

WE PARTICULARLY SOLICIT ONTARIO TRADE

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Canada's Banner Province

Ontario's timber production last year valued at $26,774,937 or 40% of Canada's total output.

Pine production, 905,442,000 ft. B.M.
Pulpwood, 246,282 cords.
Railway Ties, 5,704,459.

Ontario's woodworking industries, using 34 different kinds of wood, provide a ready market for the lumberman. Eighty-two per cent. of lumber used in Ontario's industries purchased within the Province.

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For maps and full information regarding Ontario, apply to

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823 RAILWAY EXCHANGE BUILDING

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500,000 ft. British Columbia White Pine
Factory Lumber — DRY and Ready to Ship Direct from Mills on C. P. R.

Good Stock of

California Sugar Pine **California White Pine** **Idaho White Pine**

Send us your Inquiries on above Stocks — — Our Prices and Deliveries will interest you

FIR TIMBERS

Fir Flooring, Ceiling and Siding.
Clear Fir Finish, rough and dressed.
Fir Turning Squares in 4 x 4 to 10 x 10″

B. C. Red Cedar Bevel Siding.
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Manufacturers of all grades and sizes of

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OUR SPECIALTY IS
Long Timbers and Prompt Shipment

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Heavy Fir Dimension
Is Our Particular Specialty

The Heavier it is the Better we like it

We Dress from 1 to 4 Sides up to 16-in. x 20-in., 60-ft.

Our grade is posstively right, and prices will please

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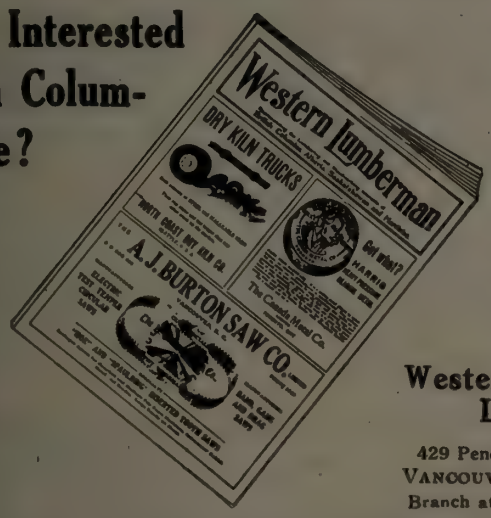
Shipments by C. P. R., C. N. R., G. N. R., and N. P. R.

Are You Interested in British Columbia Trade?

The immensity of the Lumber Industry will within a few years make this Province the most important in the whole Dominion.



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Branch at Winnipeg

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MANUFACTURERS OF

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4, 5 and 6 inch "CLEAR A" Cedar Bevel Siding.
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RITE-GRADE PERFECTS 5/2 and 6/2 RED CEDAR SHINGLES.

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About 4,000,000 feet, logs run 7 to 1,000 ft., 80 per cent. 16 ft. long.

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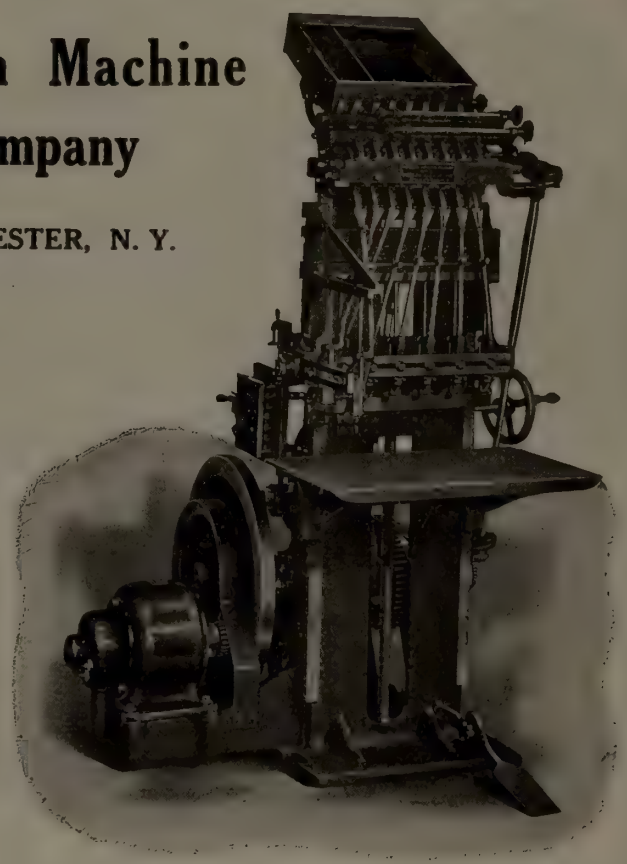

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Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the **Morgan Machine Company** for latest developments in machinery for the Box Industry.

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At Our Expense

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As All Other Concerns Combined

250,000,000 feet constantly in stock insures filling any reasonable order promptly.

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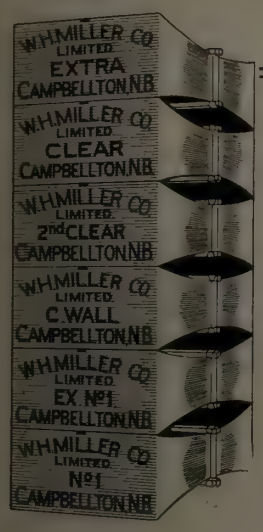
Let us quote you on your requirements for:

Spruce and Pine Lumber

We manufacture and export all kinds of it



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New Brunswick White Cedar Shingles

LET US QUOTE YOU

We also manufacture

Laths and Ties
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PROMPT—RELIABLE—CAREFULLY HANDLED

W. H. Miller Co., Limited

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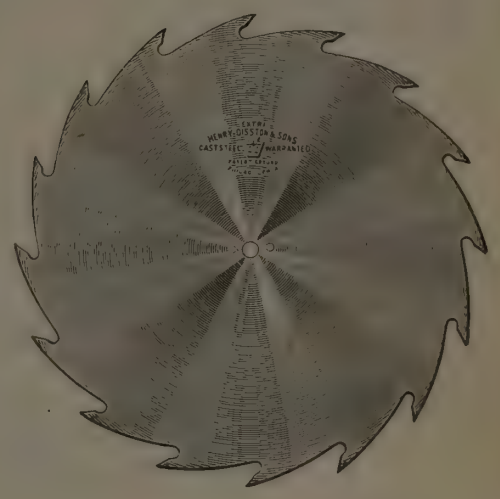

have been made from steel made by us in our own plant since 1855. More than sixty years experience in the manufacture of saw-steel coupled with a study of operating requirements extending over three quarters of a century have resulted in saws of highest excellence.

In tension—, set—and edge-holding qualities Disston Saws are as near perfection as the world's foremost saw-makers can make them.

Where quality means economy, the proper test is service.

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DISSTON BAND SAWS
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Henry Disston & Sons, Inc.

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Dressed and Rough Spruce, White Pine and Banksian Pine

ALL WELL MANUFACTURED AND AIR DRIED

Our mills at La Tuque, P.Q. have first-class equipment for all sorts of dressing, also for resawing.

Let us send you our stock list with prices

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Plant of The Stearns Salt and Lumber Co.

Stearns Quality

Michigan Forest Products

Hardwood, Hemlock, White Pine

LUMBER and TIMBER

40 Million Feet Dry Stock in pile containing a complete assortment for rush shipment.

Grades— GUARANTEED —Quality

Hardwood Specialists

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Manufacturers of Hardwoods—Any Thickness From

1/30″ SLICE CUT VENEER

1/20″ SAWED VENEER

to

2″ BAND SAWED LUMBER

Reg. U.S. Pat. Off.

Specialty:

QUARTERED WHITE OAK

LOUISIANA RED CYPRESS

QUARTERED OAK PLAIN OAK

POPLAR ASH

Yards at—Nashville, Tenn. Basic, Va.

Mills at—Sumter, S.C. Winchester, Idaho

We can ship you promptly any of the above Stock, Carefully Inspected

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Douglas Fir, Spruce, Cedar and Hemlock Lumber

Rough Timbers, Dimension, Flooring, Ceiling, Siding, Interior and Exterior Finish of all kinds including Mouldings. Fir, Spruce and Cedar Lath

Prompt shipment of Fir timbers in all sizes and up to 80 feet in length

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We specialize in supplying air dried Cedar Shingles, these cost more than kiln dried Shingles but make a better roof and last much longer

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Write or wire for prices and stock lists.

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Easy Money—Quick Profits!

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The Metallic Roofing Co., Limited

Manufacturers of
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I HAVE IT

All Grades in White Pine Lath A Specialty

Milling in Connection

E. J. MOORES, Jr.
MIDLAND CANADA

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Chicago Lumber & Coal Co.

Capital $6,500,000 MANUFACTURERS Established 1866
General Offices: EAST ST. LOUIS, ILLS.

OUR REPUTATION is your guarantee of satisfactory service and responsible attention.

WE UNDERSTAND the select structural specifications of the Southern Pine Association and also Associated Factory Mutual Fire Insurance Companies specifications, and can make prompt deliveries of long leaf yellow pine in accordance therewith.

SOUTHERN YELLOW PINE
LOUISIANA RED GULF CYPRESS

Strong Points of the "Superior" Lath Machine

The "Superior" Lath Machine is well constructed of high-grade materials. It stays on the job saving time and money. It gives satisfactory results. 15 to 20 horse-power will run it. Capable of taking four saws. Specifications are: Wooden frame. Belt or Chain Feed. Ring-oiling Boxes. Driving Pulley 10 in. diameter, 9-in. face. Capacity with two saws 40,000 to 50,000 a day.

Some Satisfied Users

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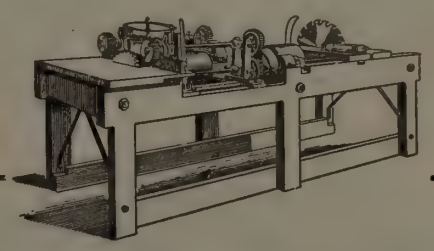
We also make Sappers, Cedar Cut Offs, Shingle Machines, Car Wheels, and Castings of all kinds.

Let us estimate on your requirements.



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We offer for Immediate Shipment

BASSWOOD

1" and 1½" Dry Basswood

DRY BIRCH STOCK

We offer in Birch End Stock—1 x 8½" 1 x 9" and wider
1 x 6 and 7" 1½" to 4"

Spruce, Basswood, Ash, Hemlock and Pine

HART & McDONAGH, 513 Continental Life Bldg., TORONTO
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FIR TIMBERS

WE CAN SUPPLY ANY SIZE AND LENGTH

Wire your enquiries to

McDONALD LUMBER CO.,

Mill—VANCOUVER, B. C.

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LUMBER

FOR BOX ORDERS NOW GOING OUT

100,000 ft. 6/4 x 4 and up x 6/11 ft., S. C. Shorts.
75,000 ft. 6/4 x 4/7 x 12/16 ft., S. C. Strips.
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600,000 ft. 3 x 4 and up 6/16 ft. Red Pine Culls.

Williams Lumber Co.

18 Central Chambers - OTTAWA, CAN.

The Best Lath Market

WE NEED 100 MILLION LATH

annually and can use
SPRUCE, BALSAM, JACK PINE,
RED PINE, WHITE PINE or HEMLOCK

—Specifications—

⅜ x 1½—4 ft.—50 pcs. per pack
No. 2 and No. 3 grades prefered.

Write us when you have Lath to offer. Will contract.

Cannon River Lumber Co.

"Lath Specialists"

Webster Bldg. CHICAGO, Ill.

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What it Contains:

Chapter 1—Historical Notes.
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Price 50 cents

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347 Adelaide St. West, Toronto

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The Victoria Harbor Lumber Co., Ltd.

Manufacturers of

Lumber, Lath and Shingles

Mills at Victoria Harbor, Ont.

HEAD OFFICE.
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Look Into the Possibilities

of having a good stock cut perfect from

The Horshoe Logs

White and Norway Pine

We have the best there is in raw material and our equipment for manufacturing is the latest in saw mill and woodworking machinery. A few of our specialties are: Boxes, Box Shooks, Wooden Pails and Tubs, Pine, Lath and Cedar Posts.

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"We aim to serve you with the Best"

Lumbermen's Tents and Clothing

Pure wool, Waterproof Mackinaw Coats, Pants and Shirts,
the kind you have been looking for.

Repellant Brand Army Duck Tents

The best duck that money can buy.
We can equip your van complete.

Pure wool Blankets, Sweaters, Underwear. Hand Knit Mitts and Socks. Palmers Shoe Packs, Buck and horse hide Moccasins, etc.

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Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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B. C. Publicity Campaign—Manufacturers Must Co-operate

The effort which is being made by the Government of British Columbia to promote the use of B. C. lumber and timber is a development of great importance in connection with the lumber business. The fact that the Government is, in this way, recognizing the dependence of the province upon the growth of its lumber industry, shows those who are engaged in it that if they will take a similar interest in the developing of their markets they will have very valuable assistance from the Government. The work of the B. C. Government is well illustrated by the case of the Ontario market, for which they have established a commissioner's office at Toronto, whose duty is to acquaint the Ontario trade with the merits of B. C. products and to acquaint the B. C .producers with the opportunities for selling their products in Ontario. In short, the Government of B. C. is doing all it can to advertise B. C. lumber and timber to the lumber trade and to the consumer of Ontario, at the same time seeking to induce the B. C. producer to cultivate this market. A similar plan is being adopted in connection with other important markets.

Results are already being shown, that is to say, the trade in Ontario, for instance, is thinking more about B. C. products today than it ever did before, and is, we believe, in a receptive mood, ready to buy and use large quantities of B. C. products if the movement is kept up and developed fully. In order to make the most of any market, however, it will not suffice for the Government of B. C. alone to do the pioneer work and the upbuilding work as well. Unless their efforts are followed up by an aggressive policy on the part of the millmen, the Government's trouble and money will have been spent in vain. The most the Government can do is to put the two ends of the trade—the producer and the consumer—in touch with one another and educate the consumer to a full appreciation of the merits of the B. C. products. After that, the producer must do the rest. It will not do for the lumbermen simply to feel that B. C. lumber will find its way into Ontario, or into other markets, on its own merits, however great these may be. The millmen must co-operate with the Government in order to supplement its work and to carry it on until it produces results.

Every lumberman in British Columbia who has made an attempt to sell his product in an export market should know pretty definitely what efforts will be necessary to produce results out of the publicity furnished by the Government today. In the first place the millmen must give the Government all the moral support they can, and must also make a study of ways and means of giving practical support. This can be done both by advertising and by furnishing what we have recently come to understand by the term "service."

While the Government of British Columbia may be counted upon to do a good deal of the advertising work, the millman must take a hand in it as well in order to secure the best results for all concerned. Government advertising will probably reach a large proportion of those whom it is important to reach, but its effectiveness by itself will be of little account, unless it is backed up by advertising on the part of the men who produce the lumber.

The service end is something in which the millman, the wholesaler and the retailer are much more closely concerned personally. The Government's duty to a large extent comes to an end where the service business commences. In Eastern Canada, the service end has been neglected to a considerable extent in the past, so far as B. C. products are concerned, and it must be developed to a much greater degree of efficiency if the results hoped for are to be secured. What is necessary is that those who are engaged in the production of lumber in British Columbia and are interested in its consumption in Eastern Canada and elsewhere should make a study of the best ways in which the requirements of these markets can be supplied. So far as the retailer and the consumer are concerned, what they want before they will become extensive purchasers of B. C. stocks is a dependable source of prompt supply. This means extensive stocks on hand close to large consuming centres, and good transportation service between the mills and these markets, so that stocks may be kept up to the required extent. B. C. products have already demonstrated their ability, under the transportation we have had, to compete successfully with other stocks, whenever it has been possible to make satisfactorily prompt and continuous delivery. Probably the Eastern Canada situation depends more particularly upon this one point than upon anything else. The demand is already there, in a rather dormant condition, ready to show itself in good proportions if stocks become available at favorable competitive prices and in satisfactory amounts.

Unless these facts are given their full importance and acted upon, we do not see a great measure of success ahead of the campaign for increasing the use of B. C. products in the east and elsewhere, but if they are given such consideration and action as we have suggested, we are optimistic enough to see no limit to the expansion that is possible. Moreover, we see another feature of the situation, which leads to the conviction that there is no option before the B. C. millmen today, other than an unquestionably necessary campaign as indicated. The great producing sections in the Southern States have already made much headway along these very lines. They are the natural competitors of British Columbia in the great lumber and timber consuming markets. They have, in the past, taken enormous shares of this trade and today they are working along the very lines we have suggested. Great manufacturers' associations in the United States, such as the Arkansas Soft Pine Association and the Southern Pine Association are, without the assistance of their respective Governments, spending large sums of money on campaigns for promoting the use of their products.

The situation today is critical, so far as British Columbia is concerned. Its opportunity in Eastern Canada, as elsewhere, is great, but the same opportunity is knocking at the door of its most vigorous competitors, and they have already opened the door and are doing all in their power to take advantage of the opportunity. Unless the manufacturers of British Columbia adopt the same policy they will soon be so far behind in the race that recovery will be a matter of many years, if it does not become practically impossible.

Trade Ethics—Can They Be Codified?

We have heard lumbermen time and again discussing questions about trade which are supposed to come under the heading of ethics, and nothing has struck us quite so forcibly as the fact that there is, in the Canadian trade, very little unanimity of opinion as to the details of "trade ethics." Even during a frank and friendly discussion among a number of lumbermen representing manufacturers, wholesalers and retailers, it is hard to get a majority of those taking part to agree upon more than one or two main points. Perhaps the intricacies of trade are so extensive as to make the idea of introducing a code of trade ethics a theoretical one only, but why not have a good try at it, say in connection with the trade in a large distributing centre like Toronto or Montreal, by holding a series of meetings of those chiefly interested in the three branches of the trade and discussing the matter as fully as possible, then appointing a committee to see whether the ideas can be crystalized into a definite code.

As a foundation from which to work out a code of trade ethics there is nothing more practical or suggestive than the biblical instruction "Do unto others as you would that they should do unto you." That is really the working scheme of any code of trade or personal ethics and is the only basis from which a workable scheme can be developed. The way in which it works out is pretty well understood by everyone in the trade, but when it comes to putting it into practice, so many events influence a lumberman's conduct that the ideal of trade ethics often comes to grief when it comes into contact with personal interests or business friendships.

We cannot illustrate this point more effectively than by giving an example. In an address before a number of lumbermen recently Mr. F. S. Underhill, of Philadelphia, referred to the time when one of the large lumber associations of the United States was under criticism by the United States Government, and two Philadelphia newspapers suggested editorially that the association should not be fined, but its members should be sent to prison. Mr. Underhill, knowing that this was an injustice growing out of ignorance about the working of the association, called upon the editors of these two newspapers and said to each of them, something like this:—

"I live in a suburban community about six miles from Philadelphia. In that community there are two lumber yards, each carrying an investment in lumber involving from $5,000 to $10,000 capital, paying taxes to the community, giving employment to citizens of the community, and affording to the people of the community a supply of material, selected, dry, ready for immediate delivery upon any emergency. You are bound to admit that they are to this extent benefactors to the community. I have a young friend living in that community, who approached me a short time ago, stating that he wished to build a house and would like to buy a carload of lumber from me for that purpose, so as to reduce the cost of the house. I said to him: 'I am friendly to you and would like to accommodate you, but these two yards are located in this community, as you know, and are taxpayers in the community. We send our representatives to see them at least twelve times a year, asking them each time to give us business, and at very many of these visits they place orders for carloads of lumber with us. Now do you think it is a fair thing for me under those conditions to sell you goods at a price with which they cannot compete, and take from them desirable business simply because your needs enable you to buy a full carload?' And, Mr. Editor, if we had so made this sale, and one of the dealers had happened to go to the railroad siding when the car was being unloaded, and saw the material, ascertained that we had sold it to someone who would naturally have been his customer if I had not intervened, would it be criminal upon his part the next time our representative called, if he told him plainly, 'I do not care to buy any lumber from you or your house, because of this transaction,' or would it have been criminal upon his part if he had walked across the pike and stated to his competitor that he had ascertained that we had shipped to this house builder this car of lumber, entirely ignoring the local dealers? The editor did not hesitate a moment, but replied: 'I should say that was a matter of ethics,' and so, I wish to say in conclusion, that the matter of properly protecting the interest of a customer, who is a retail lumber dealer, by refusing to sell in carload lots or otherwise, to one who would logically be his customer, is a matter of ethics."

The Management End of the Lumber Business

In the Canada Lumberman of May 15th we published an article contributed by one of our readers, Mr. A. M. Johnston, under the heading "'Hire and Fire vs. Hire and Inspire." In this phrase there is summed up the whole science of business management and what is said by the writer has a definite bearing upon the conduct of any line of business. Mr. Johnston, however, is interested in the lumber business and his remarks are directed more particularly towards those who make their living in this way. Briefly, the idea set forth is a contrast of the two chief ways of getting results out of men you employ. One way is that of letting everyone know, either directly or indirectly, that they are expected to make good or get out. The other way is that of studying the men individually and learning "whom to encourage, whom to drive and whom to coax."

Take any individual manager of a business and start talking with him about this matter and there will be little or no difference of opinion, because, as a matter of theory, there is no possibility of disputing the wisdom of the latter course, but take an opportunity of looking into the actual state of affairs in a number of mills or shops and you will surely find some where the manager, though he may think that he is following the more enlightened plan, is not doing so, and is losing money by failing to get out of his men the best work they are capable of performing.

One does not like to dwell too much upon the resemblance of a man to a machine, as we all have a feeling that in our own case, anyway, there is something about us that entitles us to be considered as on a higher level than any kind of machine, however intricate or wonderful it may be. But in the treatment of an employee there is much to be learned from the way in which successful men consider his possible capacity. This capacity he will exercise fully under the right conditions and it is the task of the manager to find out what these conditions are and put them into effect. There is only one way of acquiring the necessary information about a man's capacity and that is to make a study of him just as you would make a study of your machines. A machine that is good for turning out timber would not be any good for the production of lath. Why, then, should a man who has a high capacity for producing good work under definite conditions be allowed to spend his time at something else at which his productivity is relatively small? There is only one answer to this, he should not be allowed to do it. The actual conditions prevailing in many plants show that this ideal is far from being realized.

The most useful quality in a manager, for getting results from employees, outside, of course, of a practical knowledge of the work on hand, the machinery, markets, etc., is human interest. A grain or two of this, mixed with an ordinary amount of business knowledge and experience will enable a manager to secure far better results than all the business experience in the world, when it is possessed by a manager whose ideal is to drive employees to the last minute without consideration of the special abilities of each.

Every employee is a man, like yourself, or he was, once upon a time, before he became embittered by hard experience, and even now such a man still has in him, in ninety-nine cases out of a hundred, a spark of his former self that will respond quickly to right treatment. Nothing will produce bigger or better results in any plant or office than confidence between employer and employee. The old methods of considering every man according to his resemblance, one way or another, to an average sample, is out of date. It is really the plan followed by a manager who is not competent himself to do anything but follow the line of least resistance. Many a time he actually dis-

charges better men than himself and is himself the one who should be removed. How often, even in these days, when we talk so much about efficiency, service and system, do we go into an office or a plant and become aware immediately of an atmosphere of antagonism between employer and employee? We could all mention a few cases of this sort of thing and probably there will always be some examples of it until the day of judgment, but however great may be the results secured by one or two seeming exceptions to the rule, there is no question that the same good results could be multiplied several times over if the mental atmosphere between the employer and the employee could be changed from one of antagonism or even of indifference to one of confidence and loyal co-operation.

Cleanliness Produces Profits in a Sawmill

It seems rather a superfluous remark to make about a sawmill that better results can be secured if plenty of attention is given to the matter of cleanliness, than if it is not. The fact is so certain and easily understood that it does not admit of dispute, yet, like a good many other important facts, it is often neglected. The ways in which money is lost by carelessness in regard to the upkeep of a plant and its equipment are too numerous to catalogue. A dirty sawmill is a source of great danger to everyone employed about it. Carelessness of this kind is a prolific source of accidents, and it greatly reduces the capacity of the plant and the quality of the output. After visiting a number of sawmills, one is sure to be struck by the fact that there is a great difference between the way in which they are kept up. Some of them are well looked after, while others are not, and the only reason one can give for the difference is that they are managed by different men and that the manager who does not keep his mill and equipment clean is far below the others in capacity.

The men who are employed in a mill will quickly reflect the disposition of the manager and if he does not practice methodical cleanliness, neither will they. The average sawmill employee has his mind much more definitely set upon his own individual pay envelope than upon anything else, and so long as he thinks he is being fairly paid he will not worry about cleaning things up unless an example is set by those above him. If such an example is set the workman will reflect it just as readily, and the whole plant will be more efficiently run as a result. Cleanliness and uncleanliness are quite infectious. The manager has a great responsibility in this connection for the example he sets will have its effect on the whole conduct of the business. If he insists upon the mill being kept up as neatly as possible, and the yards and tracks, etc., being carefully looked after, his example will infect not only those who work at the mill, but those whose business it is to dispose of the products of the mill in the various lumber markets. When a salesman knows that he has a well managed mill behind him he will visit his customers with a confidence that cannot be approached by a man who has not the same assistance.

We believe that this point, simple as it seems, is not given the attention that it deserves in a good many Canadian mills. We have noticed it ourselves when visiting them, and we have heard it discussed by salesmen from time to time. In our issue of May 15th, we published a forcible article regarding this subject, written by one of our contributors, and we would suggest that those who have not thought about this subject as much as they might in the past, should look up the article and read it carefully. Even during times of business activity and prosperity this is a matter which ought to receive far more attention than it does. In times like the present when economy must be the watchword in connection with every line of production, it is doubly important that a great source of loss and danger should be eliminated as far as possible. Just now, when saving operations in many Canadian mills are being resumed after a winter's idleness, the results of carelessness may be seen pretty clearly in many cases, where the mills were left just as they happened to be at closing down time last fall. How much easier it would have been to open up again this spring, if proper attention had been given to this matter. With this illustration before them, managers who have not been as careful as they should in the past ought to introduce new methods at the beginning of the present sawing season so that next fall they will have the change working well and be able to close down with a far better record of operating cost during the present season and with a much better kept-up mill, which it will be a comparatively easy matter to put into proper shape for the winter idleness and for next season's operations.

Editorial Short Lengths for Busy Readers

According to a report recently issued, it is estimated that the timber cut for 1916 in the Cranbrook forest district, B.C., will be in the neighborhood of from 150 million to 160 million feet. The last previous high record was 148 million feet.

The first contract for the construction of wooden ocean-going vessels under the provisions of the shipping bill recently passed by the B. C. Government, has been announced. The Wallace Ship Yards, North Vancouver, have secured a contract for the construction of three wooden auxiliary schooners. A start has already been made upon construction. The amount involved is about $400,000, exclusive of the cost of machinery.

A logger who sustained a broken leg and other injuries as the result of an accident at Port Mellon, B.C., last year, has been awarded damages amounting to $800 by a jury. The logger was employed as a "chaser" and alleged that the accident was caused by carelessness on the part of the man in charge of the operations. He alleged that the donkey engine was started without waiting for his signal and caused one of the logs to fall upon him.

Representatives of various eastern Canada pulp manufacturing companies have presented a complaint to the Board of Railway Commissioners at Ottawa against the proposed increase in freight rates on wood pulp from points in Canada to points in the United States. They claim that the increase will range from 3 to 40 per cent. as compared with the rates that were in force before the Interstate Commerce Commission permitted a general increase of 5 per cent. in March, 1915. After hearing the argument, the Board reserved judgment and requested a statement from the railways showing details of the proposed increases. Those interested will be allowed to send in further information in the meantime.

Recent advices from the south indicate a curtailment in production of yellow pine, of from 16 2/3 per cent. to 50 per cent. It is reported that the Chicago Coal & Coke Co. has cut off its night operations at the Conroe mill, resulting in a 50 per cent. curtailment. The Kirby Lumber Co., of Houston, Texas, has eased off its production at all plants about 35 per cent. It is understood that all mills of Long-Bell Lumber Co. have curtailed approximately 18 per cent. Other prominent concerns which have initiated curtailed operations are, the Keith Lumber Co., the Beaumont Saw Mills Co., Nona Mills Co., Industrial Lumber Co., Miller-Link Lumber Co., Southern Pine Lumber Co., American Lumber Co., Peavy-Byrnes Lumber Co., South Texas Lumber Co., Chicago Lumber & Coal Co., Thompson Brothers' Lumber Co., Frost-Johnson Lumber Co., Texas Longleaf Lumber Co., Temple Lumber Co., Pickering Lumber Co., Coney Island Lumber Co., and the R. W. Weir Lumber Co. It is also reported that Mississippi mills are generally curtailing operations.

Hardwood Inspection Changes Criticized

Radical Changes to be Discussed at Meeting of National Association—Much Objection Probable

By A. E. Clark

At the annual meeting of the National Hardwood Lumber Association which is to be held in Chicago on June 15th and 16th, the most important matter to come up for discussion will be the report of the inspection rules committee. This report has been prepared and printed and is now in the hands of the members of the assiciation, so that when it is up for discussion everyone will be conversant with its details.

The report calls for a large number of important additions and changes in the inspection rules. From the point of view of Canadian hardwoods, the proposed changes may be briefly summed up. In the case of white ash, for instance, the report of the committee proposes that firsts and seconds should remain as they are; that a grade of "selects" shall be taken out of the upper end of "No. 1 common"; that the grade of "No. 1 common" shall be divided into "No. 1 common A" and "No. 1 common B"; and that the grade of "No. 2 common" shall be divided into "No. 2 common A" and "No. 2 common B."

For the other important Canadian hardwoods, such as black ash, basswood, beech, birch, maple, and soft elm, etc., the grades shall be altered in the same manner as for white ash.

The detailed proposals in connection with Canadian hardwood grading, as included in the rules which are to be discussed, will be clearly shown by the following extract, which shows the grading proposed to be adopted for white ash:—

The Proposed Changes.

Selects

Inspection made from the good side of the piece and the reverse side in pieces 8 feet and over long must work at least 80 per cent. sound.

Bright sap not a defect, admitting 25 per cent. of odd lengths, not over 30 per cent. under 12 feet, and not to exceed 5 per cent. of 6 and 7 feet lengths.

Selects must be 5 inches and over wide, 6 feet and over long.

Pieces 6 and 7 feet long must be clear one face, the reverse side may have one standard defect or its equivalent.

Pieces 5 inches wide, 8 feet and over long, must be clear one face.

Pieces 6 inches and over wide, 8 feet and over long, must grade not below Seconds on the best face.

No. 1 Common A

Inspection is made from the poor side of the piece.

Widths: 3 in. and wider, but not more than 10 per cent. of 3 in. pieces admitted.

Lengths: 4 feet and longer, but not more than 10 per cent. may be 4, 5, 6, and 7 feet lengths.

Pieces 4 and 5 feet long must be clear.

Pieces 3 and 4 inches wide, 6 and 7 feet long, must be clear one face, the reverse side may have one standard defect or its equivalent.

Pieces 3 and 4 inches wide, 8 to 16 feet long, must work 66 2/3 per cent. clear face in not over two pieces.

Pieces 6 feet long, 5 to 8 inches wide, may have one standard defect; pieces 6 feet long, 9 inches and over wide, may have two standard defects.

Pieces 5 to 7 inches wide, 7 to 11 feet long, must work 66 2/3 per cent. clear face in not over two cuttings; pieces 5 to 7 inches wide, 12 feet and over long, must work 66 2/3 per cent. clear face in not over three cuttings.

Pieces 8 inches and over wide, 7 to 9 feet long, must work 66 2/3 per cent. clear face in not over two cuttings; pieces 8 inches and over wide, 10 to 13 feet long, must work 66 2/3 per cent. clear face in not over three cuttings; pieces 8 inches and over wide, 14 feet and over long, must work 66 2/3 per cent. clear face in not over four cuttings.

No cutting to be considered which is less than 4 inches by 2 feet long, or 3 inches wide by 3 feet long.

No. 1 Common—B (New Rule)

Inspection made from the good side of the piece.

Widths: 3 inches and wider.

Lengths: 4 feet and longer, but not more than 10 per cent. may be 4, 5, 6, and 7 feet lengths.

Pieces 4 and 5 feet long must be clear one face, the reverse side sound.

Pieces 3 and 4 inches wide, 6 and 7 feet long, must be clear one face, the reverse side sound.

Pieces 3 and 4 inches wide, 8 to 16 feet long, must work 66 2/3 per cent. clear face in not over two pieces in cuttings by the full width of the piece.

Pieces 6 feet long, 5 to 8 inches wide, may have one standard defect; pieces 6 feet long, 9 inches and over wide, may have two standard defects, the reverse side 90 per cent. sound.

Pieces 5 to 7 inches wide, 7 to 11 feet long, must work 66 2/3 per cent. clear face in not over two cuttings; pieces 5 to 7 inches wide, 12 feet and over long, must work 66 2/3 per cent. clear face in not over three cuttings.

Pieces 8 inches and over wide, 7 to 9 feet long, must work 66 2/3 per cent. clear face in not over two cuttings; pieces 8 inches and over wide, 10 to 13 feet long, must work 66 2/3 per cent. clear face in not over three cuttings; pieces 8 inches and over wide, 14 feet and over long, must work 66 2/3 per cent. clear face in not over four cuttings.

No cutting to be considered which is less than 4 inches wide by 2 feet long, or 3 inches wide by 3 feet long.

No. 2 Common—A (New Rule)

Inspection made from the good side of the piece.

There is no restriction as to heart in the No. 2 common grades.

No. 2 Commons must be 3 inches and over wide, 4 feet and over long, but not more than 10 per cent. of 4 and 5 feet lengths admitted in this grade.

Pieces 3 to 7 inches wide, 4 to 10 feet long must work 50 per cent. clear face in not over three cuttings; pieces 3 to 7 inches wide, 11 feet and longer, must work 50 per cent. clear face in not over four cuttings.

Pieces 8 inches and over wide, 4 to 9 feet long, must work 50 per cent. clear face in not over three cuttings; pieces 8 inches and over wide, 10 to 13 feet long, must work 50 per cent. clear face in not over four cuttings; pieces 8 inches and over wide, 14 feet and over long, must work 50 per cent. clear face in not over five cuttings.

No cutting to be considered which is less than 3 inches wide by two feet long.

No. 2 Common—B

No. 2 Commons must be 3 inches and over wide, 4 feet and over long, but not more than 10 per cent. of 4 and 5-foot lengths admitted in this grade.

Pieces 3 to 7 inches wide, 4 to 10 feet long, must work 50 per cent. sound in not over three cuttings; pieces 3 to 7 inches wide, 11 feet and longer, must work 50 per cent. sound in not over four cuttings.

Pieces 8 inches and over wide 4 to 9 feet long, must work 50 per cent. sound in not over three cuttings; pieces 8 inches and over wide, 10 to 12 feet long. must work 50 per cent. sound in not over four cuttings; pieces 8 inches and over wide, 14 feet and over long, must work 50 per cent. sound in not over five cuttings.

No cutting to be considered which is less than 3 inches wide by 2 feet long.

Former Rules Satisfactory

I would like to draw the attention of those who are interested in the hardwood lumber business in Canada to the fact that the rules as laid down formerly have been successful. They are becoming generally accepted by the consuming trade. The inspectors have been educated through several years of hard work to understand and interpret these rules to the satisfaction of buyers and sellers. Why then should we disrupt the whole situation and try to force the National Hardwood Lumber Association to assume the duties of retail yards by putting up a specific board for every consumer of hardwood lumber?

In the first place, this would entail a complete re-instruction of

Entitled to Congratulations

Editor Canada Lumberman:— Toronto, Ont., May 23.

After an interested perusal, we have just laid down your Annual Issue of May 15th. This is such a decided improvement over previous numbers that we want to take the occasion to congratulate you, because such a manifest effort is entitled to reasonable recognition.

We are, of course, impressed with the increase in size of the issue, but the signal feature, to our mind, is the "editorial and news" section. This shows not alone a vigorous attempt to embrace all items of interest to the trade, but in addition, a fine discrimination in the character and treatment of the items presented.

Please again accept our commendations and our sincere congratulations.

Yours very truly,
Graves, Bigwood & Company,
By A. C. Manbert.

all hardwood inspectors at the different yards. In so far as both Canadian and American markets are concerned, very large proportions of the northern hardwoods are produced at small mills. If a man were to make 200,000 feet of hardwoods and were to cut, say three thicknesses, and then make grades of "firsts" and "seconds," "selects," "No. 1 common A," "No. 1 common B," "No. 2 common A," "No. 2 common B," and "No. 3 common," the quantities in the different piles would be infinitesimally small. This is a position that it is ridiculous to ask any small manufacturer to assume. In other words, it is a question of making a rule that in some cases will benefit a large producer, but in almost all cases will be a serious detriment to the small producer. There is no question that for at least a year's time there would be considerable dispute over the interpretation of these new rules, and this would be at a time when the hardwood lumber business is enjoying some measure of trade revival. It seems anything but fair to the trade to upset all the conditions of prosperity by introducing elements that will cause disputes.

Although I am a member of the Inspection Rules Committee of the National Hardwood Lumber Association, I do not think I am divulging any confidences when I state that a number of the members of this committee were not agreeable to making any change, but since it was put up to the committee to form a new set of rules, we have produced these which are presented as the best we could do, aside from what we had already, and with the hope, in the minds of some of us at any rate, that the good common sense of the members of the association would be exercised to the extent of seeing that they were nothing like equal to the former rules, and that they would be thrown out when they came before the association.

There is no doubt that certain people both in the consuming and producing trades, would benefit by these changes, but I think we, as lumber manufacturers, are big enough now to say that as a benefit to the whole trade they are not to be compared with the old rules, and that when it comes to a vote in the general meeting of the association they will see fit to throw them out. I, personally, shall go to the meeting prepared to adhere to the old rules as being quite equal to our requirements and as having proven very satisfactory to the trade with whom we have dealt. I do not consider that it is necessary for us to enter into retail yard methods in producing and selling hardwood lumber in car load lots.

To show that my views on this matter are to a considerable extent the views of other important hardwood manufacturers, it is only necessary to mention that the Chicago, Philadelphia, and Cincinnati lumbermen have all voiced their opposition to these changes, and other important centres are giving them their definite consideration with a view to following suit.

A Great Opportunity for Douglas Fir Ties

A report upon the market for railway ties, or sleepers, as they are called in India, is published in a recent issue of the Weekly Bulletin of the Department of Trade and Commerce, having been received from Mr. H. R. MacMillan. Mr. MacMillan reports that India has a railway system totalling 35,825 miles of open line, exclusive of double track. Four different gauges are in use. Although one-third of the mileage is laid on steel or cast iron sleepers, the yearly requirement for wooden sleepers is very great. The annual demand for new track, for which metal sleepers are seldom used, is about 1,300,000 sleepers. Renewals use up about 4,000,000 sleepers annually, making a total demand in India each year for 5,300,000 wooden sleepers. Indian forests have never been able to fill this need.

After discussing present sources of supply, Mr. MacMillan reports that there will remain an important market for sleepers from some other country. The only possible important source is creosoted Douglas fir. Summing up his report, Mr. MacMillan says:—

1. There is a shortage of railway sleepers in India amounting to an accumulated deficit of 6,000,000 sleepers and an annual requirement of imported sleepers for renewals of about 1,000,000 sleepers. The programme of railway construction yet to be undertaken will increase the yearly deficit.

2. Metal gives satisfactory service, but the extra cost renders a rapid extension of its use unlikely.

3. Many trials with imported sleepers from all exporting countries within reach have failed to develop a satisfactory source of supply.

4. Amongst the trials made during the past four years with creosoted Douglas fir have been several poorly prepared shipments which are earning a bad reputation for the timber.

5. The opportunity for Douglas fir in a market already importing sleepers at the rate of $1,250,000 per year, is so great that sleeper exporters should give particular care to developing and producing a creosoted Douglas fir sleeper suitable for the Indian market.

The Commissioner of Commerce, Ottawa, Canada, has been furnished with a list of the railroads in India, their managers, engineers, headquarters, miles of track of different gauges, and present types of rail and sleepers in use.

Railway sleepers enter India free of customs duty.

Never Saw Its Equal

Editor Canada Lumberman:— New York, May 24.

I have carefully perused the Annual Number of the Canada Lumberman, and it certainly looks good. The cover, in particular, is the thing that captured my eye, and I notice the good use some of your advertisers made of the color inside.

I am not a knocker of American (perhaps I should say United States products) but I have never seen a United States lumber paper as nicely gotten up as your May 15th issue.

I also noted the "technical meat" contained in the paper and have already made good use of some of the ideas brought out.

Hoping to see the good work continued,

Yours truly,

W. F. Schaphorst.

Query and Comment

New Brunswick Hardwoods

Will you be good enough to give us any data obtainable regarding the quantity and quality of birch grown in New Brunswick, and also advise us whether that province produces any elm, and in what districts it may be found?—Trenton Cooperage Mills Limited.

The Forestry Branch of the Department of the Interior, Ottawa, report that birch is the most important hardwood cut in New Brunswick and is made up of the wood of several species of which yellow birch (Betula lutea) is the most important. The birches are found over the entire province. The only elm cut into lumber in New Brunswick is the white elm (Ulmus americana) and the quantity sawn is almost negligible, representing only 6,000 feet B. M. in 1914.

The Department of Lands and Mines, Fredericton, N. B., report that the quality of birch grown in New Brunswick is first class. There are large quantities of this timber in the northern section of the province, particularly on the line of the Intercolonial Railway, between Campbellton and St. Leonards. All the lands along the line of the railway are under timber license. The International is now owned by the Intercolonial Railway, and information regarding freight, charges, etc., for shipment of timber in this district may be had from their head office at Moncton, N.B.

Elm is found only in the valleys of a few of the streams in New Brunswick, and practically none of it has ever been brought to market.

In bulletin No. 44 of the Forestry Branch of the Department of the Interior the following reference is made to birch in the Maritime Provinces:—

"Birch is the most important hardwood in the Maritime Provinces, as it is also in Canada as a whole. Of the native material the greater part is probably yellow birch (Betula lutea), with smaller quantities of paper birch (Betula alba var. papyrifers), sweet birch (Betula lenta) and gray or wire birch (Betula populifolia). The wood imported from other parts of Canada would be of a similar nature, while that purchased in the United States is probably made up of sweet birch almost entirely.

In general, the wood of birch is fairly hard and strong, with a fine even grain and texture. It is very perishable in moist situations, and checks and shrinks considerably in seasoning. The wood is easily worked, takes a high polish and has a pleasing figure and appearance when finished.

Sweet birch possesses these good qualities in the highest degree and is considered the best lumber species. Yellow birch is lighter in color and weight, and has a greater percentage of the less valuable sapwood. Paper birch is tougher than either of the preceding, and its wood is very light and white in color. Gray birch is almost entirely confined to the Maritime Provinces in Canada. Its wood is grayish-white in color and probably the toughest of all the birches, but, at the same time, the least durable in moist situations.

Birch, like spruce and pine, is used in sixteen of the wood-using industries of the Maritime Provinces. This wood heads the list in seven industries and is used in greatest quantities by the manufacturers of hardwood flooring, furniture, cars and building material, who together use 68.7 per cent. of the total quantity used in the region.

Only 45,000 feet of birch were reported as having been purchased outside of the Maritime Provinces. Of this small quantity (0.3 per cent. of the total) the greater part came from the United States, and the remainder from Ontario and Quebec.

According to the latest report of the production of lumber in Canada the output of birch in New Brunswick during 1914 was 8,034,000 feet B. M., as compared with 5,749,000 feet B. M., in 1913.

Lumbering Industry of Newfoundland

Removal of Export Prohibition a Boon to the Trade—Great Expansion and Progress in All Lines

By J. W. McGrath

St. John's, Newfoundland, (Special to the Canada Lumberman): During the past year, as the result of legislation, introduced and passed in the Newfoundland Legislature, an important change has been effected regarding the future lumber export trade of the Colony.

In 1905 the timber exports from Newfoundland amounted to the approximate total of 15,000,000 feet, and were valued at $200,000. In that year prohibitive legislation was enacted regarding the export of raw timber, and henceforth the annual export of unsawn wood from the Colony became a negligable quantity; about a quarter of a million feet yearly.

The act of last year repealed the law enforced in 1905, and as a result the export of raw timber from the Colony during the year has been revived on a great scale, and every thing points to a very large industry being developed during the coming year.

The matter of permitting the export of raw timber from the Colony was the result of representation being made to the Newfoundland Government from England, showing the great necessity for securing ample supplies of pit-props and pit-wood for English and French collieries. In response to this appeal the government, while repealing the old act, made export from Newfoundland proper a war measure, that is, the concession to last as long as the war. The act, however, as it applied to Labrador, contained no such limitations. It was passed for development purposes, and henceforth the export of unsawn timber from Labrador will be permitted indefinitely. The excellent results which have accrued from the new measure during the past year will, it is extremely probable, influence the government to allow the export to continue indefinitely from Newfoundland also.

The Pit-Prop Industry

The new Act came into operation during the winter session of the Legislature of 1915, which did not meet till late in the winter, and consequently there was comparatively little time left for much pit-prop cutting to be done before the lumbering season ended. The total cut of pit props, however, exported from the Colony last summer to England was approximately 125,000 cords.

Early last fall, several representatives of English colleries, and of firms dealing in pit props came to Newfoundland and gave a number of contracts to local timber dealers, to be filled during the winter. One or two agents, however, representing the largest colleries in England, purchased timber areas in the country, and on these during the winter a large number of men were employed cutting pit props. Those who have bought and worked timberlands will effect a good saving by eliminating the middleman's profit. It is also understood that, even after the war ends, those English firms who have either bought or will buy timber limits will use them permanently as a source of supply, instead of, as heretofore, securing the product in Scandinavian countries.

During the past winter a conservative estimate places the amount of pit props cut in Newfoundland alone at 250,000 cords. The number of men engaged in cutting was very great, for, besides those who were employed by contractors, a great many remained at home, and engaged in cutting there, as the law permitted cutting on the three mile limit.

The price per cord which was formerly being paid for the wood was most unsatisfactory. During the winter 1914-1915, the men who engaged in cutting did so in some cases at a price of $2.50 per cord, and at the end of the season found themselves with scarcely any net returns for the winter's work. This year the government took the matter up, and the price of pit props was arbitrarily fixed. Henceforth the price must not be less than $4 per cord for unrinded wood, while the props rinded, barked and ready for shipment bring $5.00 per cord.

As in one year the cut of pit props has been more than double the previous year's cut, every indication points to the likelihood of this year's cut of 250,000 cords being doubled next year, so that henceforth Newfoundland may be expected to become an important producer of this article for the European markets. Compared to the rest of British North America, Newfoundland in supplying pit props to England possesses two great advantages. In the first place labor in this colony is undoubtedly cheaper than anywhere in Canada. And in the second place the coast of Newfoundland is from three to four hundred miles nearer to England than is any shipping port in Eastern Canada. These advantages may be expected to be an important factor in developing the industry.

At the present date there are leased in Newfoundland 25,000 square miles of timber lands. All these areas have been surveyed, and the rentals are being paid only on what is entirely timber, some sixteen thousand square miles. Assuming that this bears ten cords of pit props an acre, the country at present holds some 90,500,000 cords of pit props, conservatively estimated.

There are besides this extent of timber under lease, large areas of what are considered fairly good limits of forested land not under lease, and a large area of the best wooded land in the country which is held as a Crown reserve.

In Newfoundland-Labrador there are now 22,000 square miles of timber land under lease. And it is estimated that of this area about 15,000 square miles may be considered to be well timbered, and from this area it is computed that 64,000,000 cords of pit props could be taken. There are also on Labrador, other very large areas of good timber not leased, in the disputed zone between Newfoundland and Canadian territories. Practically all this timber is spruce, about 92 per cent., the remainder consists of a mixture largely of birch and pine. The fibre of the Newfoundland spruce is peculiarly adapted to make the wood excellent material for the manufacture of pulp and paper, while the forests of Labrador are remarkable for the tenacity and soundness of the wood. The writer has seen spruce boards, which were used to construct fishing stages, in Labrador, which were exposed without any kind of paint to all the rigors of that varying climate. These boards were more than forty years old—some of them, and yet there was no sign of decay.

Scarcity of Tonnage

The scarcity of tonnage for shipping this year's cut of timber to Europe has become acute. Altogether this spring no less than thirty vessels and steamers have been bought in the United States and Canada, at prices heretofore unthought of.

The old wooden fleet of Newfoundland sealing steamers, which, ever since being built, more than thirty years ago, were considered suitable for any work but sealing, are being extensively altered to be used for freighting timber to England during the summer. This fleet, which numbers ten or twelve steamers of about 1,400 tons each, will be most valuable, and in addition to other ships will guarantee the export of the entire cut of last winter, sooner or later during the year. The rate of trans-Atlantic freights, although excessive, is still somewhat below that demanded for shipments made from Canadian ports.

Export Trade in Pulp and Paper

During the past year Newfoundland outdistanced all other countries in supplying "news" paper to the United Kingdom. In prewar times the United Kingdom supplemented its own production of paper, produced from imported wood pulp, by imports of the finished product, principally from Norway, Sweden and Newfoundland. Norway was always, for a number of years, the chief source, contributing about 85 per cent. of the total imported finished product. During the past year, Newfoundland assumed the premier position, supplying 34.7 per cent., while Norway was relegated to a second place, supplying 33.5 per cent. The total amount of newsprint contributed last year by Newfoundland was 477,896 tons. The Anglo-American Development Company, Limited, who operate large pulp and paper mills in the country declared the first dividend since the opening of the mills seven years ago. This dividend, after all depreciation was allowed for, amounted to £51,350 0s. 8d. The mills are owned by Lord Northcliffe, and cost $15,000,000.

At the present time a company known as the Newfoundland Products Corporation, of whom the Reid Bros., who are large railroad owners in this country, are the chief promoters, and owners of a large part of the stock of the company, is being financed in New York. Mills with an annual output of 100,000 cords of spruce pulpwood will be erected. A sulphite pulp mill is also to be installed having a yearly production of 36,000 tons of sulphite pulp. An electric bleaching plant is to be used. The Corporation has already expended in Newfoundland, in surveying lands, etc., in connection with the establishment of the plant, about one million dollars.

The travelling trade commission appointed by Sir Geo. Foster to visit Great Britain, France, Belgium, Italy, and possibly Russia, has sailed for Europe, and will be absent for three or four months. Mr. Roy Campbell, secretary of the Canadian Pulp and Paper Association, a son of Mr. A. C. Campbell, of the Hansard staff of the House of Commons, and secretary of the Montreal branch of the Manufacturers' Association, was apointed secretary of the commission.

Cost of Making 9.2 Shell Boxes

Analysis by a Manufacturer Shows Contract Prices Are Far Below Safety Margin*

On several occasions we have been informed that some firms quoting prices on shell boxes have submitted bids which rendered them a distinctly unsafe proposition, and certain figures laid before us seem to indicate that there is foundation for the statement. As a result of enquiries at some of the box factories where these boxes are being made, we give below a copy of the cost sheet on the 9.2 shell box, 300,000 of which have been recently let out at 95c. each. By referring to this cost sheet it will be seen that the actual amount of lumber required has been figured exactly, and an allowance made for waste, as is the usual practice. Then a manufacturing cost covering the price of the shook ready to be assembled, plus cost of manufacturing and delivery, is added, which amounts to $1.26, a total well over 95c., the price at which the business was placed. Adding a reasonable amount for operating expenses, which every sound business man understands to be absolutely necessary, for the safe conduct of his business, we have a price of $1.66.

If a manufacturer, for reasons of his own, desired to disregard entirely his profit and operating expenses, outside of labor, he would be able to make a price of $1.55, but it is difficult to understand how any man at all familiar with lumber could go so far as to quote a price on this box which will not see him through on the bare cost of the lumber and other material, at the prices which are actually in force at the present time, which will go considerably higher before the completion of his order. Business like this is distinctly unsafe, not only for the man who is doing the manufacturing, but also for those who are furnishing him material of any sort or description, and more especially for those who are advancing the money to finance his aperations.

Following is the cost sheet for the 9.2 shell box:—

2 sides, spruce,	30 x 12⅝ x 1⅜ =	7.89
2 T. & B., spruce	30 x 9⅞ x 1⅜ =	6.16
4 inside angles, spruce	12 x 2½ x 2½ =	2.07
		16.12 ft.
Waste, plus 15%=19.00 ft. at 2½c. per ft.		47½c.
Labor on shook, $5.55		10½c.
3 ends, birch	9⅞ x 9⅞ x ⅞ =	2.00
1 end, birch	12⅝ x 12⅝ x ⅞ =	1.11
2 handle blocks	2¾ x 5½ x ⅞ =	.25
		3.36 ft
Waste, plus 15%=3.95 ft. at 3c. per ft.		11¾c.
Labor on shook, $5.55		2¼c.
		72c.
2 bands, 57½ in. long		12c.
2 rope handles		8c.
20 screws, 1 in. x No. 12	$1.40 Less 80	
20 screws, 2¼ in. x No. 12	2.20 and 5%.	
10 screws, 1¾ in. x No. 12	1.80	
8 screws, 1½ in. x No. 12	1.65	14½c.
Nails		3½c.
		38c.
Assembly		11c.
Delivery		5c.
		$1.26
Overhead and general expense, 20%		1.58
Profit, 5%		1.66

* Contributed to The Canada Lumberman by a reader who is conversant with the practical details of this class of work.

Infected Lumber Found in Retail Yards

The United States Forest Products Laboratory, in its annual report, refers to studies that have been made with a view to determining the extent and cause of the decay existing in stored timber and the relation of this to outbreaks of rot in buildings. These studies show that an exceedingly bad condition exists in many lumber yards in respect to the sanitary handling of timber. The majority of dealers do not realize the full danger in supplying infected stock to the building trades, and take few precautions to maintain their material in sound condition. The "house fungus" (Merulius lachrymas) of Europe was found widely distributed in lumber yards in the eastern United States. Since the same fungus is often found in buildings in the same localities, it is probable that it is introduced in infected building material. It is hoped that through these investigations lumber dealers will be led to give greater attention to keeping their yards in sanitary condition.

Continuous Stock Inspection

In a recent issue of this journal a correspondent said that one of the drawbacks of fast-feed machines is that so little time is available for properly facing and graining stock. And in the last paragraph of his article he strikes the keynote of the chord when he remarks that "the use of the automatic feeding table gives the feeder the time he needs for graining and facing the stock."

The automatic self-feed has come to stay, and it will be but a short time before the hopper feed will be provided for almost every sort of machine and will handle both long and short lengths, or all long or all short, with ease and certainty. It will perhaps not retain the vertical form which it now has in some well-known machines, but a form of automatic feed may be looked for wherein the various pieces and lengths are taken from a "side-by-side, edgewise, and horizontal arrangement," which will bring forward and feed almost any width or length of stock.

But the facing and graining of stock should not be confined to the feed table; it should be under the inspection from the time it enters the mill until it is delivered in finished form. When ripping stock it should be the business of the sawyer to hold up every piece which will not make a first-class bit of blank stock. The cut-off sawyer who handles this stock should never let a bad knot, a split or a shake get past him, and when the strips closely resemble rainbows, they should be cut short enough that the dressed stock may be forced into place. Stock which will not come up to requirements should be "scrapped" by each and every man whose hands it may pass through.

A case in point: in a shop where thin stock was worked a good deal, being planed, ripped and cut to lengths, then the ends scarfed, glued into hoops and steamed, bent, glued, dried, and afterwards turned and smoothed in a lathe, there was a lot of stock run through which had to be rejected after several operations had been performed upon it. There seemed to be no system of inspection whatever. A machine man who came to a piece which could not possibly make a finished article, never thought of throwing it out, but passed it through his machine. A change of foremen in this shop resulted in a big change in the manner of handling work, and now every man who handles a piece of stock is an inspector, with full power and orders to reject each piece which will not make a perfect article when finished.

The cost of the finished article has been reduced fully 20 per cent. by this method of continuous inspection, and there has also been a big saving in stock. The pieces rejected at early stages of manufacture are now diverted to other uses, whereas formerly they went to the boiler furnace. Continuous inspection in this shop now begins with the man who receives and measures the lumber as it is unloaded into the stock room. And he is not afraid of hurting anybody's feelings, for he rejects promptly and finally such pieces as will not come up to the shop specifications and requirements.

When the stock is piled in storage to remain until machined, it is separated as far as possible into grades, and the laborers who do the piling have been taught to sort and separate the stock with a good deal of cleverness. The cut-off sawyer rejects freely, and the rip sawyer throws out every piece which does not look good to him. Then the man who planes the stock and scarfs the ends has a considerable number of culls to his credit, upon which all succeeding operations are prevented and their cost saved. The party who places the blanks in the steam retort finds a few which are to be rejected, and he also finds a few more which are thrown out instead of going to the bending machine.

This system works so well that it should be adopted in some form in each wood-working shop in the country, no matter how large or how small. By this method every man becomes an inspector, and is alert at all times to stop any defective piece, thereby saving money and time for the shop. There is a good deal which may be done by each man through whose hands stock may pass, to machine each piece to the best advantage. When, through fast feeding, small or short stock, or other reasons, the man who keeps the feed tables supplied cannot face and grain properly, he should be given assistance. The result will be a great improvement in the finished product and an almost entire absence of roughly-machined pieces, chipped-off ends, and other defects due to running stock against the grain.

Try continuous inspection in your shop. It may be a bit troublesome to educate the machine operators up to it, but by the time one or two have been quietly dropped for failure to inspect, the others will have found it decidedly to their advantage to fall into the scheme, for it makes their own work easier and better. Try it once and you will never regret or abolish it. And the workmen, after they have once "caught on" to the benefits they derive from the system, do not care to abolish it.—J. F. H., in The Woodworker, Indianapolis.

The 19th annual convention of the National Hardwood Lumber Association will be held at Chicago on June 15th and 16th. Among the important matters to be dealt with are important proposed alterations in the grading rules.

Fig A.—Main buildings of a typical modern creosoting plant.

Decay in Timber Prevented by Treatment

An Account of Methods in Use in Canada—Usefulness and Life of Timber Increased by Scientific Preservation

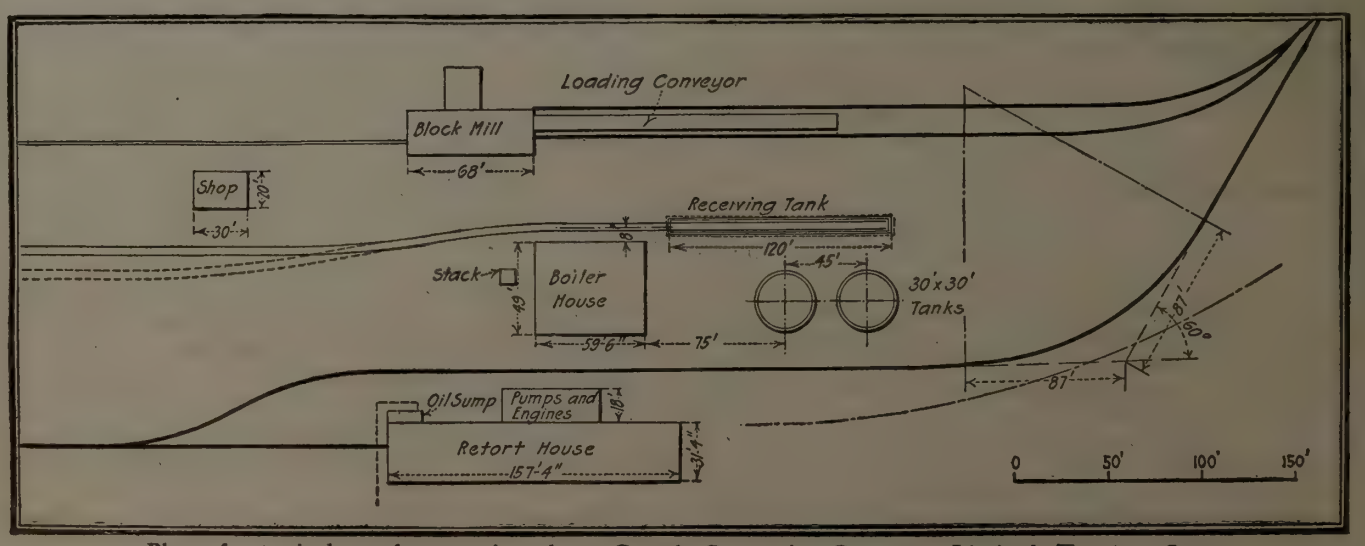
THE preservation of timber has only been developed to any considerable extent in Canada during the last few years. Even as yet, there is subjected to preservative treatment only a small percentage of the amount of timber used annually for construction purposes in which preservation would increase its usefulness. Moreover, there is an extensive field waiting to be exploited in the wood block paving line, which will consume enormous quantities of wood when the trade has been properly developed. A substantial beginning has been made, however, and it has been practically assured that the wood preserving industry in Canada will increase rapidly during the next few years. The lumber manufacturing industry is closely affected by this development. The preservation of wood by a comparatively inexpensive process, widens its market greatly, not only increasing the uses to which it can be put, but assisting it in meeting the competition of substitutes.

It is difficult to account for the failure of the lumber manufacturing industry in Canada to realize this more fully than it has, although we believe that this apparent indifference to important market possibilities will disappear rapidly once the lumbermen have had a fair taste of the increased trade which the pioneer wood preserving companies of Canada are working up for them. Unquestionably the manufacturers of Norway pine, for instance, have neglected a splendid opportunity so far in connection with the wood block paving business and have permitted their more aggressive competitors, the manufacturers of yellow pine, to create prejudice in favor of their product which will only be overcome with considerable difficulty. It is time that the Norway pine producers and the producers of other Canadian woods suitable for wood block paving, Douglas fir for instance, should organize something definite in the way of a campaign, or an Association even, for getting their share of this business which promises to be of great extent in the near future.

The growth of the wood preserving industry in Canada during the last few years has been intimately associated with the growth of our railways. We now have some 30,000 miles of railway in Canada, compared with one half that amount 20 years ago—and the increasing cost and decreasing supply of good ties, has attracted the attention of the wood preserving industry to the Dominion. Forestry experts claim it takes sixty years to grow a tie, and that we place it in the track to rot out in from five to seven years, whereas it would give from eighteen to twenty-five years' service if presevred, or treated, before being used.

On this continent in 1885 only 120,000 ties were treated out of a total of 50,000,000 used, while in 1912 about 30,000,000 were treated out of about 150,000,000 used. In other words, only about 1/400th part of the ties were preserved in 1885, while in 1912 1/5th of all the ties used were treated. In Canada alone in 1910 practically no treated ties were used. In 1911, 200,000 ties were preserved before being placed in the roadbed. This was 1.4 per cent. of the total number used. Last year about 2,500,000 ties were treated, or 10 per cent. of the total number used. This shows that the Canadian railways have commenced the battle against rot.

Rot is the chief cause of failure of timbers such as ties, paving



Plan of a typical wood preserving plant—Canada Creosoting Company, Limited, Trenton, Ont.

blocks, piles, etc. It is the breaking down of wood fibre that is caused by the growth of small plant organisms known as fungi. The spores or seeds of the fungi, which are usually carried by the wind, alight on timber and grow, sending microscopic threads or rootlets into the timber. These organisms live on the timber as food, causing the eating away or breaking down of the wood fibre.

Certain amounts of each of four things are absolutely essential to the existence of these fungi; namely, air, moisture, heat and food. Take away entirely any one of these four, and the fungi cannot live. The timber cannot be protected from air except in occasional instances, such as piles that are entirely submerged, in which case the timber needs no other protection from fungi, but may be exposed to teredo attacks.

It is also difficult, as a rule, to protect the timber from moisture, but where it can be so protected the growth of the fungi is stopped. This is shown, for instance, by the excellent condition in which one often finds very old timber in interior construction.

If one could keep timber at or below the freezing point—say, in a cold storage plant—fungi could not live; but from the practical standpoint it is impossible to protect timber from heat.

Therefore, the only thing that can be affected to destroy the growth of the fungi—the only one of the four essential conditions that can be removed—is food. The fungi have only the wood fibre for food, and if that food can be rendered poisonous, the wood will be preserved against their attacks. This is done by treating the wood with a highly antiseptic fluid.

To treat a tie properly in order to preserve it against decay requires a modern treating plant of considerable cost and complexity. In 1885 there were only three of these plants in operation on the continent, while there are now over one hundred such plants in existence, with an aggregate capacity of over 100,000,000 ties a year. In Canada we have but five of these plants, all built within the last four years, with an aggregate capacity of approximately 4,500,000 ties per annum. These plants are located at Sydney, N.S.; Fort Frances, Ont.; Trenton, Ont.; Transcona, Man., and Vancouver, B. C.

Such plants consist of retorts, pressure pumps, vacuum pumps, proper gauges, storage tanks, measuring tanks, etc. Fig. B is an interior view of the retort house at the Trenton plant. The retort (1) is shown at the right of the photograph. It is 134 feet long, 7 feet in diameter, and has a net capacity of about 2,500 cubic feet of wood. The retort is built of riveted boiler plate to withstand 225 pounds pressure per square inch. There is a door (2) at each end which is securely bolted and sealed after the retort has been charged. A receiving tank (3) holds the creosote oil that is drained from the retort after the finish of the pressure treatment, and also after the finish of the vacuum treatment. A centrifugal pump (4) forces this oil from the receiving tank to the overhead tank (5), from which the supply is drawn when the treatment is begun.

Steam coils run along the bottom of the retort for its entire length in order to regulate the temperature of the preservative during treatment.

At the operator's station is a board on which is mounted a number of gauges, both indicating and recording. One gauge indicates the pressure in the retort and one records it on a timed sheet. The amount of vacuum is indicated by another gauge and recorded, with the time, by still another. The temperature is indicated and recorded according to time.

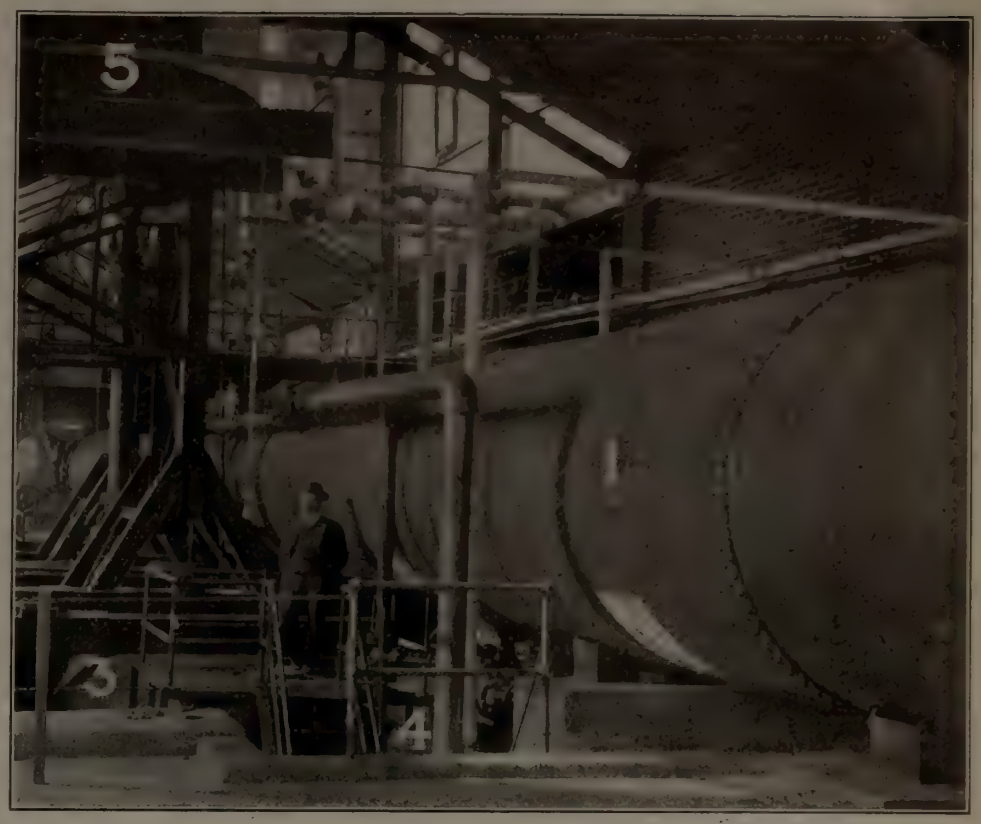


Fig. B.—Interior of retort house. 1, Retort. 2, Retort door. 3, Receiving tank. 4, Pump. 5, Overhead tank.

Among the plant's equipment are several trains of tram cars, such as are shown in the centre of Fig. C. These are used to convey the ties and lumber into the retort for treatment. Sixteen tie lengths are used to make up a train; a tie length to each tram car; each tram car holding about 60 ties. The train is pushed by an electric locomotive right into the retort. The cars are not coupled, but are so constructed that they can push against each other without disturbing the load, a cast steel bumper being attached to each end of every car. A wire cable is fastened to the car farthest from the locomotive, so the train is easily drawn out.

A different type of tram is used for treating paving blocks. A train of them is shown at the left of Fig. D. After these trams are filled with blocks, a perforated slide closes across the top of each tram, holding the blocks in place but allowing the creosote oil to flow through the perforations and fill the car.

The paving block mill which operates in connection with the treating plant and manufactures the lumber into paving blocks, consists of a conveyor, a planing mill, saw tables with saws, etc. Seasoned lumber is loaded onto the conveyor, shown in the foreground of Fig. A, which carries it into the block mill. It passes on five rolls in a straight line through the planer and onto the saw table, on which it is fed into a mill of from sixteen to twenty saws which cut fifteen to nineteen blocks at a time. The sawn blocks drop onto another conveyer which carries them from the mill. As they pass out they are inspected and, from the conveyer shown in Fig. D, they are loaded

Fig. C.—Train of ties just drawn from retort, and one type of the trams used.

into the cages, as the paving block trams are called. Sixteen of these cages are used to make up a train for each charge. Each cage contains about forty square yards of blocks.

Ties and timbers from the seasoning yard are loaded onto tram cars such as are shown in the centre of Fig. C and a number of trams placed together to make a train such as is shown at the left of Fig. C, ready to be pushed by the electric locomotive into the retort. The trains of block cages are made up at the conveyer at the end of the block mill, as shown in Fig. D, where they have been filled with blocks.

When the treatment is started after a train of paving blocks, ties or lumber has been placed in the retort, and the end doors closed and hermetically sealed, oil is allowed to flow into the retort from the overhead tank, filling the voids around the timber. Then by means of steam pumps additional oil is forced into the retort to obtain the amount of pressure required to saturate the wood thoroughly, 100 to 180 pounds pressure being used, according to the kind of wood. Upon completion of the pressure treatment the pressure is released and the oil is rapidly drawn into the receiving tank. A vacuum of from 23 to 27 inches is then quickly created in the retort by means of a special arrangement of vacuum pump and condenser. This vacuum is sustained from an hour to an hour and a half, and draws from the wood the surplus oil. After this surplus oil is drawn off, the doors of the retort can be opened and the train withdrawn.

During the treatment heat plays an important part as well as pressure and vacuum. The temperature during the pressure treatment is never allowed to drop below 150 degrees F., nor to rise above 190 degrees F. The degree of penetration depends largely upon the temperature of the oil; the higher the temperature, within certain limits, the freer the liquid will flow and the more easily it will enter the pores of the timber after the timber has become warm and the pores expanded by the heat. Some kinds of wood offer little resistance to the oil, while other kinds offer great resistance, depending on the size of the pores, the smoothness of the cell walls and the extent to which material obstructions are contained in the cells. The temperature, pressure, vaccuum, etc., etc., are readily regulated by the operator, all valves and the controlling apparatus being near the station from which he watches the proceess.

A complete record is kept so that any official of the creosoting company, or the customer's representatives, can check the operator's discretion and skill. These records are kept, and should it be desired to refer to them at any time for any reason, after a lapse of many years, one can easily do so.

A clocklike device shows the amount of oil in the overhead tank, both before and after treatment. The difference, of course, is the net amount left in the charge. This method is remarkably accurate. It is checked up monthly by actual and precise measurements, and is also verified by weighing the timber before and after treatment. The whole process of treatment takes from three to five hours for ties and from four to eight hours for paving blocks. If the ties are well barked, in good condition and well seasoned, the treatment does not take so long as it does otherwise.

Various preservative fluids are employed, but that which is in most general use is creosote oil. Of the five plants in Canada equipped for preserving wood on a large scale, all except one use creosote oil. The plant at Fort Frances, Ont., uses chloride of zinc. Unless the timber is penetrated so deeply with the preservative that checks or openings cannot reach beyond the treated zone, the spores will find their way in through the checks to the untreated portion and cause interior rot, which is frequently misnamed "dry rot." The depth of penetration of the creosote oil depends on the amount of oil that is forced into the wood, yet it is not necessary for the preservation of the timber to leave so much oil in the timber as must be put into it in order to obtain the required penetration. Therefore, many plants use the process whereby a large quantity of oil is forced into the timber, thus insuring thorough penetration, but whereby a considerable portion of this oil is afterwards drawn from the timber by the creation of a high vacuum. This leaves in the timber only the amount of oil that is needed, and the oil is evenly distributed throughout the timber (except impenetrable heart wood), instead of simply being distributed densely at the surface. By this method proper penetration can be secured without adding so greatly to the cost as would be done if all the oil were left in the timber that had been put in to obtain the penetration.

Following is the record of a treatment recently given an order of Norway pine paving blocks, three inches wide by four inches deep, for the City of Toronto:

Gross lbs. creosote oil in each cubic foot of timber at end of pressure.	Net lbs. oil remaining in each cubic foot at end of vacuum.
24.35	22.41
25.20	19.61
26.60	19.57
26.50	20.61
27.03	21.53
25.74	20.64
24.80	19.01

The objective was a twenty-pound treatment. It will be seen that the net average was 20.48 pounds. These blocks were treated at the plant of the Canada Creosoting Company, Limited, at Trenton, Ont.

After the blocks, ties or timbers have been treated, the penetration is inspected by the representatives of any inspection company who may be present on behalf of the purchasers of the materials, by cutting the blocks in two by means of a hatchet, or extracting small borings from the ties and timbers. These borings are made with a Swedish instrument which resembles a miniature core drill in its action. A perfect core several inches long and about 3/16ths of an inch in diameter is taken out of each timber that is bored. Examination of these cores shows the depth and uniformity of penetration.

The method of loading ties onto the railroad cars after treatment is shown at the right of Fig. C. The handling of large timbers, both before and after treatment, is all done mechanically.

Before ties and timbers are treated, or before lumber is cut into paving blocks, it is stacked on the seasoning yard for months, to become properly seasoned. The lumber is stacked in open piles, so as to permit the free circulation of air, for three to five months. The ties are piled in such a manner as will permit of good air circulation and at the same time not allow sufficient exposure to cause checking. It requires from 6 to 10 months to season ties properly. Fig. E shows the manner of piling ties.

Fig. A is a general view of the Trenton plant. The buildings, reading from the left to right, are the block mill, machine shop, boiler house, office and retort house. The company also owns its own tie camp, north of Trenton, which it organized in order to get hardwood ties.

The trestlike structure in Fig. D is the conveyer running out from the block mill. The sawn blocks are carried out on this conveyer. Chutes will be noticed running from the conveyer to the cars,

Fig. D.—Conveyor filling trams with paving blocks. Storage tanks in background.

Fig. E.—Tie stacking yard.

and when the cars are pulled into place under these chutes, trap doors are opened in the conveyer just over the chutes and the cars are filled. In the background of Fig. D can be seen large tanks for storing oil, holding 150,000 gallons each.

Creosote oil, the preservative used at the Trenton plant, is defined scientifically as any and all distillate oils boiling between 200 degrees and 400 degrees C. which are obtained by straight distillation from tars consisting principally of compounds belonging to the aromatic series and containing well-defined amounts of phenoloids. Or, to be less technical, creosote oil might be defined as a distillate from the tar which is produced as a by-product in the manufacture of coal gas from bituminous coal by the retort method; or a distillate from the tar which is produced as a by-product in the manufacture of coke from bituminous mixture of these two kinds of tar.

Creosote oil is highly antiseptic and thoroughly protects the timber against fungus growths. For ties, eight to twelve pounds per cubic foot (about 2½ gallons per tie) is left in the timber, while for paving blocks from sixteen to twenty pounds per cubic foot is left in. Creosote oil may have a preservative value from physical properties as well as from its antiseptic or poisonous nature. This is especially true when applied to paving blocks. It may be capable of adhering to the cell walls and fibre of the wood with such permanency as to prevent conditions favorable for the development of elements destructive to timber. With the idea of obtaining the greatest prevention, both chemically and physically, pure coal-tar of low carbon content is frequently mixed with the creosote oil.

Recently there threatened to be a serious shortage of creosote oil on this continent owing to the war in Europe, but the release by the British government of a number of cargoes of creosote oil helped the situation. England and Germany are the leading producers of creosote oil distilled from coke-oven coal-tar. When coke is manufactured in bee-hive ovens the coal-tar is burned in the process. On this continent most coke ovens are of the bee-hive type, while in Europe they are of the by-product type. Therefore we are largely dependent on Europe for our supply of coal-tar and creosote. The only by-product ovens in Canada are at Sydney, N.S., and Sault Ste. Marie, Ont. A bee-hive oven costs only about one-third or one-fourth as much as a by-product oven, which explains the popularity of the bee-hive ovens. The quality of coal for cooking in Europe is not so good as on this continent, and requires the by-product oven in order to make the greatest quantity and best grade of coke. Therefore the use of the more expensive by-product oven is not altogether a matter of choice in Europe.

Creosote oil is one of the fractions of crude coal-tar obtained by its distillation. It is the fraction coming off between the benzol and carbolic acid compounds, which come off at low temperatures, and the pitch, which remains in the still at the highest temperatures. Coal-gas tar usually has a high percentage of free carbon which should be filtered out, or otherwise removed, before such tar is ever mixed with creosote oil. Refined coal-tar is often added to the creosote oil in preparing it for use in wood preservation, as the treatment is more permanent when the mixture is used than when only creosote oils of low specific gravity are used, as there is a marked evaporation of the low-boiling fraction of the creosote oil. The coal-tar and the creosote oil, when mixed, combine thoroughly, and cannot be separated again, either physically or chemically.

Up to the present only wood block and ties have been treated at Trenton, but it is expected to treat timber for station and outdoor platforms; switch ties; dimension timbers; decking; flooring for docks, bridges, fire halls, warehouses and heavy manufacturing plants; crossing planks; fence posts; signal poles; snow fences; piling; mine props; telegraph and telephone poles; cross arms; mine timbers; tie plugs; wooden pipe; and all material for breakwater and marine work.

The first ties ever treated in eastern Canada from Canadian timber were creosoted at the Trenton plant in September 1914, for the Toronto, Hamilton and Buffalo Railway. The only woods used so far have been beech, birch and maple for ties, and southern yellow pine and Norway pine for wood block, but spruce, tamarack, fir, hemlock and other woods will probably be treated later on.

Special attention will be given to the treatment of mine props, as timbers for use in mines decay very readily, owing to ideal conditions of moisture and temperature for fungus growth. Much of the failure of mine props now attributed to breaking and splitting is due primarily to rot. This can be prevented, and the original strength of the timber maintained, by creosoting or otherwise preserving it. The creosoting of mine timbers is not so expensive as some other forms of creosoting, because it is not necessary to obtain such great penetration. The uniformity of temperature and moisture in mines, and the lack of exposure to the direct rays of the sun, result in no checking taking place, so that it is not necessary to get such deep penetration. A much lighter treatment than is given other timbers will therefore prove satisfactory. But this does not necessarily mean that any merely superficial treatment is sufficient.

The difference in strength between untreated and treated ties and timbers, except in the case of those treated with heavy oils which protect the timber from excessive moisture and add to its strength, is so slight as to be of no importance. This assumes that ties and timbers are properly treated and not injured by steaming or excessive heat during treatment. The drier that wood is kept, in ties and timbers, the stronger and better service they render.

The very great value derived from the treatment of wood is not only the prevention of the rot which makes the wood useless. The treatment maintains the original strength of the timber, especially in the case of ties treated with oil, and causes it to resist mechanical abrasion and wear longer. Furthermore, when ties are properly seasoned before treatment and preserved with creosote oil, the oil resists moisture and prevents the ties from becoming soft and spongy.

The added life due to creosoting depends upon the quality of treatment, and upon the kind of timber and the manner in which it is used. It is only fair to say, however, that creosoted ties will last from three to five times as long as untreated ties, while the cost of treatment does not double the cost of the tie. Therefore the great saving in the use of treated instead of untreated ties is apparent. This saving is even more pronounced in the case of other timbers.

Protecting Forests by Publicity

Good Results Secured by Canadian Forestry Association in Fire Prevention

By Robson Black

The use of publicity in the building up of forest protection sentiment has been employed only to the minimum degree by the lumbermen of Canada. Inspired by the excellent results achieved by the Western Forestry and Conservation Association of the United States, the British Columbia Forest Service and some commercial firms have gripped the idea and set it to work. So satisfactory and promising have been the results of popular education in forest guarding as to justify an extension to every forested province of the Dominion. Quebec, particularly within the zone of the co-operative associations, has accomplished something in the distribution of educative literature, and the carrying out of a personal propaganda by the precept and example of the fire rangers.

The adherence of all wideawake lumbermen to the needs of vigorous mutual and governmental action in the cause of forest protection against fire is growing at an amazing rate. Limit holders who a few years ago shook their heads at the thought of employing any protective devices other than natural rainfalls, have quit their old-fashioned position and lined up with the "moderns." The first experimental years of the St. Maurice and Lower Ottawa co-operative associations in Quebec have helped greatly in a general conversion. Actual saving of timber has become an accomplished fact. Old time losses have been cut to fractions. Statistical proof has been produced not only in Quebec and British Columbia, but from many parts of the United States, where brains have been given a chance to demonstrate the folly of tolerating wholesale fire damage in timber areas. No longer need the progressive lumberman point to results accomplished in Europe; he has results at his own door. No longer have the provincial and federal administations the excuse that forest fires are a necessary evil, pecularly associated with the Canadian timberlands. Facts have shown this to be false ground, and have also shown that whenever any of our government forest departments care to institute genuine forest protection, they need not step beyond the borders of the Dominion to find how it should be done.

Forest Fire Causes

The immediate causes of forest fires differ somewhat with the locality. Settlers' clearing operations cause enormous losses in one district, and in another the sportsman, river-driver, prospector, may equally share the onus of damage. Nearly always, however, human hands and human heads must bear the responsibility.

Laws that promise punishment will do much in curbing some classes of incendiarists, but it must be remembered that nearly all forest fires are, in the main sense, accidental. Few settlers deliberately burn the timber of the limit holder, although their carelessness is almost as guilty. Few campers deliberately desire to destroy the haunts of a thousand other campers; so it is with the river-driver, the prospector and the others.

This lack of deliberateness in the setting of dangerous fires in forest areas supplies the reason why all who have standing timber exposed to risk, or who have the more remote interest of a lumber yard, or a furniture factory, should get acquainted with, and stand behind, any organized Canadian effort to fight forest fires by education. The goodwill of an informed public is worth all the forest laws ever written.

"This is not conjecture," said the National Conservation Congress at Washington, D. C. "Progress differs locally almost exactly

with the degree in which propaganda has been successful."

The limit holders of the Western States agree with such a pronouncement; they back it up to the tune of from $200,000 to $300,000 a year in educational work. There is not more than a trifling fraction of such an amount spent on educative work by the lumbermen of Canada, outside of the two co-operative associations in Quebec, but the plentiful indications of an awakening to the needs of the situation are most encouraging.

The Publicity Campaign

The work of bringing the masses of the Canadian people into intimate touch with the forests and forest industries of the country is mainly in the hands of the Canadian Forestry Association, which has its headquarters at Ottawa. Without any governmental or other affiliation, this association, composed of public spirited Canadian citizens to the number of over 3,700, has waged a campaign for seventeen years. The hard labor expended in the long discouraging period when conservation was a dictionary term is bearing fruit. Even in the past two years of war, heavy additions to the membership and a wide extension of the association's activities have been carried out.

Three-fourths of the day-to-day energies of the association are expended on forest fire prevention through winning public co-operation. Experience in the United States, and to a considerable extent in British Columbia and Quebec, has plainly proved that skilful and persistent education must travel hand in hand with lookout towers, trails, telephone lines and rangers. How the educative portion of the work is carried out by the Canadian Forestry Association may be briefly indicated.

Practically all newspapers in Canada, daily, weekly, commercial, religious, etc., give the association the fullest assistance in spreading information about the importance of the wood-using industries and the need of guarding their supplies. Hundreds of articles, many illustrated, are prepared and placed. Newspaper cartoons, putting a sermon in a nutshell, are placed with about three hundred papers three times a month. Co-operation is also given to public and private agencies in getting important news to the newspapers and magazines, such as prosecutions of settlers, changes in regulations, etc.

Illustrated lectures, under the auspices of public societies are given in many parts of Canada. Motion picture theatres are freely utilized to show special fire cartoons between the reels. "Ready-prepared" lantern lectures are sent to ministers, teachers, etc., who have facilities for gathering audiences.

Enlisting Local Co-operation

One of the most fruitful activities in which the Canadian Forestry Association is engaged is the encouragement of Boards of Trade, municipal councils, clubs and societies to take an interest in the forest conditions of their localities and to bring pressure to bear upon provincial and federal authorities for needed reforms in administration or in laws.

The influence of the printed word was never so definite and real as it is today. The association makes use of print and illustration to an extent limited only by its finances. During the past seven months, ten thousand copies of "The Boy Scout's Forest-Book" were placed in the hands of school boys and girls and their elders. Colored instructive pamphlets were issued in French and English to the extent of about thirty-five thousand. Twenty-five thousand copies of "A Matter of Opinion," a propagandist novelty of 24 pages, and fifteen thousand copies of "Your Enemy's Photograph" in two languages, have gone through the country. The banks, railways, forest departments, and private corporations undertake to give all these issues very careful distribution to settlers, railwaymen, river drivers, campers, etc., etc., from coast to coast. The association also maintains "The Canadian Forestry Journal," which has been found of marked value educationally. The foregoing are some of the more tangible concerns to which the attention and revenues of the association are directed.

It will be noted that in no department of its work is the association taking up cudgels for anything but the most practical and proved methods of forest preservation through the sure channel of education.

Co-operation Between Manufacturing and Sales Departments

By George C. Robson

If we should ask the average manufacturer if his sales and manufacturing departments were co-operating, we believe he would answer, "We think so"; but ask the average sales manager or mill superintendent this same question and the answer undoubtedly would be, "Not as much as they should."

If any two departments in any business should work together to produce results, it is the sales and manufacturing deparements and in many ways this applies more to the lumber business to-day than ever before and more so than in many other lines of business.

The sales manager does not believe there is an intentional lack of co-operation between these departments, but rather a lack of understanding or knowledge of the other department's operations.

How many sales managers to-day have a proper knowledge of the manufacturing end of the business; but how many of the men directly responsible for the proper manufacture of lumber have any knowledge of the work of the sales department or the respective values of the different grades or kinds of lumber they produce and how it is sold on the market?

In the days gone by, when practically all lumber was sold as log run, it did not matter so much to the sales manager or the mill department if a few thousand feet, more or less, were lowered in grade by not being properly manufactured, for was it not true that it all brought the same price?

The manufacturer, who expects quality produced, must realize that to some extent it will affect quantity, but he should figure out for himself whether quality or quantity is the best paying proposition. Before he can perfect a manufacturing organization that will produce both, he must educate them and let them know something of what it means to him to get both results.

The soft wood problems, in both the manufacturing and sales departments, are on a much higher scale of efficiency than are the hardwoods and for this reason the hardwood question will be considered more seriously than the soft woods.

Is there a manufacturer to-day who is satisfied that his mill department is producing the maximum amount of better grades in the hardwoods, or is satisfied that he is getting the full money value in lumber from the sawing of his logs?

Is there one who is thoroughly satisfied with the present manner in which he markets his hardwood products? There is, of course, a remedy and we believe this remedy is in the hands of the employer fully as much as or more than in the sales or manufacturing departments; and when the remedy is found, these departments must co-operate to work it out.

Manufacturing and Sales Departments

We urge that the sales and manufacturing departments each study the problems of the other; that the sales managers familiarize themselves with the market's requirements so they can intelligently advise the manufacturing department, and when the mill department understands some of the principal essentials of the sales department, it will produce the quality that will enable the sales department to make a much better showing.

We believe each manufacturer could well take his mill superintendent, head sawyer, edger man, and trimmer man, yard foreman, and graders into his confidence to the extent of possibly holding meetings frequently, talking over the various subjects in connection with the proper manufactuirng of lumber, advise them of the respective values of the different grades, make a study of the grading rules and impress on them the necessity of their becoming students of the manufacturing game; and in this way the manufacturer, his sales managers and employees will find much enlightenment and more interest in the manufacture of lumber.

The up-to-date manufacturer of to-day is endeavoring to manufacture his lumber with the expectation of shipping it to meet the requirements of the market; and in determining how he will manufacture his timber, he must first consider the quality of his logs. If his logs are of good size and quality, he can well consider the sawing of some thick material, but unless he has a good quality, he should

A Creditable Issue

Editor Canada Lumberman:— Owen Sound, Ont., May 24.

Your Annual Number is indeed very creditable. The reading matter is well "put up" and the statistics are informative. The advertisements are well illustrated.

The publication brings home with force to the reader the great importance of the lumber manufacturing industry of the country.

Yours very truly,
W. J. Beattie.

A Fine Piece of Work

Editor Canada Lumberman:— Batiscan Station, P.Q., May 25.

I think the Annual Number of the Canada Lumberman surpasses any of your former issues. It is certainly a fine piece of work and all your articles are interesting and practical.

Yours very truly,
Maurice Walsh.

think of the results on the balance of his stock before he attempts to saw much thick lumber.

After it has been definitely determined as to the thickness of lumber to be sawn, the sales department is entitled to and should insist that the lumber be as well manufactured as is possible and practicable and endeavor to see that the logs are sawn to the best advantage, that the lumber is properly trimmed and edged and the thicknesses are as uniform as it is possible to manufacture them.

Mis-manufactured lumber undoubtedly causes the sales department more trouble than any one thing it has to contend with, for it not only takes valuable time in straightening out complaints, but it is usually necessary to sell such an article for considerably below the market value.

Proper Sorting Advisable

Next to the proper manufacturing of lumber comes the importance of sorting the lumber to the best advantage in accordance with the manner in which it is to be sold.

Most of the manufacturers have already overcome sorting difficulties with reference to their soft woods, but the sorting of hardwoods for the market has been largely neglected by most of the mills, as a careful investigation shows that most of them still continue to pile their hardwoods No. 2 common and better.

We believe this, to a more or less extent, is necessary on account of the majority of the mills not having a sufficient amount of room on their sorting works to enable them to sort the many different kinds of wood they manufacture to advantage and as a result a very heavy additional expense results when the lumber is shipped, on account of so much extra sorting and handling in the yard.

A mill, well equipped, with sufficient sorting room, can, with practically no additional expense, sort its lumber so as to eliminate a large portion of the cost now chargeable to the loading of harwood lumber which, all know, is high in comparison with the loading cost of soft woods.

I believe you will bear me out in the statement that in the ordinary yard the cost for inspecting and loading hardwood lumber is on the average, considerably in excess of $1 a thousand where the lumber is piled No. 2 common and better, while a soft wood yard, where the lumber is sorted, can be handled for less than one-half of the cost of handling hardwood in the same yard.

Not only can you materially reduce the cost of loading your hardwoods by proper sorting at the mill, but you have the additional advantage of having your lumber sorted ready for the market, can give your trade what it requires promptly, and without the necessity of the additional heavy expense of sorting and stacking down in an attempt to get out any particular grade; and you likewise will eliminate the depreciation that results from stacking lumber for any length of time.

We do not suggest that this sorting at the mill be done to excess, but we do believe that every mill can do a much better job of sorting than is being done at the present time and we likewise believe that every manufacturer who is producing hardwoods can well give serious consideration to his present sorting capacity and the manner in which he separates and piles his lumber.

Piling an Essential Factor

The piling of lumber is fully as essential as proper manufacturing. The foundations for pile bottoms should be made solid, with good pitch and well up from the ground to allow a free circulation of air under the piles. In piling the lumber, plenty of pitch from the bottom to the top of the pile should be allowed and proper chimneys of good widths should be placed in the centre of the pile to allow circulation of air from the bottom to the top of the pile. Narrow crossing strips should always be used, especially in hardwoods, and care should be used to see that these crossings are placed directly above the foundation timbers. This will eliminate a great deal of warped and crooked lumber caused by improper piling.

In the piling of better grades, it has been found very profitable to use 4-inch hemlock strips, either green or dry, to help eliminate the chances of discoloration. Stain undoubtedly causes the lowering of grades in lumber more than any other feature in connection with air-drying stock, and great care should be used to see that lumber is piled to avoid this feature.

Different kinds of lumber require different spacing to dry properly and to the best advantage, while the season of the year in which it is sawed makes considerable difference in the amount of spacing that is used.

Lumber should be properly roofed with plenty of extra pitch as soon as the pile is completed. If it is piled 12-foot and shorter together, the same should be covered with 16-foot lumber of as wide widths as can be obtained conveniently, while 14 and 16-foot piles or 16-foot square piles should be covered with a double length roof; and in either event the roof should extend at least 18 inches over the front of the pile and 2½ feet over the back of the pile. Care should be used to see that the cracks in the bottom course of roofing are well battened with boards 6 inches or wider, as it is a mistake to use 4-inch strips for roofing purposes.

Each pile cover should have three crossing strips on the top, securely tied down at the ends with twine to hold the roofing in place against winds, which would otherwise disturb them.

If proper pitch is not allowed in the pile bottom, it should be made in piling. Good lumber should not be used for risers in making this pitch, as the lumber will stain and lower in grade, but rather use a low grade for this purpose, as well as for roofing beds.

Lumber that is piled as above, either 12-foot and shorter, together on three foundations, 10 feet from front to back, and 14 and 16-foot together, with three foundations, 14 feet from front to back, or in box piles on four foundations 4 feet apart, so all lengths will rest on a crossing and if piled with a pitch of 1 inch to the foot and carried forward in front in the process of piling at the rate of about 1½ inches to the foot, will stand the work of the elements without deterioration for a considerable length of time and will come from the pile free from crossing stains, serious checking and other defects caused by improper piling.

It has been found advisable in many places to cover all hardwood and pine lumber of the grade of No. 2 common and better with No. 3 and No. 4 common hardwood.

A little care used by the piling crew will result in this low grade lumber coming off the piles with very little depreciation, while if better grades are used for pile covers there is sure to be depreciation in value.

Plenty of space should be used between the piles and also behind the piles to allow a free air clearance throughout the yard.

The grading of lumber is a very important feature and as much of it should be done at the saw mill as is possible. If the manufacturing organization does its part properly and the same is properly graded before it leaves the saw mill, the work of the inspectors in the dry yard will be reduced to a minimum and the amount of outs to re-handle will be small.

This careful inspection and scoring at the saw mill will likewise insure a much better grading of dry lumber and the amount the inspectors can handle will increase materially.

The sales department can likewise handle its sales to better advantage on account of knowing approximately what it has to offer on the market and it can thereby take full advantage of the best markets in making its sales.

Should be Properly Loaded

The loading of lumber, while it may seem unimportant, and frequently is very carelessly done, is one of the important features with a sales department. Lumber should be properly loaded, with the ends and sides evenly piled, with short stock mixed with the longer lengths throughout the car rather than piled in the door or altogether in one portion of the car.

Planing mill work should always be done in a high class manner. Poor planing mill work is the cause of as much trouble in the sales department as poor grades. The planing mill foreman should see that his knives are kept in proper shape to do smooth, high class work and particularly to see that matching and similar work is done in such a way that it will fit properly for the purpose intended and present a high-class appearance. A few pieces of lumber improperly milled oftentimes cause serious complaint, while a little care and watchfulness at the planing mill will eliminate this trouble and save the manufacturer considerable loss, and give satisfaction to his customers.

Valuable Suggestions

In closing, I desire to make the following suggestion: that the sales department and the manufacturing end of the business get together in a spirit of co-operation, make a study of the efficiency in manufacturing and endeavour to have their product leave the saw mill manufactured in as near a perfect manner as is possible; and the manufacturing department should be taken into the confidence of the sales department so they will know more of values between the various grades of lumber.

I urge that the manufacturers endeavor to sort their lumber to better advantage at the saw mill; that much more care be used in the proper piling and roofing and that the shipping department and planing mill department use more care in the loading and millworking.

I particularly urge that the sales manager use more care in endeavoring to dispose of the stock in the manner best suited to fit the stock he has to offer and in accordance with the manner in which it is piled.

On May 23rd a brief strike occurred at Ottawa when 40 or 50 river drivers on the log booms for various companies demanded more pay. The men were getting $2.25 per day and wanted $2.50. The companies refused this and the men quit work. The lumber companies then offered a compromise of a 10c. increase, but the men would not accept this and held out for the full $2.50. Finally this was granted and the men returned to work.

Good Food Helps Loggers' Output

Efficient Cooking Produces Better Meals at Lower Cost—Good Advice from a Practical Man.

"Cook-House Efficiency" is a subject which comes up for discussion frequently in connection with successful logging operation. For this reason, and because of the comparative scarcity of anything in the way of a written discussion of the subject, we are glad to be able to reproduce from "The Timberman" an article contributed by E. Hoyer, cook for the C. H. Wheeler camp at Timber, Oregon. Mr. Hoyer's article is as follows:—

This subject has been under much discussion in the last few years, especially on account of the greatly increased cost of living. I have had lots of experience as a logging camp cook, and I have devoted most of my time to the study of efficiency and economy, and I will try, to the best of my ability, to explain my views.

I know many camps a few years ago used to think they got off reasonably well with two pounds of fresh meat a day per man, besides the salted and cured meats. Today those same firms have cut down the cooks' allowances to one and one-half pounds, as the high prices are constantly driving them to economize, if they are to break even.

From personal experience I know that the best results can be had with one pound of meat a day. This may sound small to some, but it can be done easily. However, it requires study and real figuring, and the highest point of efficiency everywhere. There are a hundred little things, each of which helps. Many little streams make a big river, but each must have its supply of water or the river will go dry.

The companies are forcing themselves to economize more every day by force of necessity. Still there has been nothing done to educate them to the occasion or give them more practical knowledge than they ever had, and the matter of a course at college for this class of work is almost out of the question, and not to be considered anyway at this time, and cooking schools are of no practical use for this kind of work.

The main item of cost in the boarding house is the meat. If the cost of fresh beef by the side is 12½ cents (the average price today) by the time it is cooked, the bones and other waste eliminated, it is actually worth 25 cents a pound, so anyone will realize that it is an item worthy of the greatest consideration, and to see to it that the men have all they want and have it nicely and appetizingly put up, and still use as little as possible, is a very big problem to solve.

It must be remembered that these men work hard in the fresh air, and naturally develop a good appetite, and to get a man's goodwill (a most priceless asset), feed him well when he is hungry, and also the better you feed him the better he feels, and the more work he will produce, and that is what you got him for in the first place.

One thing more which is probably not generally known: If you want your men satisfied to east less, load the table in front of them to capacity with nice things, and if you try and cut down on the grub it will act just the reverse.

From personal experience I know places I have worked where I could not feed the men as well as I would like, where the management would try to cut out all expensive things possible, and used the cheapest grade of everything. In the first place, the men would be dissatisfied, in the second place the cost of the meals is always considerably higher in these places than where I got plenty of everything and was able to satisfy the men.

It must be remembered there always is plenty of fresh meat, and if there is nothing else to eat they surely will eat more meat. Such things as soup, bread and potatoes should be given more attention than they get from a good many cooks. They are the less costly part of the meal, and the better they are the cheaper the meal.

I have heard many cooks say they don't care about soup; there are only a few who eat it anyway. That's just what's the matter. If you don't care, the soup is no good and nobody wants it. Just try for a short time and do the best you can on it, and it will be appreciated by fifty per cent. of the boarders, and the only cost of soup is vegetables, as you always have the bones anyway.

If any of my colleagues should read this article, I will ask a question they can answer fair to their own judgment: Do you remember, for instance, some Thanksgiving you were worried because you were afraid you were not going to have enough turkey? You were sure they were going to eat an awful lot, and you decided to do the best you could. You filled the platters as well as you could—and do you remember how you had quite a lot left, and do you know why? If you do or do not I will tell you.

If you overload a plate in front of a gentleman of leisure and a poor appetite, it will make him sick and he can't eat at all, but if you fill the plate in front of a lumberjack who has a good fresh-air appetite, it doesn't make him sick, but it gives him a feeling of confidence and satisfaction. He knows your intentions are real, and it seems then like a little will satisfy him.

On the other hand, if you want him to eat all the hash, in the first place use nothing but fresh and clean stuff for it, and have it well seasoned, and see that you yourself, your help and the place where you work looks neat and clean at all times; it always gives the men confidence. Then be sure to put just a little hash on each platter and have it refilled as often as it is empty, and you will get rid of more hash than you ever thought possible.

Of course, when I say to fill the table in front of the men to capacity, it must be understood that the cook must be able to put it up in such a manner that what is left over can be used again and be as good as it was in the first place. You cannot afford to lose anything if you are going to get the cost down to my proportions, and any cook who cannot do this needs some more learning or he will be a hopeless failure in any boarding house.

Now, some of these things may sound foolish to some, and small and even insulting, but they are facts and part of the real art of efficient boarding house management.

Efficiency is necessary. It must come, therefore it is the only real solution of the problem.

Only a few years ago most camps were charging $4.50 a week for board, but the cost of everything increased to such an extent that they kept raising, and many of them are now charging $6, and still they can't break even.

The manager of a well-known logging company in Oregon told me last spring in a private interview that they had two camps, each of 100 men or more. I know he hires the best cooks he can find, and pays top wages. He furnishes anything reasonable that is asked. They raised the board to $6 and are still running behind each month, and these camps are close to the railroad. The cost of getting stuff in there is small compared with many camps that have a long haul by team, over bad roads.

Several managers have told me, "We are paying some of our men as little as $2 a day, and these men just can't afford to pay $6 for board, but neither can we afford to run behind."

The trouble with most of the companies is, if they do hire a boarding house manager or camp manager—or whatever you prefer to call him; I would call him efficiency man—it is mostly either a man with money, influence, or a young fellow with a college education who just has to have a start somewhere. It is hardly ever an experienced camp cook, with up-to-date ideas, and will and gumption to back them up, and only such a man would be able to do things. He would be able to hire cooks and helpers who will take his ideas and work hand in hand with him, a thing absolutely necessary for success. It would also inspire the better class of men with new ambition—that of becoming efficiency men themselves.

I suppose this line of talk will meet with disapproval from some of my readers. If so, I am sorry, but I must admit that I don't expect to please everybody, but it is my aim to state facts as I see them. The world is getting bigger and greater every day, and there is, by reason of progress, a constant demand for bigger men to do bigger things than was ever done before.

Surely none expect a cook or any other kind of man to be satisfied with earning an average salary of $100 per month. Any man who is satisfied with that has no ambition, and a man without ambition is no good. Lots of fellows are not satisfied, but they know they can't go any farther, simply stay in the business long enough to get money to go into something else, and those are the fellows we cannot afford to lose.

Of course, my ideas of efficiency are not to bring a man up to your camps to show you where you ought to put up an electric plant and cold storage, and a $200 machine to wash the dishes, and dido to peel the spuds, and still keep the same men on the same jobs to run the respective electric machines. These things are awfully nice to have, but unless you know just when they are going to pay for themselves, and how much money they are going to save you afterward, you do not want them. Remember, experiment is closely related to failure, and is your best friend.

In most logging camps such things are out of the question altogether. In mills where they develop their own electric power, it is and can be used effectively for some things. Of course, conditions are so very different in each place that each has to work out his own problems to get the highest point of efficiency.

I took a fry cook job in a large boarding house in Idaho once. I went there more out of curiosity than anything else. I had heard of

the place for several years, as well as its manager, and thought it was an ideal place of efficiency, as I am always wanting to see the work of someone I think knows more than I do, and I felt very fortunate to have the opportunity of working there.

But how utterly surprised I was when I saw the system—or rather lack of system—they had of doing things. I will say here that in all the time I was there the chef and I did not have one cross word between us, and when I left we parted on the best of terms. But to express my feelings in words, I will admit that if I had charge of a boarding house I would not give such a man a job of any kind. He had one good quality I know of: he was always on the job. Of course, the manager knew, but I guess what he liked particularly was that he did not know any more than the manager.

The place itself was modern in every respect. They were boarding, and had rooms for about 320 people, but the management was about 15 years behind the times. The manager never was a cook himself. He got the position and held it on the strength of being absolutely trustworthy and having been with the company for many years.

I made up my mind when I went to work there to keep my eyes and ears open and my mouth shut, but anyone knows occasions will arise when it is hard to keep your mouth shut, when you know you can put somebody on the right track.

Once they had a lot of complaints about the pies. It was a mining boarding house, and to show their contempt, the men would take their pies out of their lunch baskets and throw them in a pile at the entrance to the mine, a very annoying thing for the manager. He spoke to me abount the matter, and I told him to tell the baker to save the juice of the fruit, boil it with a little starch, and he had no more trouble after that; the bottom paste would be deliciously done. Before this the baker used to strain away and waste all the juice—about fifty per cent. of the contents of the can; and pies made without boiling the fruit, are bound to be soggy and bad.

The manager told me afterward it made a saving of 15 gallon cans of fruit a day—over $5, or $150 a month—quite a saving. And this one item alone would make quite a salary for an experienced man to stop many such leakages, and the item alone proves my theory that economy and efficiency will nearly always improve the quality. If it doesn't, I wouldn't suggest the saving.

Another time we had quite a discussion about coffee. The manager was getting coffee at a local store at 28 cents a pound, so I left word for a coffee salesman to call, and he sold him a better grade of coffee at 23 cents, a saving of 5 cents a pound. They were using lots of coffee, putting up 300 lunch buckets a day, using 18 pounds of coffee, a day, a saving of 90 cents, or $27 a month.

The manager was constantly complaining about too much meat coming back on the plates, and the chef and the meat cutter had lots of trouble over it. Neither knew the cause nor the remedy, but each one rubbing it into the other to get him fired to his own and the manager's satisfaction. At this stage of the game the manager was still treating me nice, but quite below zero for making too many suggestions, and knowing this I declined to interfere. I suppose he considered me a menace to his own position; quite unjustified, as I was only trying to assist him in any way I felt I was able.

The dishwashers would save the meat scrap in a big pan and send them to the company's farm for chicken feed. Finally the chef in despair would empty the whole pan of scraps in the stock boiler (a pot in which bones are boiled, from which soup is made), not because he wanted it, as there always was plenty of fresh bones, but just to hide it from the eyes of the manager.

This is an unjustified, filthy thing to do, and anyone practicing it should be prosecuted and forever banished from the kitchen. I very much disapproved of it and told him so, and he finally stopped doing it for fear I would make a complaint about it.

When a butcher in a city shop cuts his T-bone steaks, it's a matter of business with him to leave as big tails on them as possible, as the tails are part of the flank that sells for 11 cents a pound, when he gets 25 cents for it if it is on the steaks. For the same reason he does not trim any more fat off of any of his cuts than he can get away with. He prefers to sell the fat at beef prices.

And when a man goes into a restaurant and orders a good steak, if the tail is not there he would kick. Not that he wants it to eat, but he is paying for it and he feels he wants to see it and leave it on his plate. For the same reason he wouldn't accept his broiled fish unless the head was there.

But when it comes to a boarding house, it is a different matter. A man pays so much for his meals, and he is supposed to have all he wants to eat. Why not trim the steaks and just serve a man the parts he wants to eat? The boarder will be better satisfied, and you would save more in this way in a week than you will making hash a whole month.

I hate to rob a man of his personal liberties, but I am a radical economist, and I believe in years to come, unless science changes our mode of eating altogether, the ideas of the people will advance to such an extent that it will be a punishable crime for anyone to go to a restaurant and order a steak two or three times as large as he knows he wants to eat, when maybe two blocks away there are people who would be glad to get a soup bone, if they could only afford it.

I could continue with a hundred examples of this sort, but my article is already getting far bigger than I intended, and I don't want my readers to think I am trying to write a cook book.

If I ever get the time to write another article on this subject, I shall explain how to eliminate waste almost entirely by up-to-date methods. Every part of the meat, even to the skin of a pig, can be used effectively. Many things are wasted in the camps by neglect and incompetence, which could be made into exactly the same things bought at groceries at fancy prices, with very little additional effort.

There are lots of good cooks working in the Pacific Northwest; if they were co-operated with a little and given more opportunity, you would be surprised at the results. Any company employing 200 or more men can afford, and should keep, an efficient manager of the boarding house, with no other duties, and he will earn his salary many times over. Some firms have been trying this out and have found it very effective.

The average working man is willing to pay the price for a good meal and the getting of it, but he hates to pay for something he does not get. The thing has been argued up and down, but I know in many cases where he pays the biggest price he is losing out by reason of inefficient management.

Exports and Imports of Wood Products

Canada's imports of wood and manufactures of wood for twelve months ending February, were valued as follows: 1916, $8,477,118; 1915, $15,656,974. Of the 1916 total the imports from the United States were valued at $8,040,895, and those from the United Kingdom at $111,395. Exports of forest products during the twelve months ending March, were valued as follows: 1916. $51,271,400; 1915, $42,650,683; 1914, $42,792,137.

Details of exports of wood and manufactures of wood during the 12 months ending February, were as follows:—

Articles Exported	1915	Total	To United Kingdom	To United States
		1916	1916	1916
Logs	$ 994,086	$ 1,285,835	$ 49,359	$ 1,236,136
Lumber—Deals, pine ..	1,151,310	1,248,605	1,168,696	49,539
Spruce and other	6,254,057	9,799,752	8,951,971	263,907
Lath, palings & pickets	1,840,929	2,507,461	11,268	2,481,396
Planks and boards	18,678,854	23,520,759	2,129,073	19,727,097
Shingles	2,937,253	3,662,143	.....	3,643,570
Timber, square	546,404	477,558	465,820	11,738
Wood blocks for pulp ..	6,815,396	6,030,803	.....	6,030,803
Wood-pulp	9,170,187	10,050,051	314,061	9,013,062

Alex. Macdonald, Pembroke, Ont., one of the best known men in the lumber business in Pembroke, died suddenly of heart failure on May 10th.

Better Conditions in B.C. Industry

Editor Canada Lumberman:— Vancouver, B.C.

The lumber situation this spring in British Columbia shows an immense improvement over this time last year, chiefly through the heavy demand from the prairie provinces. There is also a good demand for our products in Ontario and Quebec. The shingle branch of the business is especially active at good prices, and, with the increasing cost of metals and the raw materials for patent roofing, shingles will likely be in still greater demand.

Another feature of the situation is the good volume of lumber being shipped from this province to the United States, which is a much better situation than that prevailing in past years, where western Canada imported heavily from across the line.—Timms, Phillips & Company, Limited.

Equal to the Best

Editor Canada Lumberman:— Chatham, Ont., May 23.

The Annual Number of the Canada Lumberman, which I have just received, is a credit to you, both in its mechanical features and in the very interesting articles that you have published.

I think that the letter press and cuts are fully equal to those of any trade papers that we receive, either from the United Kingdom, or from the United States, and the paper should be a very valuable one to those interested in the lumber business, either as manufacturers or consumers.

Yours very truly,

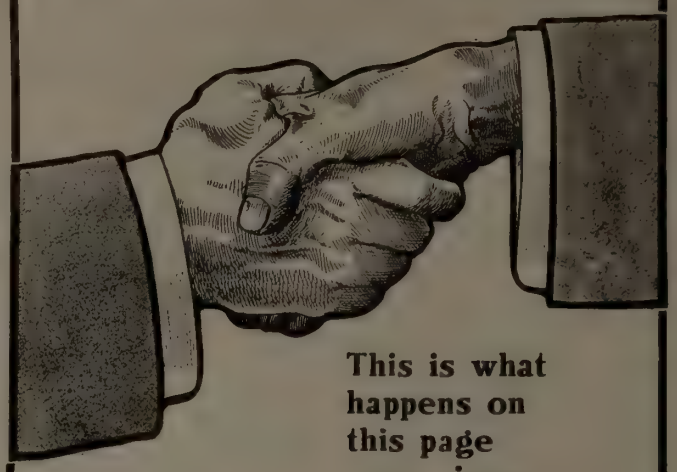
J. Innes,

"The Sutherland, Innes Co., Ltd."

The Master of Ceremonies

Mr. Buyer

Are you in the market for a special bill of lumber? Would you like to pick up a real good second-hand planer or perhaps some logging equipment? Have you a vacancy in your plant for a filer or other employee? If you answer "Yes" to any of these, advertise on this page. It is the "Master of Ceremonies" and will introduce you to the man you want.



This is what happens on this page every issue

Mr. Seller

You are looking for the man who is looking for you—you have for sale what he wants. All that is needed is an "Ad" on this page to bring you together. Appeal to this "Master of Ceremonies" and send us a small ad. today. What can we sell for you—or perhaps we can find you a job.

Send along your ad.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch. each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Maple and Hickory

Wanted, Maple and Hickory Axles, dry. Jackson Wagon Co., St. George, Ont. 8-11

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Wanted to Buy

750,000 ft. 2 in., 2½ in., 3 in. and 4 in. log run Birch. Terms 75 per cent. cash on shipment, balance on arrival. Apply P. O. Box 643, Montreal, Que. 9-12

For Sale–Lumber

For Sale

One hundred thousand feet of 4/4 Basswood, Ash and Elm crating lumber. S. L. Purdy, Coe Hill, Ont. 11-12

For Sale

30 cars Winter Cut Basswood Logs, 6 to 16 ft. long, largely 12 ft., 10 in. diameter and up. Box 200, Canada Lumberman, 119 Board of Trade, Montreal, Que. 11-11

For Sale

10 cars Short Basswood Logs, 4 ft. long, 8 in. to 20 in. diameter, winter cut; practically no black heart. Rail or water shipment. Box 100, Canada Lumberman, 119 Board of Trade, Montreal, Que. 11-11

For Sale

500,000 Western Ontario White Pine Logs. Can be sawn to your order. Those interested please write Hall Brothers, 174 Mutual St., Toronto, Ont. 9-12

Slabs and Edgings

Wanted a buyer for the slabs and edgings from our saw mill cutting 25 M. feet B. M. per day, Maple and Birch, also Ashes from our boilers. Additional supplies of hardwood can be purchased in the vicinity. Reply to Box 410, Canada Lumberman, Toronto, Ont. 11-12

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
e Montreal, Que.

For Sale–Machinery

Machine For Sale

Two second-hand McGregor-Gourlay Q. Y. Planers and Matchers, one 9-in., one 15-in. wide; in good condition, ran every day till October, when fast feed Matcher was installed. Located in Saskatchewan. Box 384, Canada Lumberman, Toronto, Ont. 8-11

Machinery for Sale

Complete Sawmill Outfit; One Hundred and Twenty-five H.P.; Single Circular; Steam Feed; Nigger Log Turn; Live Rolls; Four Saw Edger; Dutch Oven; Perkins Shingle Rig, including Cut-off and Jointer. Everything in first-class condition. Building also if desired.

McCAMUS & McKELVIE,
11-11 New Liskeard, Ont.

Machinery for Sale

Second-hand saw mill engine, Corliss type, in perfect condition. A snap for quick sale. Box 400, Canada Lumberman, Toronto, Ont. 10-11

Timber Limits and Mills

Timber limits for sale in the District of Algoma, also a Band and Gang Saw Mill. For particulars apply to Geo. Niebergall & Son, Parry Sound, Ont. 11-13

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

FOR SALE

Woodworking Machinery

The following second-hand machines have been placed with us for sale:
1 Woods No. 32 Matcher; 1 Goldie 10-in. Moulder; 1 Goldie 24-in. Matcher; 1 Cowan 42-in. Sander; 1 Jackson Cochrane 36-in. Sander; 1 Egan 36-in. Single Surfacer; 1 McGregor Gourlay 2-drum 30-in. Boss Sander; 1 Egan 30-in. 2-drum Sander; 1 CMC 8-in. 4-side Sticker.

P. B. Yates Machine Company, Limited,
10-t.f. Hamilton, Ont.

Machinery For Sale

Refuse Burner, 24 ft. diam. 100 ft. to spark arrester; all grate bars. 4 base doors, lined with fire brick; in good condition.

Smoke stack 7 ft. x 130 ft. to spark arrester, a1 condition.

Three Boilers, 6 ft. x 16 ft.; 70 4-in. tubes, 2 fire doors, 2 draft doors, fronts in a1 condition.

One No. 8 Buffalo Forge Co. Blower.

One Dean Duplex Steam Pump; 2—14 x 14 steam end; 2—12 x 28 water end, valves and piping.

All angle iron frames and galvanized roofing for large fire room.

All or any part at bargain prices.

Box 390, Canada Lumberman, Toronto, Ont. 10-12

Wanted–Machinery

Lorries Wanted

Fifteen second-hand lumber lorries, must be in good condition. Campbell MacLaurin Lumber Company, Limited, Drummondville, Que. 11-14

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

INSPECTOR WANTED—A man capable of inspecting both hardwood and softwood, and shipping same. State references, experience and salary expected. Box 394, Canada Lumberman, Toronto, Ont. 9-12

BOOK-KEEPER WANTED to act as Secretary-Treasurer of a Lumber Company with $100,000 invested; in first-class condition and operating. Applicant must be willing to invest $5,000 or $10,000 in the capital stock of the Company. A young man preferred, who is not eligible for active service, and one who has some knowledge of the lumber business. Must have good record. Apply to Box 406, Canada Lumberman, Toronto, Ont. 11-12

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

BAND OR CIRCULAR FILER or Mill Foreman wants position. Twenty-seven (27) years' sawmill experience. Gilt edge references. Box 405, Canada Lumberman, Toronto, Ont. 11-11

EXPERIENCED LUMBERMAN wants position. At present employed as sales manager. Can furnish A1 references. Reason for change, company going out of business. Box 401, Canada Lumberman, Toronto, Ont. 10-11

DOUBLE BAND SAW FILER wants position, first-class references.

BAND MILL FOREMAN wants position, first-class millwright, and can handle men to good advantage. Box 359, Canada Lumberman, Toronto, Ont. 6-11

Business Chances

For Sale

To close an Estate, the valuable Lumber Mill known as the Picnic Island Mill at Little Current, Ont., Georgian Bay, is offered for sale. Capacity about twenty million feet of lumber per season. Extensive docks with sixteen feet of water and booming capacity for about fifteen million feet of logs.

Picnic Island, which is freehold property, consists of thirty-seven acres, containing the mill and twenty dwelling houses for employees. Superior drying grounds. Can ship by rail or water. For further particulars write,

James Battle, Thorold, Ont.
Administrator Estate of Late John Conlon,
or
Thomas Conlon, 44 Church St.,
U-13 St. Catharines, Ont.

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

Timber Rafts for Overseas

A novel method of getting needed timber and lumber overseas without using up shipping so urgently needed for other purposes, has been suggested by Captain A. G. Midford, Ottawa. His plan is to tow it across in the form of huge timber rafts and he states that from one to twenty million feet of timber can be taken over at once. His suggestion has received commendation both in Canada and in Great Britain and it is most probable that the suggestion may be productive of practical results.

The Timber Trades Journal refers to the suggestion as follows: "The difficulty of all nations, belligerent and neutral, is the scarcity of tonnage. Although this is in a great part due to the large number of mercantile ships engaged in carrying supplies for war purposes, so great must be the wastage that, notwithstanding the releasing of a large amount of tonnage at the close of hostilities and the continued building of new vessels, ships will be in greater demand after the war than now.

"The best way to economize in the matter of ships is to do without them altogether and though this is impossible, at least at present, for the transport of certain classes of goods from overseas, we are pleased to hear that as regards the transport of timber it is not only possible but likely to be brought about by sheer necessity. We have been favored with a copy of a letter received by the Timber Trade Federation from A. G. Midford, of Ottawa, a civil engineer, who has had a life of experience in executing marine work of magnitude and in solving maritime problems. He also holds a master's certificate and is well known throughout Canada, the United States and South America.

"Captain Midford's object is to construct a ship-shape raft of timber and lumber in such a manner as to provide against the incessant and usual strain to which any floating body or ship is exposed and must encounter in meeting the vicissitudes of a stormy sea. The ship-shaped raft is to be built entirely of mercantile and marketable lumber and timber, is in no sense watertight and therefore depends entirely upon buoyancy and not on displacement in the ordinary acceptance of the technical meaning. The ever-changing strain which must prevail is provided for, without which any floating body would go to pieces in a storm. The midship section is decidedly ellipsoid, the deck being turtle back for economic reasons readily apparent to the competent ship designer or marine architect who will give due consideration to the problem.

"Towing has been fully considered, including the cause and prevention of the snapping of the tow-line and the ship-raft will be steered from the after-deck of the towing vessel. Sea rafts of the type suggested may be made up entirely of marketable timber and lumber and no lumber need be cut or bored for constructive purposes. The entire outside layer could be composed of slabs which have no marketable value in Canada but would be useful in England.

"This is an outline of Captain Midford's project. If he can make it successful he will be doing a service to humanity, for the ships can thus be relieved of wood cargoes for more pressing services."

Promissory Notes in Wood

The lumber manufacturers of the United States have adopted a new motto for their plants. "Make Every Board a Promissory Note." This motto is the outgrowth of a new movement which is spreading with amazing rapidity to every lumber manufacturing district in the United States, in a national campaign to standardize lumber, to adopt specific grades for lumber, which will guarantee the quality of every piece of lumber put out by a saw mill, says a bulletin issued by the National Lumber Manufacturers' Association.

The devising of trade marks is going hand in hand with the new movement and is part of it. Nearly every lumber manufacturing organization in America today either has decided upon a trademark for lumber, or is considering such a movement.

The trademarking of lumber has developed through a demand by builders and architects in all parts of the country for some standard which would assure their clients that the character of a building under erection would be in accordance with specifications, and that the timbers would be equal to the heaviest demands upon them. When every board is a promissory note, an architect can specify the quality of lumber he wants in a building, and can know instantly from the trademark whether the lumber provided is that which he asked in his specifications.

If one keeps an eye on the material used now in the implement and other kindred lines, it will be noted that maple is used in place of ash for many purposes, and pecan takes the place of hickory. Red oak, after steaming, looks a good deal like white oak, and will probably last as long in many places, being usually worn out before it has a chance to rot out or break. "Things are seldom what they seem; skim milk masquerades as cream."

Union Lumber Co.
Limited

White Pine Cuts

MILNET (Sellwood Jct.)—1915 cut

100,000—2 x 4 and up 10/16—No. 3 cuts and better
50,000—6/4 x 4 " " " "
50,000—1 x 7 " " " "

SPANISH—Bone Dry

18,000—2 x 4 and up 10/16—No. 2 cuts and better
(80 per cent. No. 1 cuts and better)
17,000—5/4 x 4 and up 10/16—No. 2 cuts and better
(66⅔ per cent. No. 1 cuts and better)

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TORONTO, CANADA

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The Preservation of Structural Timber, by Howard F. Weiss. Published in 1915 by McGraw-Hill Book Company. 312 pages, illustrated. Price $3.00.
Scribner's Lumber & Log Book, 1915 Edition, Price 35c.
Baughman's Buyer & Seller, 75c.
Utilization of Wood-Waste (Second Revised Edition), by Ernst Hubbard. Published in 1915 by Scott, Greenwood & Sons. 192 pages, illustrated. Price $1.50.

Canada Lumberman
347 Adelaide Street West
TORONTO

Review of Current Trade Conditions

Ontario

The retail lumber trade in Ontario is not showing much in the way of activity. Wholesalers report that enquiries from retail yards are not so plentiful as they were a few weeks ago. In Eastern Ontario, the trade has settled down to a very small volume and towns which were fairly active a few weeks ago are now very quiet. Brockville, for instance, was very busy for a while, but its local trade has now dwindled. In fact most of the centres in Eastern Ontario and many of those in the west report that there is very little stock moving. This is chiefly on account of the situation in which the farmers find themselves on account of the backward spring. Not having been able to get on his land anything like as early as usual, the farmer has been playing safe. The general situation with the farmer is somewhat doubtful, comparatively speaking, this year, and he is not now to be counted upon as a strong factor in creating a good demand. In a few of the centres of south-western Ontario trade is active, chiefly on account of the manufacturing demand, but even there it is spotty; that is to say, it will be good for a few days and then become quiet again. Hemlock continues quiet and the probability is that it will remain fairly steady because the production this year shows a considerable falling off.

The present indications of good weather are helping the general trade to some extent and are likely to bring out a fair amount of repair work throughout the country districts.

The hardwood trade in Ontario continues on an active and firm basis. There is a steady demand for the good end of hardwood stocks, but dry stocks are very scarce. A month ago, number three common stocks looked as though they might become a drag, but they have been moving well and now there is very little number three common left. Conditions generally are characterized by a scarcity of dry stocks, and purchasers are showing a little hesitation about purchasing new stocks. As a whole, the hardwood trade is good.

Eastern Canada

There has been a slight improvement in the local market at St. John, N.B., but the export trade both with the United Kingdom and the United States, is very quiet. Sales of deals, etc., for export are rare. Nearly all cuts of deals for this season, however, have been sold, what remains being a small quantity of portable mill stock which is rather difficult to dispose of. The tonnage scarcity at St. John continues with practically no sign of improvement. The American market is less firm than it was a fortnight ago. Schedule prices are at about $27 base. There is less demand also for spruce boards in the American market. A fairly good demand is reported for lath, but coastwise freights are very heavy and are eating up a big portion of the price. Shingles show a slight improvement and are about 10c. per M. better than they were a year ago, but freight rates in this case also are a serious matter. Spring drives on the St. John River have not made as good headway as was hoped for at first. The weather has been dry and water has fallen rapidly, so that a number of important operations and drives have been held up.

At Montreal there is also some improvement in the local trade, especially in the demand for hardwoods. Building activity is very light. There is a fair demand from the United States markets.

Reports from Boston indicate that prices of spruce are showing a slightly weaker tendency, as a result of increased production. The demand, however, continues on a fairly extensive scale. Some wholesalers are quoting $28 base on frames and some manufacturers have reduced their base price to $27.50 when selling through commission houses. Further concessions would be likely on anything in the way of large business. Random is moving more freely than formerly during the present year, some good orders having been placed lately, and more being in sight. The present quotations for random range about as follows: 2 x 3, 2 x 5, and 2 x 6. $21.50 to $22; 2 x 4, $22 to $22.50; 2 x 8, $25 to $26; 2 x 10, $26.50 to $27; 2 x 12, $27.50 to $28. The demand for spruce boards at Boston is growing more satisfactory all the time. The hemlock situation also is favorable, with a good demand and signs of further improvement as building operations increase. Prices are steady.

Improvement is reported in the demand for shingles at Boston and throughout the east. No good extra white cedars are offered at less than $3.50, and some brands are bringing $3.60. Clears are selling at $3.20 to $3.30. Red cedar shingles are also doing well, but there is a shortage of stocks. Some nice brands of extras have been bringing $4. There is a good demand for lath, but production has increased and prices are a little easier. For 1⅝ in. the quotation is from $4.15 to $4.25, and 1½ in. are bringing $3.90 to $4.00.

United States

Building operations in the United States continue to increase in practically all important centres. During April there was an increase of 16 per cent. in building permits in 71 cities. The reports received, moreover, indicate a strong tendency to return to wood construction. Throughout New England the building activity of the past few months continues unabated and includes many factories of mill construction.

In spite of improvement in the car supply situation, the freight embargo in the east has become more acute and is a great handicap to shippers who supply buyers in New England and on the Atlantic Coast. Embargoes have been placed on lumber shipments by several railroads, including the Pennsylvania, the New York, New Haven and Hartford, the New York Central, the Baltimore and Ohio, and the Erie railroads.

Better reports are being received from the southern pine districts and it is thought that the flurry that was looking rather serious a short time ago has passed by and that improvement is likely to develop. Some of the larger manufacturers have begun to curtail production. The improvement in the car supply has enabled mills to forward shipments in greater volume and thus to reduce the amount of stock on hand.

Encouraging reports continue to come from the Pacific Coast, where the situation is stronger than it has been at any time during the past two years. The advances recently made in fir are maintained and the market has an upward tendency. There is an active demand for all Pacific Coast woods. The only unsatisfactory feature of the trade is the scarcity of ocean transportation facilities. If there were vessels available to-day, Pacific coast mills which don an export trade could dispose of practically their full capacity at prices better than they have received for some years. The re-opening of the Panama Canal has not as yet been of any particular benefit to west coast mills, because of the scarcity of vessels. There is a good demand on the Atlantic coast for Pacific coast products, but extensive shipments cannot be made by water at present.

The hardwood trade is encouraging. Hardwoods are holding a commanding position in the trade. There has been a marked improvement in the demand for oak. Northern hardwoods continue to show exceptional activity, although some of the mills have been having more than their share of labor troubles of late. Hemlock manufacturers report an active demand, and stocks in shipping condition have been badly broken, so that shippers are finding difficulty in filling the requirements of the trade.

Northern pine trade continues about normal, with prices steady. The yard trade is not extensive, but there is a fair demand from large corporations in the important cities. Weather conditions have been rather against improvement in the country trade. At Buffalo, the demand for northern pine shows some improvement, though at times it is still quite spotty. This is a result of backward weather. Farmers generally are from two to three weeks behind in their spring work. There is no great demand at Buffalo for white pine, but the trade is better than it was a year ago.

Great Britain

In spite of the great increase in the value of wood resulting from advanced freight rates, the consumption on the spot market at London is still extensive. There is not much disposition, however, on the part of importers, to take an interest in forward business, as it is a very difficult matter to sell at a fair profit on anything except hand-to-mouth transactions. The requirements of the Government are somewhat less numerous than formerly and, although they may be expected to continue during the war to some extent, they will not keep the trade as busy as they have formerly. This year's import is likely to be moderate, because of the scarcity of vessels, cost of war risk, rates of exchange, and restrictions that have recently been imposed. Importers, therefore, are inclined to allow producers to hold their stocks until they can be transported to England at a cost which will not be so great a burden to the consumer. The stock now on hand at London is reported to be equal to about two months' consumption. The Board of Trade have given out an intimation that they will restrict the import of planed, tongued and grooved boards, and matchings. Stocks of these goods in London, however, are plentiful to keep the trade going, for a fair time.

At Foy, Morgan & Company's recent auction sale, 3 x 11, 8 to 19 ft., first second, and third red pine from St. John was sold at £28 15s. 3 x 9, 12 to 16 ft., third red pine from Montreal, brought £29. Unsorted Quebec spruce, 3 x 11 in., 11 and 12 ft., brought £29 5s. Fifth quality 3 x 9 Quebec spruce, 9 to 14 ft., sold at £26. A quan-

View of Mills in Sarnia.

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Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

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Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

tity of 3 x 7 unsorted red pine from Montreal, 10 to 18 ft., brought £27 5s.

Imports of spruce into Liverpool during April showed a considerable decrease, and the consumption also fell off, according to the figures that have been compiled. F. o. b. and c. i. f. selling has been very quiet for Lower Ports spruce, but this quietness is expected to be only of a temporary nature, as future offerings can hardly be anything but light, and ready buyers are expected to be waiting for them. There have not been many fixtures of late, but rates apparently are still high, 375s. having been paid.

At Manchester the consumption of spruce is quite equal to that of a year ago and seems likely to continue. Prices are still firm and high. The hardwood trade at Liverpool continues quiet. There are a fair number of enquiries for special lines, but difficulties in making delivery are a handicap. Stocks of hardwoods are not large. The prohibition of certain hardwood imports is preventing stocks from increasing. There is practically no forward business in hardwoods at Liverpool. There is a fair enquiry at Manchester for hardwoods, especially for 2½ in. and 1½ in. planking in anything but oak. Maple flooring is in fair demand and stocks are limited. Birch is sought for in Quebec quality, but there is much difficulty in securing stocks at satisfactory prices.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

More Vessels Available at Montreal

Montreal, May 27.—(Special to The Canada Lumberman).—A small improvement is to be noted in local trade. With the building business still quiet, it is not to be expected that the sales should show any marked increase. The most active section is, relatively, hardwoods, where the demand is still brisk, with a scarcity of dimension descriptions.

There is an absence of notable building projects, if we except a scheme for constructing a union station and a tunnel under the St. Lawrence at a cost of 35 million dollars. This, however, is in quite a preliminary stage. It has yet to go before the Railway Commission, and the plans are only of a tentative character. The promoters are seeking public support, not of a financial character, and have many difficulties to overcome before the plan can be carried out.

Buying for the United States continues to be satisfactory. The embargo on the Williams Line continues at the time of writing, but there is a probability of its being raised shortly. The situation at Albany has improved greatly, the congestion of cars being gradually relieved.

Quite unexpectedly the Government have released several steamers, making a fair amount of tonnage available for the export lumber trade. In consequence, there has been a considerable increase in the lumber exported from Montreal and from Three Rivers. This is principally spruce, the demand for pine being rather slow. Rates are again higher, 400s. having been paid. A cheering item of news is contained in a cable from the other side announcing that the embargo on birch timber has been raised, and it is expected that the lifting of the prohibition on birch lumber will follow. The rates for shipping the timber are very stiff. As much as 600s. per standard has been paid, against a normal rate of 75s. The steamship companies have issued a good list of sailings, but this does not necessarily mean that much space will be at exporters' service, as the Government may commandeer boats at very short notice, and thus upset exporters' calculations.

Mail advices from England state that there is great confusion over the Government orders prohibiting, except under license, the importation of hardwoods and certain other commodities. The special committee dealing with this matter is inundated with letters and enquiries, and considerable uncertainty prevails as to the conditions under which imports are allowed. In one instance, lumber products were prohibited from landing, and in a few days the embargo was removed, causing great delay in the landing of these goods.

The sulphite market is in a buoyant condition, with prices still higher. Stocks in the United States are very low, the prospect being that little European pulp will be imported for some time. A large amount of Canadian pulp has just been shipped to the United Kingdom, where there is a scarcity. Mechanical pulp is also firmer, considerable stocks having been absorbed.

Deal Shipments from Parrsboro, N. S.

Parrsboro, N.S., May 25.—Owing to the remarkable scarcity of tonnage, the deal shipments from this port up to the present are much smaller than in other years. Only one schooner and one small steamer have yet sailed—the two carrying about two million feet. As a result of abnormal freight rates and scarcity of bottoms, an American schooner fifty-one years old, and of only 199 tons register, is now loading here. This is the smallest, as well as the oldest vessel that has ever loaded deals at this port for overseas. Another schooner, of larger dimensions and fewer years, has just finished loading, and two other schooners are partly loaded. One of the latter took four deal cargoes across last season. A large steamer under orders from the Imperial Government arrived here this week for a cargo of deals. She will take upwards of four million feet. Several other vessels are under charter to load here, and the prospects are that the deal business will be fairly brisk during the remainder of the season. Freight rates are ranging in the vicinity of four hundred shillings per standard, or about ten times the normal rate, and it is thought they have about reached the limit.

The demand for tonnage seems to increase with the efforts made to supply it, and will probably lead to the construction of more vessels than the builders originally intended. The shipbuilders in this vicinity can, if they wish, sell the vessels now under construction at prices that would afford a handsome profit on the estimated cost of building. For instance, one shipbuilder has been offered $50,000 for a vessel which he estimates will cost $35,000. No wonder the builders are looking for more frames.

Ten fine spars of Douglas fir arrived here last week from Seattle for G. M. Cochrane, of Port Greville. They are ninety feet long and from 22 to 24 inches in diameter. The freight bill was eleven hundred dollars. By the way, why do our builders have to go across the border to get the timber they require? Are there no big trees left in British Columbia?

E. Woodworth.

St. John Markets—Better Local Trade

St. John, N.B., May 26.—(Special to The Canada Lumberman).—During the past ten days the local market in the building trade has shown some improvement. While this is so, it cannot be said that the English and American export business has followed the same upward trend; in fact, very little business is being transacted and sales of deals, etc., are few and far between. Of course, practically all the cuts of deals for this season have been sold, therefore only a small quantity of portable mill stock remains to be marketed. Persons having such stock to offer are finding trouble to dispose of it, as the deal buyers do not seem disposed to load up with any more stock, claiming they can get no tonnage at any price, also that the risk is too great, the freights being so high—ten times over the usual price. Only a few firms in Great Britain are able to purchase and it is expected before long that conditions will show a great change. Therefore, we cannot quote a market price to-day. The American market is not quite so firm as it was two weeks ago, and any excess of stock which might be dumped there, would be felt severely, and no doubt cause a slump. In some sections the railway embargo still holds, but in the majority of towns it has been raised. Of course, where concerns are not clearing their tracks when the stock accumulates, a ban is being put upon them and no stock can be cleared for their yards until their sidings are cleaned up. Taken as a whole, the American market is very disappointing, and those parties who predicted a good year and said the market was very firm were the first to concede prices. Schedule prices have dropped to $27.00 base, which is one dollar less than two weeks ago. The American spruce board market is also in the same condition as dimension, gradually easing away. Of course, every year, after all the mills get in motion in Maine and elsewhere, it is a usual thing for the U. S. market to recede, and this year is evidently no different from the past.

Laths are fairly firm, but the very heavy coastwise freights are eating up the big end of the price. As high as $1.25 per M. has been offered for vessels from St. John, a usual high figure being 80c. per M. This will only leave about $2.50 per M., f.o.b. mills.

Shingles are about 10c. per M. better in price than a year ago, but freights again enter into the question and eat up the extra price.

Locally, the market is better. No great amount of large building is being done, but a great deal of repair work is being carried on and factories are all very busy. Refuse lumber prices remain about the same as a year ago, but probably, with an accumulation and with mills running, prices will decline.

The drives in the St. John river are only making fair headway. The spring has been exceedingly dry and water has fallen very rapidly. Messrs. Murray & Gregory, Ltd., were forced to leave about three

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Manufacturers of Lumber

Extensive New Brunswick and Quebec timber limits, abundant with Virgin Spruce, Pine and Hardwoods.

Twenty years' experience in Milling and Manufacturing, together with a practical knowledge of Building and Architecture, is why our Customers tell us that the Dressing, Grading, and Manufacture of our Stock is just a little better than they expected.

Large stocks of 1 in. Spruce Lumber always on hand.

Try a car of our Air-dried Dressed Spruce.

We also make a Specialty of Kiln Dried Stock.

Our personal attention given to every detail.

Write, wire or phone us for quotations.

Established 1894 ***Incorporated 1908***

Campbellton, New Brunswick

million of their drive on Lae Frontiere, Quebec, but as they are erecting a new large mill at that point, this will not prove a loss, as the logs will be sawn there.

Randolph & Baker have hung about three million on Little Black River; Cuncliffe Bros., about one million on the Allegash, and Stetson, Cutler & Co., about one million on the Tobeque. All the rest of the logs are on the Corporation, but unless rain comes some more logs are sure to hang in the Main river.

Liverpool Market Reports

Alfred Dobell & Company, Liverpool, England, in their timber market report under date of May 1st, say:—

Spruce deals.—Operations have been less active, but values continue firm. First-hand stocks are light and the difficulty of renewing supplies is even more accentuated than it was. The freight problem is becoming more and more difficult of solution, and it is questionable now whether there will be sufficient tonnage available for the freighting of the season's requirements.

Douglas fir.—The small quantities that have arrived per liners for delivery against contracts have passed readily into consumption and the market stands practically bare of supplies. There is no freight room obtainable at the present from the Pacific Coast and the prospects of relief in this direction are not promising.

Flooring boards have arrived rather freely and chiefly against contracts. The enquiry has been somewhat languid, but the stocks are being held firmly.

Liverpool and Manchester Stocks

The following report upon Liverpool and Manchester stocks for the month ending April 30th, 1916, is furnished by H. W. Lightburne & Company, Liverpool, and their St. John, N. B. representatives John E. Moore & Company, Limited.

Spruce and Birch

Month Ending 30th April, 1916

Liverpool

	Import			Consumption			Stock		
	1914.	1915.	1916	1914.	1915.	1916.	1914.	1915.	1916.
N.B. & N.S. Spruce & Pine, Stds. ...	1,940	2,880	230	2,200	2,700	1,380	5,830	3,770	5,640
Birch Logs, Loads	460	280	0	280	160	100	720	140	400
Birch Planks, Stds.	103	24	24	182	67	109	382	169	315

Manchester

Spruce, Stds.	590	2,130	250	2,270	1,840	1,860	9,880	2,200	6,880
Birch Logs, Loads	180	0	0	80	140	40	240	60	540
Birch Planks, Stds.	0	18	12	109	85	127	261	194	327

Stocks in Manchester and Liverpool Combined

Spruce

	1912.	1913.	1914.	1915.	1916.	
Manchester	5,130	5,240	9,880	2,200	6,880	
Liverpool	3,080	2,730	5,830	3,770	5,640	
	8,210	7,970	15,710	5,970	12,520	Stds.

Birch Logs

Manchester	40	260	240	60	540	
Liverpool	560	580	720	140	400	
	600	840	960	200	940	Loads

Birch Planks

Manchester	194	418	261	194	327	
Liverpool	424	443	382	169	315	
	618	861	643	363	642	Stds.

Reports from points in Northern Maine indicate that the log cut in that district will be larger than was expected at first. Market conditions have improved greatly since the operators made their first plans for the season. Many who went into the woods with the intention of taking out 25 to 50 per cent. less logs than usual, were so encouraged by improved market conditions that they changed their plans, and in some instances took out fully 25 per cent. more logs than ever before.

A Fine Calendar Widely Appreciated

Jas. D. Lacey and Company, timberland factors, Chicago, and Seattle, sent out to their business friends, early in the present year, a calendar for 1916 which was one of the most striking and artistic calendar productions we have had the pleasure of seeing. The calendar consisted of a large photograph about 10 in. x 19 in., showing a beautiful group of Sitka spruce trees. The photograph was handsomely mounted and a calendar pad of practical size was attached beneath. This calendar had a wide distribution and its beauty brought forth many expressions of well-merited praise. Nearly all of those who wrote to the company stated that the calendar had been given the place of honor in their private offices.

Canadian Box Shooks Required in South Africa

in a recent issue, states that a South African merchant is open to import box shooks from Canada. He will purchase not less than $10,000 worth annually in small sizes. His trade is chiefly with fruit growers.

The following details are submitted for the information of intending exporters:—

Wood must be white, free from knots, and fine sawn. Sizes mainly required are: 18 x 12 x 2½ in.; 18 x 12 x 3 in.; 18 x 12 x 3½in.

Thicknesses of wood for the above are:—

Two ends .... ½ in.
Two tops .... .3/16 in.
Two bottoms ....3/16 in.
Two sides ....3/16 in.

An air space of one-half inch is to be allowed clear on each side, and on tops, bottoms, and sides. Thus to cover the lid there are required two pieces 5½ inches wide and bottoms 5½ inches wide. Sides will also be one-half inch short of the actual depth of ends.

Shooks should be packed in bundles in such a manner that 14 bundles make 100 boxes.

Large quantities of boxes size 18 by 12 by 5½-inch are also required.

The following are the thicknesses of wood for the above:—

Two end pieces .... ⅝ in.
Two tops .... .3/16 in.
Two bottoms ....3/16 in.
Two sides ....3/16 in.

The same number of pieces and the same air space referred to above are required.

Orange Boxes

The export of oranges is calculated in a few years to use millions of boxes. The size of the cases required is 26 by 12½ by 12½-inch.

These boxes are made up of eleven pieces, consisting of two tops, two bottoms, four sides, all of equal size, with ends and one centre piece of equal size. The ends and the centre piece should be made solid by patent jointing process. Steel clips are of no use.

The ends and centre piece should be 12 by 12 by ⅝-inch, and tops, bottoms, and sides 26 by 5½ by 3/16-inch.

There has also arisen a demand for tops, bottoms and sides measuring 26 by 5½ by ¼-inch.

Goods should be shipped through bankers against documents Cape Town, and prices quoted c.i.f. Cape Town are preferred.

Dry Rot Case Before Court of Review

The Court of Review recently heard argument in one of the largest and most important cases that have appeared in Canadian courts for some time past, namely, the case of the Canadian Spool Cotton Company against Peter Lyall & Son, contractors, and Brown and Vallance, architects. In the original case the Cotton Company claimed $91,802.42 as compensation for the cost of remedying certain alleged defects in the construction of the plaintiffs' cotton mill at Maisonneuve, P.Q. These defects were put under protest to effect a remedy, but nothing was done on their behalf, it was complained, and the plaintiffs ripped out all the timber beams and substituted steel. Their suit was to recover costs for this work. They brought action in the Superior Court against the architects and contractors and judgment was given for them for $71,000 damages against the defendants jointly and severally. It was against this judgment that argument was heard in the Court of Review, upon which judgment is now being awaited.

The contractors urged that the timber used was in accordance with specifications and denied all liability. The architects claimed that even if they should be held liable they could not be obliged to pay for the substitution of steel for timber. They had agreed to offer the plaintiffs $5,000, so as to save further loss of time and to avoid litigation.

The contract in question was entered into in 1907 between the plaintiffs and the architects to make plans and draw up specifications and superintend the construction of the plaintiffs' spool cotton factory at Maisonneuve, the remuneration to be 4 per cent. of the cost of the work. After the plans had been made they were submitted to J. & P. Coates, in the Old Country, the plaintiff company being a subsidiary of the Coates Company. The plans were returned in 1908. The work of construction was carried on by Peter Lyall & Son, and the plaintiffs entered into possession and occupation before the certificate of the architects was delivered to them. Complaints were then made of poor quality of timber in the work and it was alleged that the whole interior woodwork was infected by dry rot. No final certificate was issued by the architects to the contractors, according to the defendants' statement, and, therefore, both architects and contractors denied their liability for the loss. The judgment of the Court of Review will be of great importance to the timber trade in Canada, as well as to architects and contractors.

J. G. Riordan, of the Riordan Pulp & Paper Company, left an estate valued at $745,601.

SUPPLIES

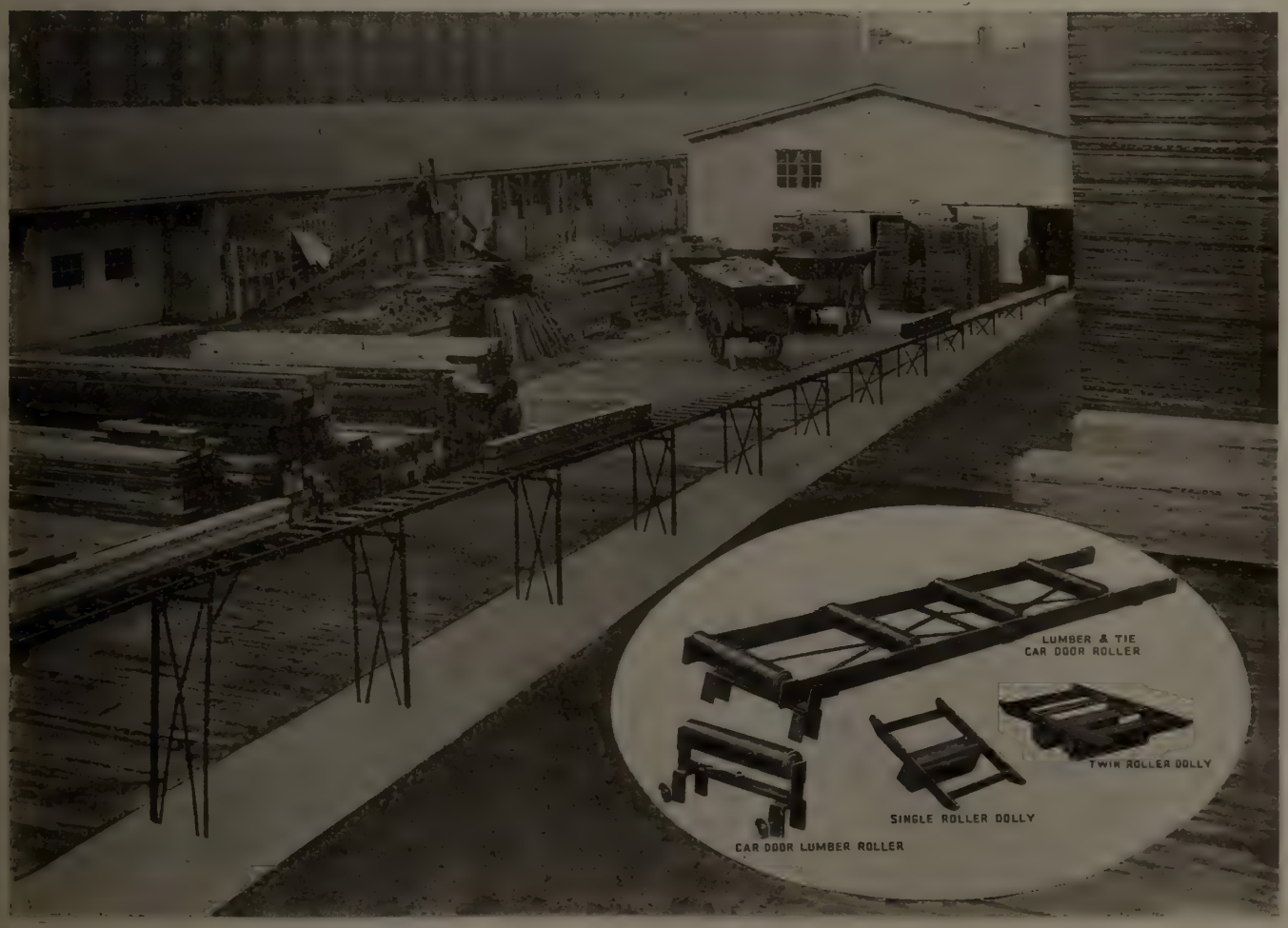
Everything in the Grocery line that's needed for the Camps—we are ever on the look out for goods that will meet your requirements and now have on hand a number of splendid lines which you can without doubt use to good advantage in these times of rapidly advancing prices for all food products. Here's a little list. If you notice anything that you can use we shall be glad to hear from you.

Greek Valencia Raisins, 50 lb. Boxes	6½
California " " "	7¾
Fine Filiatra Currants, Cleaned	12½
California Evaporated Peaches 50s	3¾
California Standard Apricots 25s	9½
Choice Natural Figs 28s	7½
Gallon Rhubarb	1.75
" Apples	2.75
" Lombard Plums, Heavy Syrup	3.25
" Pie Peaches	2.25

H. P. ECKARDT & COMPANY

WHOLESALE GROCERS

Church St. and Esplanade, TORONTO



The Power of Gravity is Free— Use it to handle Your Lumber

Our Steel Ball Bearing Gravity Lumber Carrier conveys boards, siding, flooring in bundles, timbers, etc., upon a grade of 4% (4 ft. fall in 100 ft.) The sensitive bearing moves the lumber.

Write us

Canadian Mathews Gravity Carrier Company, Limited

484 Richmond Street, West, TORONTO

Keeping up with the Trade Procession

Logger, Millman, Wholesaler and Retailer All Interested in Effective Co-operation to Promote Business

In order to keep abreast of the times and to make sure that their business will not only hold its own, but make reasonable progress, it is necessary for retail lumbermen to give a good deal of their attention to the problem of trade extension. At a recent convention of retailers this question was discussed at considerable length by Mr. H. S. Sackett, of Chicago. While Mr. Saskett's remarks relate to conditions existing across the line, many of his points apply forcibly in connection with the retail trade in Canada. Some of the ideas brought out in the course of his address were as follows:—

For a number of months I have lived in an atmoshere of trade extension. I have heard it discussed by manufacturers, wholesalers and retailers. I am thoroughly saturated with it. Some time ago I began to wonder what it was all about, why the lumbermen all of a sudden were interested in such forms of publicity as newspaper and magazine advertising; in moving picture films; in talking frankly about their products to architects and engineers; in asking the public to come and see their wares at expositions and building shows, and I began to analyze the situation—and what did I find? I found simply this: That the lumbermen away back in the early days were absolutely alone in the building material field—there were no competitors; that for many years this condition of affairs obtained; that a few years ago two important things happened, namely, competitors of wood came into existence, and the era of advertising began; that these two got together and hit wood such a tremendous blow that some of the lumber manufacturers have not even yet awakened to a realization of what happened.

It's all very simple, isn't it? But why were the lumbermen, if they were good business men, so slow to realize what was going on? I must confess that for a time I could not understand it, but now I think I have the answer. It was for two reasons. In the first place, wood's competitors got busy when business was good and prices were high, and by efficient manufacturing and merchandising methods, and an effective advertising campaign, they attained an enormous growth in an extremely short time. In other words, they got in before the lumbermen realized what was going on.

The other reason for their success is a psychological one. To show you what I mean I want to compare for a moment the steel business and the lumber business. In the case of the former, nature put the iron and the coal deep down in the ground, and it was necessary for the steel men to dig for it, and after they got it to the surface of the ground, to get the two materials together by means of transportation. It is thus seen that they had difficulties in getting their raw materials together. But what of the lumbermen? Nature planted the trees on top of the ground and scattered them all over North America. There was no difficulty in securing raw material at almost any point where it was wanted.

And how about the manufacturing part? Here again the steel men had great difficulties. The manufacture of their product is a difficult and costly one, requiring large investments of capital for plants; but this is not true of the lumber industry. Certainly a very small sum is involved for a plant in comparison with the steel plants, and so here again the lumbermen have had a big advantage.

How Advertising Creates a Market

And how about the merchandising methods? The steel men with a high priced product, and with a comparatively undeveloped market for it, were obliged to advertise widely, to spend large sums in so doing, to employ high salaried salesmen, to build laboratories with which to experiment. But how about the lumbermen? They had no such problem. The public for years had used wood and knew all about it, or thought they did. Their market was already prepared. They had to spend no money in advertising, nor in the employment of high salaried men. And so it has been all through the two industries, difficulties on the one hand, and comparative ease on the other, and what is the result? The men of one industry are trained to cost accounting; to the minutest details of management; they are taught, if you please, to think in terms of the fraction of a penny; while those of the lumber industry accustomed to big margins, and having lived without the necessity of strict economy, are easy going, untrained in system, or cost accounting, and are thinkers in the dollar fraction instead of the penny. If $27.50 is too high a price, the next is not $27.49, or $27.45, as the steel man would say, but $27.25, or an even $27.00. What is true of the steel industry is also true of the cement industry, and the others competing with wood, and that is why, in my judgment, the lumbermen have been so slow in awakening to the situation, and is why we are hearing so much nowadays of trade extension in the lumber industry.

Mr. Sackett then explained the work of the trade extension department of the National Lumber Manufacturers' Association, pointing out the ways in which it is prepared to assist retailers in developing their trade. Continuing he said:—

The trend of modern business methods is towards publicity, and this publicity in a large measure takes the form of direct advertising.

If your public doesn't know who, nor what, nor where you are, nor what you can do for them, you will not profit. You must let them know these things; you must make them know. In a word, you must advertise. Some dealers complain that the mail order houses are injuring their business; they say that people in their territory have bills shipped in before the dealer even knows that a building is contemplated, and why? Simply because the mail order house advertised, and the mail order house's advertising was better than yours when you did advertise. It had to be, for it had to counteract your reputation for square dealing, your service, the power of your presence, your personal argument, your extension of credit, the quality of your materials—that is, provided you had all these things. And more than this, the mail order house kept right on after your customers, not for a day, or a week, or a month, but for years. The general manager of one of the largest mail order houses in the country said last year that they often followed up a prospect for three years, but finally landed him. Do you ever do that yourself? And still more, these houses keep on suggesting new comforts, new conveniences, new uses for their materials, until by force of repetition the prospect becomes an active customer for that article—people whose name he naturally connects with the thing that he wants?

The Use of Local Papers

You should unquestionably advertise in your local papers. This advertisement should be educational, rather than the mere statement that you have lumber to sell and can make prompt deliveries. The desirability of wooden structures should be carefully pointed out; it should be followed by specific suggestions as to the kind of material to select, and how to use it to the best advantage. This makes it necessary for you to be an information bureau, but it will well pay you to know more about lumber products than anyone else in your community. This educational publicity should be supplemented by literature on the different woods, which is easily obtainable from the various manufacturing associations.

There has been a great waste in the past and a failure to get the most out of available literature, because of the poor display or lack of distribution. You should have in your office an attractive rack in which the more important lumber literature is displayed. This would make it available to callers, and also serve as a reference library. A good plan is to send out notices from time to time to the consumers, stating the literature which is available in your office, or which will be sent upon request. You should notify your customers from time to time that you have a good reference library on farm structures which is at the service of any who may be interested.

The proper handling of lumber consumers in any community means a systematic listing of names, and a follow-up system. The best plan is usually to install a simple card system, giving the names and addresses, and noting on the cards the needs and requirements of the different individuals as ascertained, and the time of their last purchase. For example, if you find that a farmer in your community is contemplating building a new barn next spring, or a new silo, this should be noted, and should be followed up by letters and literature on the subject. A constant stimulation of interest is necessary, either by circular letters, by envelope inserts or the distribution of literature.

You should have displayed in your office attractive samples of the woods that you have for sale. You should show them in the rough, and in a surfaced condition; you should show samples of moulding, of casing, of base boards, of interior finish, panels, and all the various products of wood that you have to offer. You should fix them up so neatly and attractively that the man who is going to build a home would come to your office, and look over your commodities in just the same way that he goes to the dry goods store and looks over their goods before he buys.

It would be an excellent plan from time to time for groups of dealers in the larger towns and cities to get together, and have a dinner and invite your architect and engineer friends to come and talk to you about their problems.

Watch Building and Fire Protection Ordinances

Keep in touch with what is going on in your home town. If a change is proposed in the building ordinance, know all about it; find

Give Your Men Good Bread

The work your men do is governed to quite an extent by their health. Give them good food and you keep them healthy. Bread is a big item. To be safe use only

Cream of the West Flour

The hard wheat flour that is guaranteed for bread. Used by the largest bakers in Canada.

No flour can surpass it in pure, nutritious wholesomeness. Your men will surely appreciate your efforts to give them the best.

Write us for prices on a trial shipment.

THE CAMPBELL FLOUR MILLS CO., LIMITED

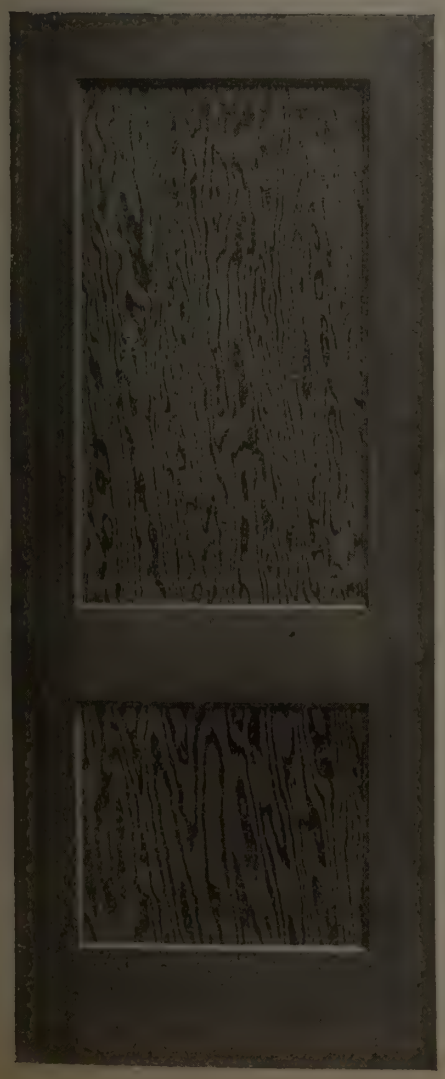
TORONTO PETERBORO

Paul F. Gauvreau
84 St. Peter St., QUEBEC, Que.

W. J. McAuley & Co.
B-24 Board of Trade Bldg., MONTREAL, Que.

C. E. Choat & Co., HALIFAX, N.S.

H. E. RAINS, Special Maritime Representative, 42 Lawrence St., HALIFAX, N.S.



Fir "Twopan"

Canadian Western Lumber Co., Ltd.

Fraser Mills, B.C.

Canada's Largest Lumber Manufacturing Plant

Mixed Car Shipments
containing
Doors, Mouldings, 3 Ply Panels and guaranteed quality X X X B.C. Red Cedar Shingles

PROMPT SHIPMENTS

Fir Timbers
and
Dimension Flooring, Ceiling, Finish, Casing, Base and Interior Trimmings

GUARANTEED QUALITIES

The 1916 model is a ***FIR*** Door made with 3 Ply Rotary Cut beautifully Grained Veneer Panels and Edge Grain Stiles and Rails.

Eastern Sales Offices

Toronto—L. D. Barclay

Montreal—R. H. Underhill

out what the changes are going to be; ascertain if anything detrimental to the use of wood is proposed; write the trade extension department what is going on, so that we may have an opportunity of sending one of our special representatives to help you, if help is needed. In this connection we are now working on a standard building code for towns and cities of various sizes, all of which information will be at your service.

Take an interest in the question of fire protection; keep in touch with your building commissions and city councils; show them that you are as much interested in safe building construction as any other good citizen, or as the manufacturer of non-combustible materials; make it clear to them that it is not the use of wood, but its unsafe use that contributes to the fire danger. Keep your business before the public, and above all, keep plenty of news concerning the lumber industry in your local papers.

Who Is Your Competitor?

And now in closing, may I say just a word to you about competition? When you speak of "competition" or your "competitor," just what do you mean? Your only competitor can be that merchant in your own industry, in your own distributing territory, who has the same stock, the same knowledge, the same energy and financial strength as you have. If there is any difference in any of these elements, then the balance of trade will sway towards the better equipped, and true competition will cease. Let me illustrate: Suppose we have a town with three yards. If you are only a "material" man, the only competition you will have will be with the other "material" man. If, however, you add to your equipment, a knowledge of your materials and their uses, you rise above the "material man's" competition, and your only competition will then come from someone equally well equipped. The higher you rise the smaller becomes your field of competition and the greater your chances to secure the trade, and that rise in the scale depends entirely and absolutely on each one of you individually. One retail lumberman said not long ago that he was going to stop talking "service" because he didn't see where it did him any good. It didn't—simply because that was just exactly what he did—talk service. He didn't give service. Service, adequate service, is your only hope of salvation.

Every Branch of the Industry Must Co-operate

Above all, you should co-operate with every branch of the industry. Remember, that the owner of the primary raw material is the first link in the chain, the last link being the yard clerk who receipts to the ultimate consumer for the last payment on the little home, and each link depends on every other. It takes the combined action of every branch of the industry to complete the sale on which the livelihood and prosperity of all and each depends. A sale is never made to the people but to the individual, and as that sale is the exchange of money for a board cut by the logger, surfaced by the manufacturer, stored by the wholesaler, and delivered by the retailer, it follows that each is a necessary and interested link in the sales chain. The logger is just as much interested in the way you meet a customer as you are in the way he cuts his trees. The manufacturer is just as much interested in the care your yard man gives to the stocks as you are in the way those boards are made, graded and shipped.

Strain on any link weakens the entire chain, and failure of any branch to co-operate fully and properly with the others for the real object of all—the sale to the ultimate consumer—jeopardizes the business welfare of everyone connected with the industry. And accordingly everyone should be interested in seeing that the others do their proper share in the whole work. Lack of real co-operation, to put it in the mildest way, is just plain "bad business."

More Canadian Forestry Battalions Wanted

An Ottawa despatch under date of May 28th, states that the War Office has called for another Canadian Forestry Battalion of 1,500 men. The 224th Battalion, under command of Lt.-Col. Alex. McDougall, has done such excellent work in England and Scotland in aiding the naval and shipbuilding industries that a second battalion of this nature has been authorized at the request of the British authorities and recruiting will begin immediately in the lumbering districts. Lt.-Col. J. B. White, of Montreal, formerly of the Riordon Pulp and Paper Company, who is now with the 224th Overseas Battalion, has been recalled to organize and command the new regiment. A third Battalion is also to be raised, with Lieut.-Col. W. R. Smyth, M.P.P. for Algoma, in command. This Battalion will be raised in Ontario.

The Forestry Branch of the Department of Lands, Forests and Mines of the Province of Ontario have issued an illustrated bulletin upon "The White Pine Blister Rust," a dangerous disease of white pine. The bulletin contains a discussion of the disease, a description of its activities and an account of the method of eradicating it by destroying neighboring currant and gooseberry bushes upon which the spores depend for their reproduction.

Setting Up and Babbitting Journal Bearings

The practice of lining journal bearings with a metal that is sufficiently fusible to be melted in a common ladle, is not always so much for the purpose of securing anti-friction properties as for the convenience and cheapness of forming a perfect bearing in line with a shaft without the necessity of boring. Boxes that are bored, no matter how accurate, require great care in fitting and attaching to the frame or other parts of a machine. It is not good practice, however, to use the shaft for the purpose of casting the bearing, especially if the shaft be steel, for the reason that the hot metal is apt to spring it. A better plan is to use a mandrel, the same size or a trifle larger, for this purpose.

For slow-running journals, where the load is moderate, almost any metal that may be conveniently melted and will run freely, will answer the purpose. For wearing properties, with a moderate speed, there is probably nothing superior to pure zinc, but when not combined with other metal it shrinks so much in cooling that it cannot be held firmly in the recess, and soon works loose; also, it lacks those anti-friction properties which are necessary in order to stand high speed. For lineshafting and all work where the speed is not over 300 or 400-r.p.m., an alloy of 8 parts zinc and 2 parts block tin will not only wear longer than any composition of this class, but will successfully resist the force of heavy loads. The tin counteracts the shrinkage, so that the metal, if not overheated, will firmly adhere to the box until it is worn out. But this mixture does not possess sufficient anti-friction properties to warrant its use in fast-running journals.

Among all the soft metals in use, none possesses greater anti-friction properties than pure lead; but lead alone is impracticable, for it is so soft that it cannot be retained in the recess. When by any process lead can be sufficiently hardened to be retained in the boxes without materially injuring its anti-friction properties, there is no metal that will wear longer in light, fast-running journals. With most of the best and most popular anti-friction metals in use and sold under the name of babbit metal, the basis is lead. Lead and antimony have the properties of combining with each other in all proportions without impairing the antifriction or wearing properties, or will stand a higher speed without heat or abrasion. It runs freely in its melted state, has no shrinkage, and is better adapted to light, high-speed machinery than any other. Care, however, should be exercised in using it, and it should never be heated beyond a temperature that will scorch a dry pine block.

It is difficult at the present time to determine the exact formula used by the original Babbitt, the inventor of the recessed box, as a number of different formulas are given for that composition. Tin, copper, and antimony were the ingredients, and from the best sources of information, the original proportions were as follows: tin, 50 parts; copper, 2 parts; antimony, 4 parts. The copper was first melted and the antimony added, then about 10 or 15 lbs. of tin, the whole kept at a dull heat and constantly stirred until the metals were thoroughly incorporated, after which the balance of tin was added, and after being thoroughly stirred again it was cast into ingots. When copper is thoroughly melted, and before the antimony is added, a handful of powdered charcoal should be thrown into the crucible to form a flux, in order to exclude the air and prevent the antimony from vaporizing; otherwise much of it will escape in the form of vapor and consequently be wasted. This metal, when carefully prepared, is probably one of the best in use for lining boxes that are subject to a heavy weight and wear, but for light, fast-running journals the copper renders it more susceptible to friction, and it is more liable to heat than the metal composed of lead and antimony in the proportion just given.

When pouring the metal, provide two pieces of shafting for mandrels, somewhat longer than the bearing or box to be babbitted. One of these should be turned to a size about 1/32-in. larger than the diameter of shaft, and is to be used for shaping the babbit in pouring. The other mandrel should be of the same diameter as shaft which is to run in the bearing; this mandrel is for use when scraping the babbitt metal to a bearing. If it is inconvenient to procure a piece of shafting larger in diameter than the journal, the difficulty may be gotten over by placing a sheet of strong, smooth paper around the mandrel that is same diameter as shaft, and pouring the metal around

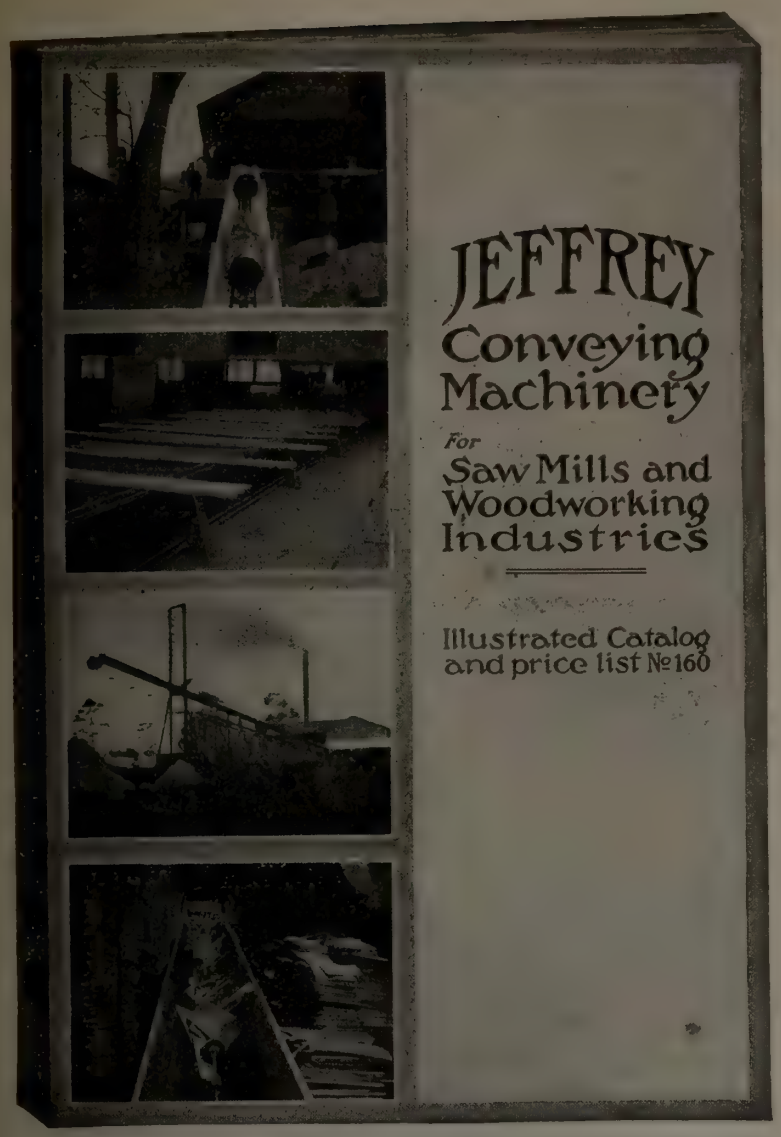
Surpasses Everything

Editor Canada Lumberman:— Westboro, Ont., May 24.

I have subscribed for the Canada Lumberman since it was first published; a small sheet at that time. I have watched it grow with much interest, but your last Annual Number surpasses in every respect anything I had anticipated. Take the cuts on pages 34 and 35; I do not think they can be surpassed on this continent. They are only samples of all the other parts of the issue. Wishing you continued success,

Yours truly,

I. N. Kendall.



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for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

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it. The thickness of the paper around mandrel and the contraction of the soft metal when cooled, will serve to relieve the journal from being pinched by the babbitt metal, which is liable to occurr when the metal is poured dircetly around the journal.

Two thin pieces of wood liners, one for each side of the box, should also be prepared, and they should be about the thickness of the permanent liners to be used. One edge of these wooden liners should be notched, to allow the metal, when poured from above, to fill the lower box. These liners are placed between the cap and bottom half of box, with shaft in a central position, and the parts of the box clamped together. In case the box is secured together by means of bolts, the outer edges of the liners are slotted to fit the bolts. Small wooden blocks, cut tapering, are placed in each end of box to maintain the shaft in a central position. The box is placed horizontally in a vise and the shaft centered by means of calipers, the shaft being moved by moving the wedges in or out as needed. After the shaft is correctly located, the ends of the box are stopped by means of putty, or other convenient method which will prevent the metal from flowing out; a putty funnel is also built up about the hole into which the hot babbit is to be poured.

The babbitt is heated in any convenient way until it is fluid. Care should be taken that it does not get too hot, or its efficiency will be diminished. A good way of testing is to dip a soft pine stick in the metal; when hot enough to char it the proper temperature is reached. Then pour into the box through the funnel, as rapidly as possible, as the metal quickly sets, and if this occurs the box is spoiled and must be cleaned and repoured. After the metal has set, the spur in the funnel is broken from the cap, the cap removed from lower part of box and the shafting removed. The babbitt should have formed a reasonably smooth surface and be free from cold shots. In cold weather it is sometimes advisable to warm the shaft used as a mandrel.

When cap and box are poured separately, the melted babbitt metal is usually poured into one side of bearing and rises along the other side until the cavity is full. When pouring a bearing of this character move the ladle from one end of the bearing to the other, causing the stream to traverse along the slot, thereby keeping the babbitt at approximately the same temperature in all parts of bearing. When two ladles are used to pour from it will be sufficient to pour into diagonally opposite corners of bearing, and if both streams be poured quickly, the cavity will be filled before the metal becomes too cold to flow to the corners. Oil channels may be formed in the lining by means of a small, hard, spun cord, wound around the mandrel in the direction the shaft is to run. The cord should be rubbed smooth with putty before being placed upon the mandrel.

It was stated above that the temperature of the alloy, when poured, should be just high enough to slightly char a soft wood stick. This is a general rule, and by following it the millwright will not go far astray on ordinary work, but there are exceptions. When thin, solid boxes must be poured. and there is a long, narrow, or thin space to be filled with soft metal, it is sometimes necessary to pour the metal hotter than described. In such cases, the metals to come in contact with the soft metal should always be heated as much as possible before pouring in the lining. When a ladleful of metal fails to fill a box, and another ladleful is not at hand, do not try to fill the box by pouring hot metal on top of the cold, for it is very seldom that such a course results in a satisfactory bearing. Hot babbit will not unite with or weld itself to cold babbitt by simply pouring one on top of the other. Therefore, should a man fail to fill a bearing when pouring in the lining, it is decidedly the best practice to take down and chip out the partially-filled bearing, then set up again and pour a supply sufficient to fill the bearing.

When babbitt or other lining metal is poured into a cold casting, the lining becomes chilled before the iron casting becomes heated, therefore when the soft lining finally cools it shrinks away from the casting and becomes loose. Heating the box before pouring in the soft metal lining will prevent this looseness, as the iron casting then shrinks with the soft metal lining on cooling, and holds it fast when cold. One way of fastening a lining tightly into a cold casting is by using one of the antimony alloys, as the lining antimony, when alloyed with lead and with some other soft metals, loses the power of shrinking during the freezing process, and, like water, expands and fills the casting so tightly that there is no rattle or looseness. Therefore, when forced to line a cold bearing, use an antimony alloy.

In order to obtain a good and reliable journal bearing the babbitt should, after cooling, be scraped and accurately fitted to the journal. For this work the mandrel previously referred to, which has been turned to the same size as the shaft, is now covered with ultramarine, placed in the lower half of the box and revolved. Upon removing it the high spots in the babbitt will be plainly marked. There may be only two or three spots so marked at the first trial, but these indicate that the shaft touches the bearing only at those spots. The metal should be removed at these spots by scraping, after which the mandrel should again be placed in bearing and revolved. This time the shaft may touch in four or five places, as indicated by the markings. This process should be repeated until the bearing spots appear practically all over the surface of the babbitt box, when it may be assumed that the job is completed. Plumbago or red lead, mixed with oil, may be used on the mandrel for the marking, in the absence of the ultramarine, and the mandrel should be rubbed with it each time is it tried in the bearing.—J. H. B., in The Woodworker, Indianapolis.

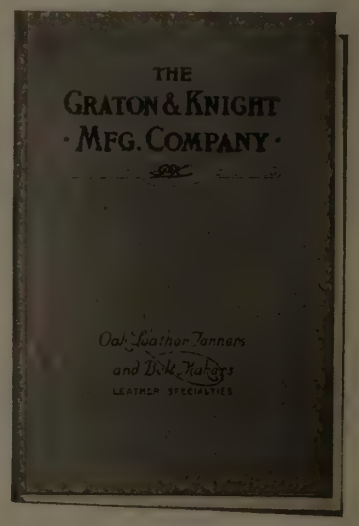
A New Bulletin on Jeffrey Products

The Jeffrey Mfg. Company, Columbus, Ohio, are distributing an interesting bulletin upon "Manganese Steel Chains," containing full details and prices of their Detachable, Peerless and "Hercules" types of Manganese Chains, sprockets and attachments. These ensure a maximum of elevator and conveyor service in connection with aggravating cases of wear in which conditions require the chains and sprockets to handle gritty and abrasive materials. All styles and sizes of chains as shown in the bulletin are carried in stock for immediate delivery. Others will be added by the company as facilities permit. Requests for this bulletin, or for additional information on Manganese or other types of Jeffrey chains for all elevating, conveying and power service, may be addressed to the Montreal office of the company, Power Building, Montreal, P.Q.

Graton & Knight's Fine New Catalogue

A new catalogue has just been issued by the Graton & Knight Mfg. Company, oak leather tanners and belt makers, Worcester, Mass., which is a fine specimen of catalogue work. Besides illustrating and describing all the company's products, the catalogue contains many facts of general interest to those who purchase belting, lace leather, packings, and other leather products.

The belting section of the catalogue describes the qualities of each grade manufactured, and tells why they are suited specially to their particular work, describing at the same time their differences and capabilities. In this section the catalogue includes also valuable



mechanical rules, tables and formulae, which will assist the buyer in determining the proper grade, width and weight of belting required for any given drive.

One section of the catalogue is devoted to leather packings, describing all the varieties and grades and explaining their special advantages. The company manufacture all kinds of straps, automobile leathers, halters and other leather sundries, amounting to hundreds of different products. These are illustrated and described in a special section of the catalogue. A copy of the catalogue will be sent on request to executives, purchasing agents, managers, superintendents, mechanical engineers, and others interested in the buying of belting and other leather products.

Among the members re-elected at the Quebec Provincial elections are, Mr. E. Ouellette, Yamaska ((acclamation), and Mr. R. Tourville, Maskinonge, both of the Tourville Lumber Mills Company, Louisville and Montreal; and Mr. Walter Reed. lumberman, Montreal, for D'Assomption (acclamation). All these gentlemen are supporters of the Government.

Latest reports from New Brunswick points state that recent rain falls have raised the water in the rivers sufficiently to bring out a number of drives that were threatened with being help up. Drives on the Nashwaak have benefited more than others by the high water. The benefit is also being felt on the St. John River and its tributaries.

Wm. A. Dunn, J.P., one of Toronto's well known lumber merchants, died at his home recently after an illness of several months. The late Mr. Dunn conducted a large lumber business at 102 Davenport Road. He was born at Toronto in 1861. He is survived by his widow, two sons and five daughters.

Stable and Storage Tents

Gable End and Hipped Styles

TENTS that are strongly made, reinforced with manila rope where strain is greatest, easily erected and adjusted. Walls are detachable.

A stock of these tents in various sizes is always kept ready for immediate shipment.

We will be pleased to mail or telegraph prices at any time. Send for our "Catalogue de Luxe."

Smart-Woods LIMITED

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RUBBER GOODS FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable.

Hose for Steam, Water, etc., in various grades, made especially to give satisfactory and economical service under different conditions.

Fire Hose One or more of our twenty brands of Fire Hose will be found, not only in the best equipped Factories, Mills, etc., but in almost every Fire Department in the Dominion.

Gutta Percha & Rubber, Limited

TORONTO MONTREAL WINNIPEG REGINA SASKATOON CALGARY EDMONTON VANCOUVER

THE EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS DIEU RIEN
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Head Office at Montreal.

SPRUCE rough or dressed

1" No. 2 and Better Birch, 1914 cut
also Basswood, Hemlock and Pine

Saw Mills at MONT LAURIER.
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Manufacturers of

WHITE PINE and RED PINE
LUMBER and LATH

EXCELLENT PLANING MILL FACILITIES

Special Attention Given to Prompt Delivery

LATH

Campbell, MacLaurin Lumber Co.
Limited
Board of Trade Building, MONTREAL

Pine, Spruce
Hemlock
Hardwoods, Lath

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber. Lath and Shingles
Offices—500 McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

Chas Wilcox, McIntosh Mills, Ont., recently lost his sawmill by fire.

The National Wood Mfg. Co., Ltd., South River, Ont., has obtained a charter.

The damage caused by fire recently at the plant of L. W. Fick & Son, Simcoe, Ont., amounted to $8,000. Upon this there was insurance of $4,595.

Fire destroyed Chrysler's barrel heading and custom sawmill at Windham Centre on May 27th. The loss included about $1,500 worth of heading. Stock to the value of $2,000 in the yard and some custom lumber was saved.

Rankin & Company, Limited, have been incorporated with head office at Toronto, Ont., and capital stock of $100,000, to carry on business as timber merchants, sawmill proprietors, timber growers and dealers in timber and wood of all kinds. The provisional directors are A. W. Holmsted, N. R. Kay and E. M. Carruthers.

A by-law has been carried at Campbellford, Ont., authorizing a loan to the Northumberland Paper & Electric Company of $30,000, to assist them in rebuilding their paper mills, which were recently destroyed by fire. The company intend to put up a much larger plant than the former one.

The Peerless Pulp Company, Thorold, Ont., have taken over the old Inland Paper & Pulp Company of that place. The plant, which was formerly that of the Colonial Wood Products Company, and has been idle for three or four years, will be operated again early in June, giving employment to about forty men at first. Herman Reiger, of Niagara Falls, N. Y., is president of the new company, and H. A. Constantine, Niagara Falls, N. Y., is treasurer. Edward Foley, Thorold, Ont., is vice-president and general manager.

Eastern Canada

The Eagle Lumber Company, Limited, St. Jerome, P. Q., have increased their capital from $90,000 to $500,000.

The R. & T. Ritchie Company, at Aylmer, P. Q., expect to commence operations on a sawing contract for the Hawkesbury Lumber Company about June 10th.

The St. Croix Lumber Company, Hartville, N. S., suffered a loss by fire recently. The fire started in their store and spread rapidly, consuming a barn, boarding house and several small buildings.

Fraser & Company's mills, Aylmer, P. Q., which have been closed during the past year and a half, will begin operations again early in June, having a contract to saw for the Hawkesbury Lumber Company.

The wholesale and retail lumber business of the P. Vincent Lumber Company, Limited, 806 Notre Dame Street West, Montreal, has been purchased by Smith and Ste. Marie, formerly of 310 Board of Trade Building.

La Compagnie Chs. A. Julien, Limitee, has been incorporated with head office at Pont Rouge, County of Portneuf, P. Q., and capital stock of $145,000, to carry on business as manufacturers of and dealers in lumber, and to operate a timber business, construct sawmills, and conduct lumber yards.

The annual meeting of the Campbell-MacLaurin Lumber Company, Limited, was held on May 23 at the offices, Board of Trade, Montreal. The report submitted indicated that the company had had a favorable year, and that the outlook was very satisfactory, especially for the United States markets. The following officers were re-elected: Alex. MacLaurin, president; D. C. Culver, vice-president; Arthur H. Campbell, managing director; Geo. L. Ryon, and Maurice Welsh, directors.

Western Canada

The North Canada Lumber Co., Ltd., Prince Albert, Sask., recently suffered a loss by fire, which was covered by insurance.

C. Lindmark has leased the Canadian Pacific Lumber Company's mill at Pingston Creek, B. C., and is now operating it at full capacity, giving employment to thirty men.

J. E. Wade and H. H. Stuart are erecting a shingle mill at Squamish, B. C., at the head of Howe Sound, and will operate under the name of the Squamish Timber & Manufacturing Company, Limited.

Charles W. Tait & Company, Limited, have been incorporated with head office at New Westminster, B. C., and capital stock of $10,000, to carry on business as sawmill owners, loggers, lumbermen, etc.

G. G. Abernethy & Nelson S. Lougheed, who have sold their mills to the Maple Ridge Lumber Company, will in future give their whole attention to

logging operations in connection with their extensive timber limits in the Stave Lake country.

Mr. W. A. Anstie reports that the Forest Mills of British Columbia, Limited, have purchased the Arrow Lakes Lumber Company's mill at Arrowhead and over a billion feet of standing timber. It is reported that the deal represented over a million dollars.

The Ontario Lumber Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $10,000, to carry on business as manufacturers of and dealers in lumber of all kinds, including wood pulp, paper mill refuse, and to own sawmills, planing mills, etc.

The Revelstoke Lumber Company, Limited, has been incorporated with head office at Revelstoke, B. C., and capital stock of $25,000, to carry on business as timber merchants, sawmill, shingle mill and pulp mill owners, loggers and lumber merchants, and to deal in saw logs, timber, piles and poles, lumber and wood of all kinds.

W. C. E. Koch's timber flume between his camp and the river at Koch's Siding near Nelson, B. C., was recently seriously damaged by some unknown cause. About 75 feet of the flume, located about half a mile from the river was completely destroyed, and it is supposed that someone placed dynamite beneath the flume and exploded it.

Sealed tenders are being received by the Minister of Lands for British Columbia until June 14th, 1916, for the purchase of License X614, to cut 1,547,000 feet of fir, cedar, hemlock and balsam, on an area adjoining Timber Sale X55, Redonda Island, New Westminster District. Two years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia until June 7th, 1916, for the purchase of License X530, to cut 1,087,780 feet of Douglas fir, hemlock, cedar and spruce on an area adjoining S. T. L. 43890, Swanson Island, Coast District, Range 1. Two years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia until June 7th, 1916, for the purchase of Pulp License X597, to cut 3,924,000 feet of spruce, balsam and hemlock on an area adjoining L. 730, Lake Island, Mathieson Channel, Coast District, Range 3. Two years will be allowed for the removal of the timber.

The Acorn Lumber & Shingle Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $25,000, to carry on business as sawmill and shingle mill owners, timber and lumber merchants, and to take over the general contracting, mill, timber and mercantile business carried on by M. D. Irvine, at Burnaby, B. C.

The Maple Ridge Lumber Company have purchased the mills owned by Abernethy & Lougheed at Port Moody and Port Haney, B. C., and will operate both plants at full capacity. The Maple Ridge Lumber Company is a subsidiary of the B. C. Box Company of New Westminster. Their box factory is located at Queensborough, B. C. The head office is at New Westminster, B. C., and the capital stock is $25,000.

The Nor-west Farmers Co-operative Lumber Company, Limited, have been incorporated with head office at Vancouver, B. C., and capital stock of $100,000, to carry on business as sawmill proprietors, timber merchants, lumbermen, loggers, lumber and shingle manufacturers and to deal in saw-logs, timber, lumber, shingles, bolts and wood of all kinds. Those interested are M. L. Malloy, M. L. A. Gibson, J. H. Senkler, G. C. Van Horne and M. G. Caple, all of Vancouver.

About 50 shingle mills in the State of Washington were closed on May 1st as the result of a demand from the International Shingle-Weavers' Union of America for the reinstatement of the 1914 wage scale. About 1,500 men out of the 2,500 union members employed are reported to have gone out. The increase asked by the men varies from 2 to 15 per cent. and averages 10 per cent. above what they are receiving.

Manufacturers on the Pacific Coast, including British Columbia, have presented a petition to the Interstate Commerce Commission of the United States for a downward revision of the freight rates on sash, doors and other lumber products from the Pacific Coast to Eastern Canada, New England, New York, and other Atlantic Coast points. The petitioners state that the rates were increased last August from 1 to 20 per cent. and they ask to recover the excess already paid.

Carrying a cargo of lumber loaded at Chemainus on June 1st of last year, the American schooner J. M. Weatherwax is reported to have reached Sydney, Australia, on April 6th, after an eventful voyage of ten months. On August 14 of last year the schooner put in at Honolulu to repair damages sustained in a storm. A month later she set sail for Australia, but on October 5 again limped into Honolulu harbor in a leaky condition. Later she was libeled by the crew for unpaid wages and was ordered sold. At the sale the vessel was purchased by Mr. Neils Nielson, representing the New South Wales Government, to whom the lumber was consigned, for the sum of $3,200. A new crew was then shipped and on January 10th last the Weatherwax again left Honolulu for Sydney.

Blair & Rolland, Limited

Lumber & Pulpwood

20 St. Nicholas Street, Montreal, Que.

Spruce and Pine, 1916 Cut

Mill Run, First and Clear left in

1 in. x 4 in., 5 in., 6 in., 7 in., 8 in., 9 in., 10 in. up x 6/9 ft.
1 " " " " " " x 10 ft.
1 " " " " " " x 11 ft.
1 " " " " " " x 12 ft.
1 " " " " " " x 13 ft.

Same specifications in 2 in. and 3 in. thick.

Box

1 in. x 4 in., 5 in., 6 in., 7 in., 8 in., 9 in., 10 in. up x 6/9 ft.
1 " " " " " " x 10 ft.
1 " " " " " " x 11 ft.
1 " " " " " " x 12 ft.
1 " " " " " " x 13 ft.

Same specifications in 2 and 3 in. thick.

Mill Cull Spruce 1 in. x 4 in. up x 8/13 ft.
" " Red Pine 1 in. "
M. Cull Spruce 2 in. x 4 in. up x 8/13 ft.
" " 3 " " "
" Red Pine 2 " " "
" " 3 " " "
4,000,000 Pcs. Mill Run Spruce Lath 1½ in. x ⅜ in. x 4 ft.
1,000,000 Pcs. No. 3 " "
2,000,000 Pcs. Mill Run White Pine " "
500,000 Pcs. No. 3 " "
2,000,000 Pcs. Mill Run Red Pine " "
500,000 Pcs. No. 3 " "

Write us for our Stock List balance of 1914 and 1915 Cuts

We are booking orders Now for our 1916 cut.

H. BOURGOUIN

Dominion Express Bldg., 145 St. James St., Montreal

Wholesale Lumber and Timber

SHELL BOX STOCK

White and Red Pine, Spruce

Hemlock, Birch, Maple

Railway Ties, Fence Posts, Etc.

Prompt shipment. Satisfactory stock. Good service Write for Prices.

A. F. B. AUSTIN, Manager

FRED WOOD & SON

135 Richmond St. W., TORONTO

Manufacturers and Dealers in
HIGH-GRADE CIRCULAR SAWS

Circular Cross Cuts
Trimmers
Edgers
Bolters
Concave, Etc.

REPAIRING A SPECIALTY

We make a Specialty of Repairs and can give your orders prompt attention

35 years' practical experience in making saws in Canada

Advertising Ideas for Retailers

Individuality Essential to Good Results—Co-operation with Others Interested in Community Development

The subject of advertising has attracted a great deal of attention among lumber manufacturers in the United States during the past few years and important developments are being announced frequently, showing that manufacturers of lumber are continually increasing their appreciation of the importance of approaching the consumer through advertising as directly as possible. While this movement has not definitely extended to the Canadian industry, we expect that it will do so in the course of time, possibly in the quite near future, but even though Canadian manufacturers are not definitely advertising the chief lines of Canadian lumber in more than one or two cases, the advertising which is being carried on in the United States is being read by Canadian people in the big United States magazines, and manufacturers in Canada are finding out indirectly the effect of this means of promoting trade.

While the manufacturer has gone into the advertising business in the United States in a very large way, the average retailer has not by any means realized what he can do by means of advertising to improve his business. This applies also to the retailer in Canada. Recently we came across an interesting discussion of retail lumber advertising, written by Mr. J. B. Powell, instructor in advertising at the University of Missouri, and published in the St. Louis Lumberman. As a rule one expects a surplus of theory and not much in the way of practical stuff from a university instructor. In this case, however, the practical over-rides the theoretical so much that one would think that Mr. Powell was actually a successful retail lumberman, whose success had been built up by advertising. Some of Mr. Powell's ideas we are pleased to reproduce as follows:—

It has been the writer's pleasure, Mr. Powell says, to assist in a minor way in some of these recent advertising discussions, and as a result some dozens of letters from lumber retailers have been received in the last few months.

"We believe in advertising in our local papers, but how in the thunder are we going to do it and get our money's worth," some of the letters ask. Several of the letters said: "We have asked the local editor about it and, outside of the statement that 'It pays to advertise,' he seems to be as devoid of information on this subject as we are."

So how is a retail lumberman going to advertise? is the burning question. And we will answer this question by saying that it is just as difficult to outline a plan that would apply to all retail lumber dealers as it would be to outline a blanket plan of courtship that would be equally effective with college girls and militant suffragettes.

The lumber yard in the country town of 600 persons can advertise that it supplies house plans free, but this would play hob in a city of 50,000 people with half a dozen local architects on the job.

Forced Into a Price Competitive Existence

Many owners of lumber yards have felt that since most of their business comes from local architects and contractors, advertising to consumers is unnecessary. To state it in another way, they have permitted the contractors to force the lumber yards into a mere price competition existence. Before this impression gets any further my suggestion would be that the lumber retailer who makes himself solid with the consumer need not fear either contractor or architect, for the consumer is the man who is spending the money and has the right to say where the lumber comes from and what kind.

The lumber yard in a "tenant" farm community has a different problem from the yard in a farm or home-owned community. The yard in a tenant community should direct its advertising in the local newspaper to the owner of the land, telling him that better houses and barns make better tenants. This will have a wholesome effect upon the tenant in making him desire better things. Trust him to express his desires.

The yard in a "home-owned" community has but to create a local pride for good homes in its advertising, and this is comparatively easy. Automobile salesmen and manufacturers know that "pride and emulation" sell more cars than any other appeal. Prove this yourself by glancing through any magazine, and note the pictures of cars amid scenes of elegance and luxury.

The lumber retailer in a community that has the mail-order bee has still "something yet again" to consider. His problem is distinct and vital.

No Such Thing as a Blanket Ad.

With all these problems in mind we can see how difficult—yes, almost impossible it is, for anybody to prepare a blanket ad that every retailer in any one State even could use to advantage.

Since this article is not intended to exhaust the subject, I trust the header will indulge me for rambling all over the subject. So here is another idea.

Bankers all over the country have been pushing the thrift idea. Why doesn't this offer wonderful possibilities for local co-operative advertising on the part of lumber firms, banks, real estate men, building and loan associations? Here's an opportunity for community development that is worth while. It should not be difficult for the reader to imagine the results of an extensive, well-prepared campaign of co-operative advertising on the part of banks, real estate men, building and loan societies and lumber dealers. If properly handled this would be real community advertising with a money-back guarantee for the persons who conducted it, and for the good of the whole community.

But back to the advertising problems of retail lumber dealers. First we must admit that no blanket plan of advertising will fit all places. This makes the problem more difficult, but if the proper rules of common or horse sense are followed advertising for a lumber dealer is no more difficult than advertising for a drygoods or hardware store. And it can be made just as effective.

Use a Camera for Pictures to Illustrate Ads.

In these days when everybody owns a camera it should not be difficult for every lumber yard proprietor to obtain pictures to illustrate his ads. If there is a shingle roof in the home community that has given good service for a long period, why not get a picture of it and write an ad on shingles that will be as "newsy" as the column of personals from Homeburg Station. If George Smith builds a silo, why not take a picture of it and print it in the paper so that all the other George Smiths and Browns, and Johnsons will want one, too. The initial cost of the electros may seem high for one ad, but if the electro is good it can be also used in circulars, on letter-heads and on posters for several years. Another thing to remember when ordering electros is to send along to the engraver a sample of the newspaper that the "cut" is to be printed in. An electro for a newspaper will also show up well on higher grades of paper, but it will not always work the other way.

Another point to remember is that your ad is likely to be one of many ads that are all competing for the reader's attention. For this reason use plenty of white space in the ad, for this attracts attention to your copy. This is especially true where the ad is "all type" and without illustrations.

In selecting the type for an advertisement, it is wise to stick to one type family, or at best not more than two different styles of type. Every ad should bring out one important point and everything else should be subordinated. There should not be too many "display" lines. By display line is meant the heavy type that is used in the head-lines. The purpose of a display line is the same as a sign-board at a cross road. If there is one board at the corner that tells directions and distances the traveler can easily find his way, but if there are a dozen sign-boards pointing in all directions, the poor traveler is sure to go astray.

Most of the rules for writing advertisements also apply to letter writing and to the preparation of booklets and circulars. Every lumber dealer should have a mailing list of the people in his community. If this list is properly classified, it can be made a most valuable asset. Country newspapers offer valuable help in the building of mailing lists. Every wedding should offer possibilities for the sale of lumber as well as furniture or kitchen utensils. A newspaper item telling of unusual crop prospects should offer possibilities for the sale of lumber for barns, granaries, silos, or sheds. The arrival of a new family in the community offers lumber possibilities. If the lumber dealer also handles side lines, or "substitutes," in other words, these also should be exploited. The lumberman who sells paint should remember that a great place to advertise it is on the walls and sides of his own office.

Why shouldn't a man give his wife a hardwood floor as a Christmas or wedding anniversary present?

I recently saw an advertisement of a building and loan association that started out: "A man really does not begin to live until he owns his own home." Certainly it should be possible for the lumber retailer to "humanize" his business. The lumber dealer who encourages the people of his community to build better homes, barns and silos is more than a merchant; he is a public benefactor, for better homes make better citizens—and better citizens buy more lumber than the other kind.

The aggressive educational campaign of the Canadian Forestry Association in the cause of forest conservation has been supplemented by a new issue called "A Matter of Opinion." The booklet is an attractive one and strikes at the subject of forest guarding from a unique angle. Seven characters are introduced—Settler, Camper, Banker, Railway Man, Power Engineer, Fire Ranger, and Tax Payer—each telling his personal story of the need for living forests and the increasing menace of burned and wasted forests. The booklet makes easy reading, and a mass of information is packed into the 24 pages. Copies may be had free by addressing the Association's office, Booth Building, Ottawa.

LINK-BELT

for Conveying, Elevating and Power Transmission

THIS TRADE MARK ON EVERY LINK — IS YOUR GUARANTEE OF RELIABILITY

Link-Belt "H" Class Chains are generously proportioned for the service they are to perform. The rivets are made of .40 per cent. carbon steel, rolled true and smooth after forging. This process compresses the original hard scale surface, and materially increases the durability of the joint.

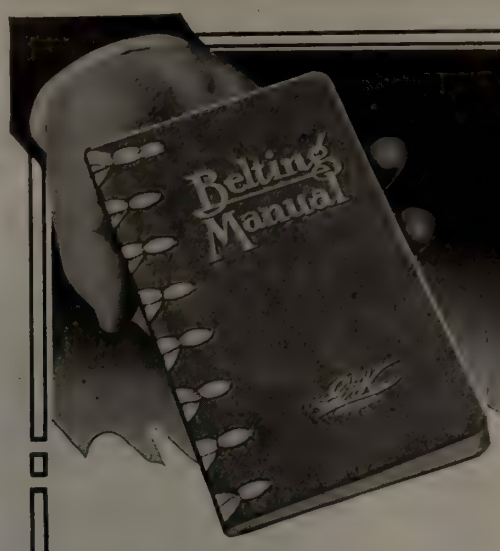
OUR LARGE STOCKS INSURE PROMPT DELIVERIES

SEND FOR CHAIN CATALOGUE No. 110-D.

CANADIAN LINK-BELT CO., LTD.

1189 King Street West, TORONTO

A. R. Williams Machinery Company, Limited, Vancouver, B. C.



This Valuable Book sent all Belt Users- for the asking

THE BELTING MANUAL, a hand book of 96 pages, substantially bound, is the most complete and concise book published on belt transmission. It tells

—how to select belting.
—how to install, lace and care for belting.
—how to make belting endless on the pulleys.
—how to find the width, speed and horse-power of belting.
—scores of other "hows" which are constantly coming up in your Power Transmission problems.

We want to send a copy of this book to every Mill Manager, Superintendent, Purchasing Agent, Foreman, Master Mechanic, Engineer or others who are actually responsible for the selection, installation and up-keep of belting equipment.

If you haven't a Belting Manual write us on your business stationery and a copy will be sent by return mail.

The Graton & Knight Mfg. Co.

Oak Leather Tanners and Belt Makers

Worcester, Mass., U. S. A.

Representatives in Canada:

The Canadian Fairbanks-Morse Co., Limited

St. John Quebec Montreal Ottawa Toronto Hamilton Vancouver Victoria

1851 G&K TRADE MARK REG. U.S. PAT. OFF.

Special "C C" Steel Loading Chain

For Lumbermen's Use

Light and Exceedingly Strong

The Columbus Chain Company

Lebanon, Pa. — **Columbus, Ohio**

Address communications to Columbus, Ohio

Canadian Agent—

ALEXANDER GIBB

3 St. Nicholas Street - MONTREAL, QUE.

Are your horses of use to you?

This seems an absurd question—and the answer is always **"Of course they are"**—In which case provide your stables with:

Johnson's Reliable Veterinary Remedies

Johnson's Horse Liniment, No. 1 (Alcoholic)

1 gal. jugs (Imperial)	$4.50 gal.
1 lb. bottles	8.00 doz.
2 lb. bottles	15.00 doz.

Johnson's Horse Liniment, No. 2 (an oil liniment)

1 gal. jugs (Imperial)	3.00 gal.
1 lb. bottles	6.00 doz.
2 lb. bottles	11.00 doz.

Johnson's Horse Colic Remedy

A sure and speedy cure for all kinds of Colic

1 gal. jugs (Imperial) 40 doses	5.00 gal.
1 lb. bottles 4 doses	8.00 doz.
2 lb. bottles 8 doses	15.00 doz,

Johnson's Veterinary Healing Ointment (Gall Cure)

2 lb. tins	2.00 per tin
4 oz. tins	3.50 doz.

Johnson's Condition Powders (Concentrated)

1 lb. Packages	3.60 per doz.

Johnson's Camp and Household Remedies, such as Cough Syrup, Healing Ointment, Headache Powders, Big 4 Liniment, Stomach Bitters, Cathartic Pills, etc., etc., have stood the test of twenty-five years and are in use all over Canada, from the Atlantic to the Pacific. Prices are lower than those of all other manufacturers. Letter orders receive prompt attention.

A. H. Johnson, Wholesale Druggist, **Collingwood, Ont.**

Logging Locomotives
Made in Canada

Our fifty years' experience in the design and manufacture of logging locomotives is at your disposal. Many of the largest logging operators in Canada are using our "Canadian Made" locomotives.

Our logging models are as carefully designed and built as our 200 ton sizes—oil or coal burning.

MAY WE SEND YOU SPECIFICATIONS?

This engine is 13½ ins. x 18 ins. and weighs 35 tons.

Canadian Locomotive Company, Limited, Kingston, Ont.
Taylor and Arnold Ltd., Sales Agent, Montreal and Winnipeg

Saving $100,000.00 Yearly on Coal Bills

Arrangement of Jones Underfeed Stokers in Dutch Oven for burning paper mill refuse in conjunction with coal.

That may sound fabulous but it is a fact established by the Minnesota & Ontario Power Company. Before the installations of Jones Underfeed Stokers 695 tons of coal at $3.50 per ton were the daily requirement. With the Jones Stokers and Dutch Ovens, as illustrated, the mill waste was utilized and only 5 tons of coal were burned each week.

This is only one example of many showing the immense saving in fuel bills effected by Jones Stokers.

We will be pleased to correspond with you regarding the use of Jones Stokers in your plant. Write us.

Jones Underfeed Stoker Co., Limited
National Trust Building, TORONTO

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Deputy Minister.

Department of the Interior, Ottawa,
December 20th, 1912.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing ...	27 00	29 00
1 x 8 common and dressing ...	27 00	29 00
1 x 10 common and dressing ..	31 00	32 00
1 x 12 common and dressing ..	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ...		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft. ...		16 00
2 x 4 to 12, 10 and 16 ft. ...		20 00
2 x 4 to 12-in., 12 and 14 ft. ...		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain..		31 50
Fir flooring, 1 x 4, edge grain..		35 00
Fir flooring, 1 x 4, flat grain ..		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 25
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00	
Ash, white, No. 1 common	45 00	
Ash, brown, 1sts and 2nds, 4/4	50 00	
Ash, brown, common and better	40 00	
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00	
Birch, 1st and 2nds, 4/4	42 00	
Birch, No. 1 com. and bet., 4/4	35 00	
Birch, 1st and 2nds, 6/4 and 8/4	45 00	
Birch, 1st and 2nds, 10/4 and 12/4..	52 00	
Birch, 1st and 2nds, 16/4	55 00	
Basswood, 1sts and 2nds, 4/4	40 00	
Basswood, No. 1 com. and bet., 4/4..	34 00	
Basswood, No. 2 and 3, common	18 50	
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00	
Basswood, 6/4 and 8/4, com. and bet.	38 00	
Basswood, 4/4, No. 2 com. and bet...	28 00	
Soft elm, 1sts and 2nds, 4/4	40 00	
Soft elm, No. 1 com. and bet., 4/4	32 00	
Soft elm, No. 2 and 3 common	17 50	
Soft elm, 6/4 and 8/4, 1 and 2	42 00	
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00	
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00	
Soft maple, 1sts and 2nds, 4/4	33 00	
Soft maple, com. and bet., 4/4	25 00	
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00	
Hard maple, 1st and 2nds, 4/4	40 00	
Hard Maple, common and better, 4/4	30 00	
Hard maple, 12/4 & 16/4, 1sts and 2nds.	46 00	
Red oak, plain 1st and 2nds, 4/4....	66 00	
Red oak, plain, No. 1 com., 4/4.....	40 00	
Red oak, plain No. 2 com. 4/4.....	32 00	
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00	
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00	
White oak, plain 1sts and 2nds, 4/4.	68 00	
White oak, plain, No. 1 com., 4/4....	40 00	
White oak, plain, No. 2 com., 4/4....	32 00	
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	66 00	
Red and White oak, plain, No. 1 com. 5/4 and 6/4	43 00	
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00	
Red and White oak, plain, 1sts and 2nds, 8/4	72 00	
Red and White oak, plain, No. 1 com. 8/4	48 00	
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00	
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00	
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00	
White oak, ¼ cut No. 1 common	57 00	
Hickory, 1sts and 2nds, 4/4	70 00	
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00	

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up $52 00		54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ...	29 00	30 00
Pine, No. 1 dressing shorts ...	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ...	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips ...	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips ...	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips ...	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	25 00	26 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11' ...	17 50	18 00
1"x 3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12 ..	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16' ...	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles:		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	75	80
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Quebec Spruce Deals		
12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00	
1 in., 8 in. and up wide	62 00	
1¼ and 1½ in. and up wide	65 00	
2 in. and up wide	70 00	
Cuts and Better		
4/4 x 8 and up No. 1 and better	50 00	
6/4 x 8 and up No. 1 and better	60 00	
8/4 x 8 and up No. 1 and better	62 00	
6/4 x 6 and up No. 2 and better	52 00	
8/4 x 6 and up No. 2 and better	54 00	
6/4 x 6 and up No. 3 and better	46 00	
8/4 x 6 and up No. 3 and better	50 00	
No. 1 Cuts		
1 in., 8 in. and up wide	40 00	
1¼ in., 8 in. and up wide	55 00	
1½ in., 8 in. and up wide	57 00	
2 in., 8 in. and up wide	60 00	
2½ and 3, 8 in. and up wide	75 00	
4 in., 8 in. and up wide	85 00	
No. 2 Cuts		
1 in., 6-in. and up wide	31 00	
1¼ in., 6-in. and up wide	42 00	
1½ in., 6-in. and up wide	44 00	
2-in.. 6-in. and up wide	44 00	
2½, 3 and 4 in., 6-in. and up wide	62 00	65 00
No. 3 Cuts		
1 in., 6-in. and up wide	24 00	
1¼ and 1½ in., 6-in. and up wide..	33 00	
2-in., 6-in. and up wide	33 00	
2½, 3 and 4-in., 6-in. and up wide	43 00	48 00
Common and Dressing Mill Run		
1-in. x 4-in.	25 00	
1-in. x 5-in.	25 00	
1-in. x 6-in.	26 00	
1-in. x 8-in.	27 00	
1-in. x 10-in.	29 00	
1-in. x 12-in.	34 00	
1 in. x 13 in. and up	34 00	
1¼, 1½ and 2-in.	30 00	
No. 1 Barn		
1 inch	31 00	45 00
1¼, 1½ and 2-in.	36 00	45 00
2½ and 3-in.		45 00
4 inch		50 00
No. 2 Barn		
1 inch	28 00	36 00
1¼, 1½ and 2-in.	30 00	36 00
2½ and 3-in.		38 00
No. 3 Barn		
1 inch	21 00	28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00	25 00
Box		
No. 1, 1, 1¼, 1½, 2-in.	22 00	25 00
No. 2, 1¼, 1½, 2-in.	19 00	23 00
Mill Culls		
Mill run culls, 1-in.		19 00
1, 1¼, 1½ and 2-in.		20 00
No. 2	17 00	18 00
Lath		
No. 1, 32-in. pine		1 80
No. 2, 48-in. pine		4 35
No. 1, 48-in. pine		4 85
No. 3, 48-in. pine		3 85
Hemlock Lath 48 in.		3 80

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1. E.			
	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8..	14 00	17 00	20 50	21 50
2 x 10	18 00	18 50	21 50	22 50
2 x 12	18 00	19 00	23 50	23 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	21 50
2 x 4, 10, 18, 20	23 50
2 x 6, 8 to 16	21 50
2 x 8, 8 to 16	21 50
2 x 4-6 and 8-in.; 24,. 26, 28, 30, 32 ft.	29 50
2 x 10 and 2 x 12; 8-16 ft.	26 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	28 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	30 50
No. 1 Common Boards	
4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50
Flooring	
4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00
Shiplap—Finished	
6 inch	22 50
8, 10 and 12 inch	23 50
Siding	
6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00
Lath	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	27 10
3 x 8 in., 8 to 16 ft.	24 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.....	27 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	29 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	20 50
2 x 4 in.; 12 and 14 ft.	21 50
2 x 4 in.; 10 and 16 ft.	22 50
2 x 4 in.; 18 and 24 ft.	23 50
2 x 4 in.; 22 and 24 ft.	24 50
2 x 4 in.; 26 to 32 ft.	26 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.....	23 00
2 x 10 and 2 x 12 in.; 18 and 20 ft. ..	25 00
2 x 10 and 2 x 12 in.; 22 and 24 ft. ..	26 00
2 x 10 and 2 x 12 in.; 26 to 32 ft. ...	28 00
2 x 14 in.; 10 to 16 ft.	28 00
2 x 14 in.; 18 and 20 ft.	30 00
2 x 14 in.; 22 and 24 ft.	31 00
2 x 14 in.; 26 to 32 ft.	33 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	24 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	25 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	26 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	27 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft. ...	27 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	27 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	28 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	28 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ..	23 00
No. 2 Shiplap, 6 in.	22 00
No. 2 Shiplap, 8, 10 and 12 in.	23 00

FIR, COMMON BOARDS, S 1 S; 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 85

LATH

Fir lath, ⅜ x 1½ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ⅜ x 1½ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$94 00
Uppers 5/4 to 8/4	92 00
Uppers 10/4 to 12/4	97 00
Selects 4/4	84 00
Selects 5/4 to 8/4	82 00
Selects 10/4 to 12/4	92 00
Fine common 4/4	61 00
Fine common 5/4	65 00
Fine common 6/4	65 00
Fine common 8/4	67 00
No. 1 Cuts 4/4	51 00
No. 1 Cuts 5/4	57 00
No. 1 Cuts 6/4	59 00
No. 1 Cuts 8/4	61 00
No. 2 Cuts 4/4	32 00
No. 2 Cuts 5/4	43 00
No. 2 Cuts 6/4	45 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	33 00
No. 3 Cuts 6/4	34 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	46 00
Dressing 5/4 x 10	51 00
Dressing 5/4 x 12	52 00
No. 1 Moulding 5/4	58 00
No. 1 Moulding 6/4	58 00

(Continued on page 64)

Here's what we do for you!!

Our Traffic Engineers know from actual experience the Hauling Problems of every business. This knowledge is worth money to you—if you will use it. We maintain a staff of trained Traffic Engineers who will tackle your problems of Haulage and Delivery in a business-like way, and give you a report that will present in facts and figures the most economical method that you can adopt to get the most efficiency in the delivery end of your business.

NATIONAL Motor Trucks are made in four models — 1500 pounds, 2000 pounds, 4000 and 7000 pounds. Capacities that provide a truck for every line of business.

If you are as thorough in your investigation of the different makes of Trucks as we are in the construction of the NATIONAL you will own a NATIONAL Truck.

Conferring with us entails no obligation. Catalogue mailed upon request.

NATIONAL STEEL CAR COMPANY, Limited

Works and Operating Office: HAMILTON, CAN. **Montreal Office: SHAUGHNESSY BLDG.**

CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4		58 00
No. 2 Moulding 5/4		47 00
No. 2 Moulding 6/4		47 00
No. 2 Moulding 8/4		47 00
No. 1 Barn 1 x 12		48 00
No. 1 Barn 1 x 6 and 8		34 00
No. 1 Barn 1 x 10		36 00
No. 2 Barn 1 x 6 and 8		32 00
No. 2 Barn 1 x 10		34 00
No. 3 Barn 1 x 6 and 8		26 00
No. 3 Barn 1 x 10		27 00
Box 1 x 6 and up		23 00
Box 1 x 10		25 00
Box 1 x 12		26 00
Box 1 x 13 and up		30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	37 - 39	24 - 26	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

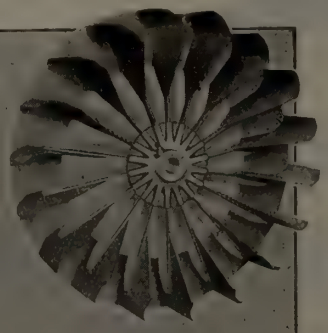
4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in...		98 00
Selects, 1 to 2 in.		88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	72 00	74 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	38 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 50	34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 50	30 00
No. 3, 1 x 8		29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	29 00	28 00
Spruce, 12 in. dimension	30 00	29 00
Spruce, 9 in.		27 00
Spruce, 8 in. and under dimen.	27 50	28 00
10 and 12 in. random lengths, 10 ft. and up	25 00	26 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 50	23 00
All other random lengths, 7-in. and under, 10 ft. and up	21 50	23 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50	23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled		22 00
1⅝-in. spruce laths	4 15	4 25
1½-in. spruce laths		4 00

New Brunswick Cedar Shingles

Extras	3 50	3 60
Clears	3 10	3 15
Second clears	2 40	2 60
Clear whites	2 25	2 30
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.		3 75
Red Cedar Eurekas, 18 inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear		3 65

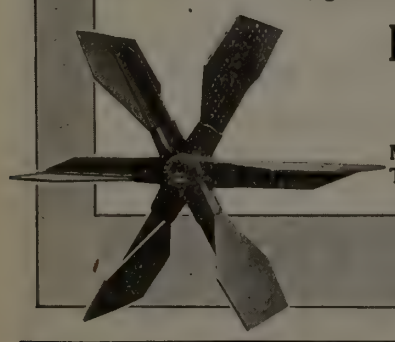


Fan Wheels For Handling Shavings

Each particular class of shavings, refuse or sawdust, requires a special wheel.

Sturtevant Trade Mark PLANING MILL EXHAUSTERS are made with many different types of wheels—one for each class of service. We do not make just one wheel and recommend it for all conditions, but we consider each case individually.

Why not talk it over with one of our engineers?—or get catalog 185-C.



B. F. Sturtevant Co.
of Canada, Limited
GALT - ONTARIO
Montreal Winnipeg
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"Peterborough"

For nearly forty years we have been making the famous "Peterborough" canoes. The model illustrated is our 16 ft. canvas covered canoe which is very popular with lumbermen.

Write for our catalogue

Peterborough Canoe Co., Limited
Peterborough, Ont.

New **RAILS** Relaying
12 to 80 pounds per yard.

LOGGING CARS

Jno. J. Gartshore
58 Front St. West, Toronto

Meet Me at the TULLER—for Value, Service, Home Comforts.

NEW
Hotel Tuller
DETROIT, MICH.

Center of business on Grand Circus Park. Take Woodward car, get off at Adams Avenue

ABSOLUTELY FIREPROOF
200 Rooms, Private Bath, $1.50 Single, $2.50 Up Double.
200 Rooms, Private Bath, $2.00 Single, $3.00 Up Double.
100 Rooms, Private Bath, $2.50 Single, $4.00 Up Double.
100 Rooms, Private Bath, $3.00 to $5.00 Single, $4.50 Up Double.
TOTAL, 600 OUTSIDE ROOMS
All Absolutely Quiet

Two Floors—Agents' Sample Rooms. New Unique Cafes and Cabaret Excellente.

PRATT & WHITNEY CO.
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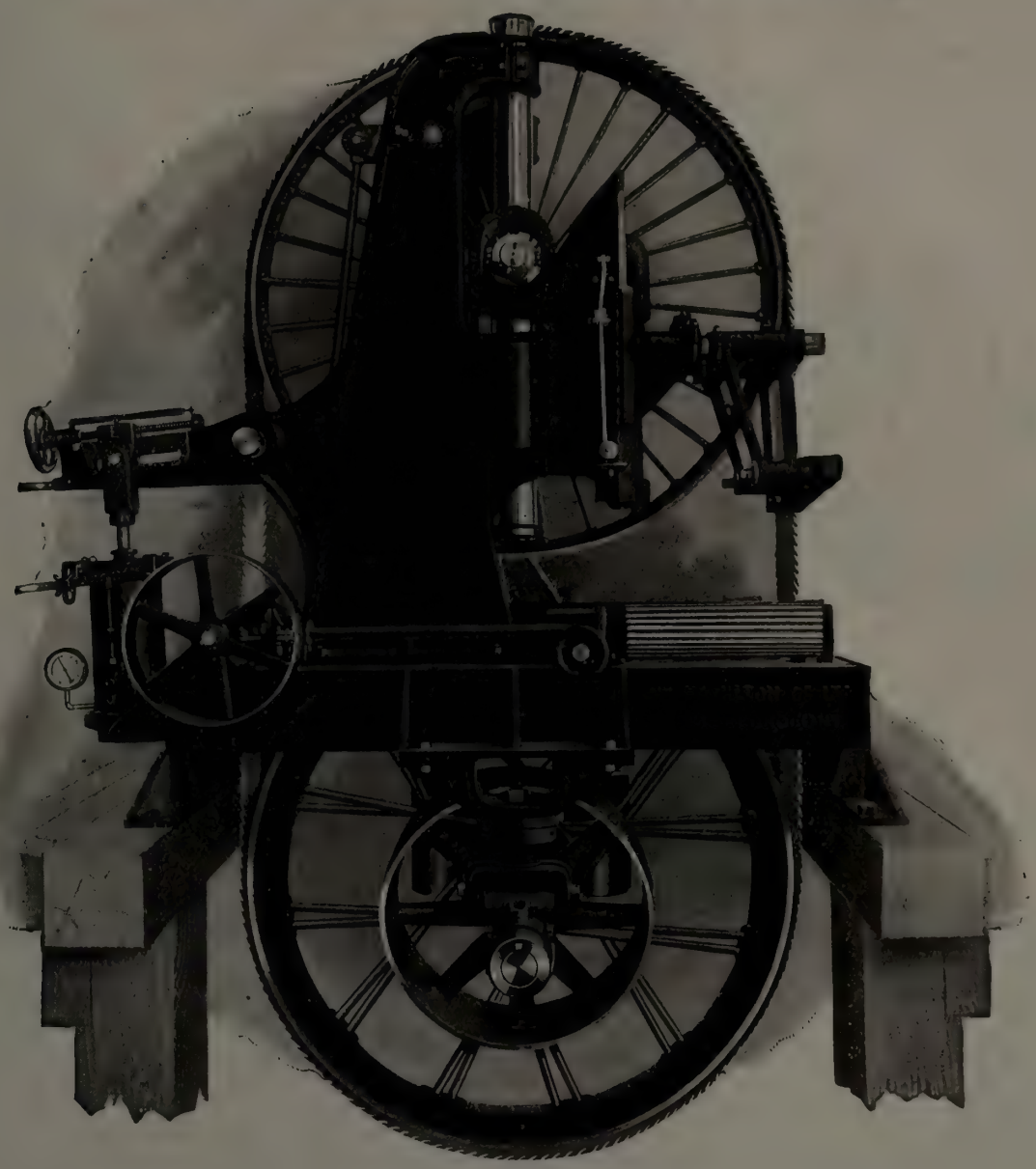

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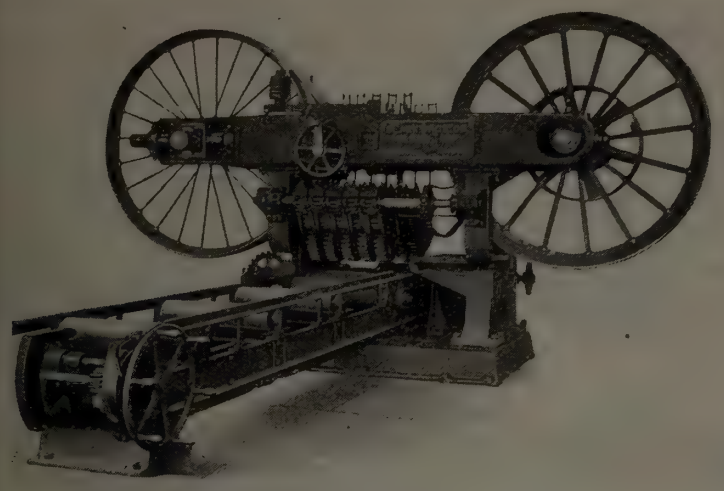

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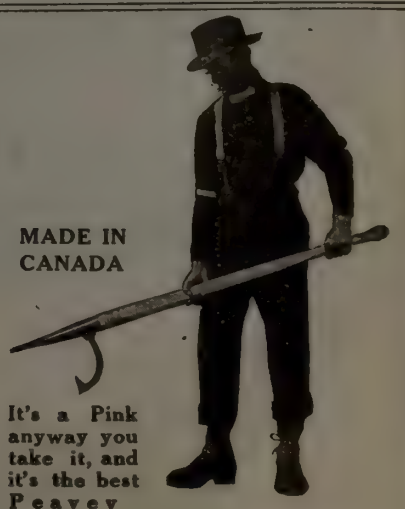

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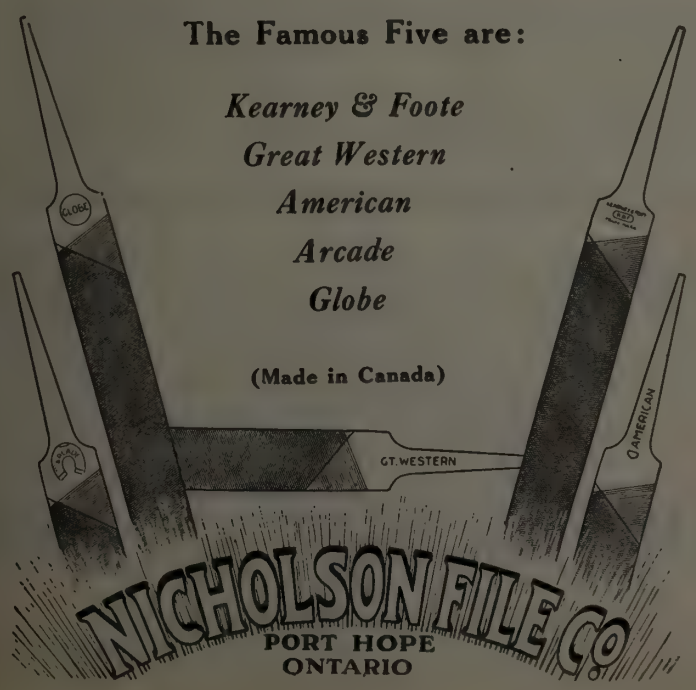

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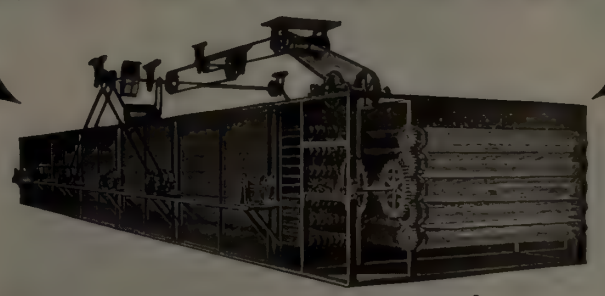

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Harris Tie & Timber Company
Long Lumber Company
Mainland Lumber & Shingle Co.
McGibbon Lumber Company
Miller Co. Ltd., W. H.
Muir, Kirkpatrick & Sharpe
Terry & Gordon.
Timms, Phillips & Company

SHINGLE & LATH MACHINERY
Dunbar Engine & Foundry Co.
Hamilton Company, William
Long Manufacturing Company, E.
Payette & Company, P.
Waterous Engine Works Company

SHOE PACKS
Gendron Shoepack Company, P. T.

SILENT CHAIN DRIVES
Canadian Link -BeltCompany

SNOW PLOWS
Pink Company. Thos.

SODA PULP PLANTS
Becker & Co.

SOUTHERN PINE
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Cameron & Company
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Hobart & Company
Mason, Gordon & Company
Southern Lumber Company
Stout Lumber Company
Valley Lumber Company
Wilson Lumber Company
Wisconsin & Arkansas Lumber Co.
Wuichet, Louis

SPARK ARRESTERS
Canada Wire & Iron Goods Co.

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Auger & Son
Bartram Bros.
Blair & Rolland
Bourgouin, H.
Brown Corporation
Donogh & Company, John
Federal Lumber Company
Fesserton Timber Company
Fraser Limited
Fraser-Bryson Lumber Company
Gillies Bros.
Grant & Compbell
Hart & McDonagh
Laferte, J. A.
Mason, Gordon & Company
Murray & Gregory
New Ontario Colonization Company
Partington Pulp & Paper Co., Ed.
Quebec & St. Maurice Industrial Co.
Spencer, C. A.
Terry & Gordon.

STEEL CHAIN
Canadian Link-Belt Company
Columbus Chain Company
Jeffrey Mfg. Company
McKinnon Chain Company
Waterous Engine Works Co.

STEAM PLANT ACCESSORIES
Waterous Engine Works Company

STEAM APPLIANCES
Darling Bros.

STEAM TRAPS
Cole Co., Geo. W.

STEEL BARRELS
Smart-Turner Machine Co.

STEEL DRUMS
Smart-Turner Machine Co.

STOKERS
Jones Underfeed Stoker Company

TAPS and DIES
Pratt & Whitney Company
Waterous Engine Works Company

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Austin & Nicholson
Fesserton Timber Company
Harris Tie & Timber Company
Spears & Lauder
Terry & Gordon.
W. H. Miller Co., Ltd.

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Cant & Kemp
Farnworth & Jardine
Hillas & Company, W. N.
Smith & Tyrer Limited

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Sewall, James W.
McInnis, A. D.

TIMBER CRUISERS
Campbell Lumber Company. L. E.

TIMBER LANDS
Lacey Co., Jas. D.

TRANSMISSION MACHINERY
Canadian Link-Belt Company
Jeffrey Manufacturing Company
Waterous Engine Works Company

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West & Peachey

TURBINES
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Smith Company, S. Morgan.

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Hoffman Brothers Company
Webster & Bro., James

VENEER MACHINERY
Perrin, William R.
Philadelphia Textile Machinery Co.

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Waterous Engine Works Company
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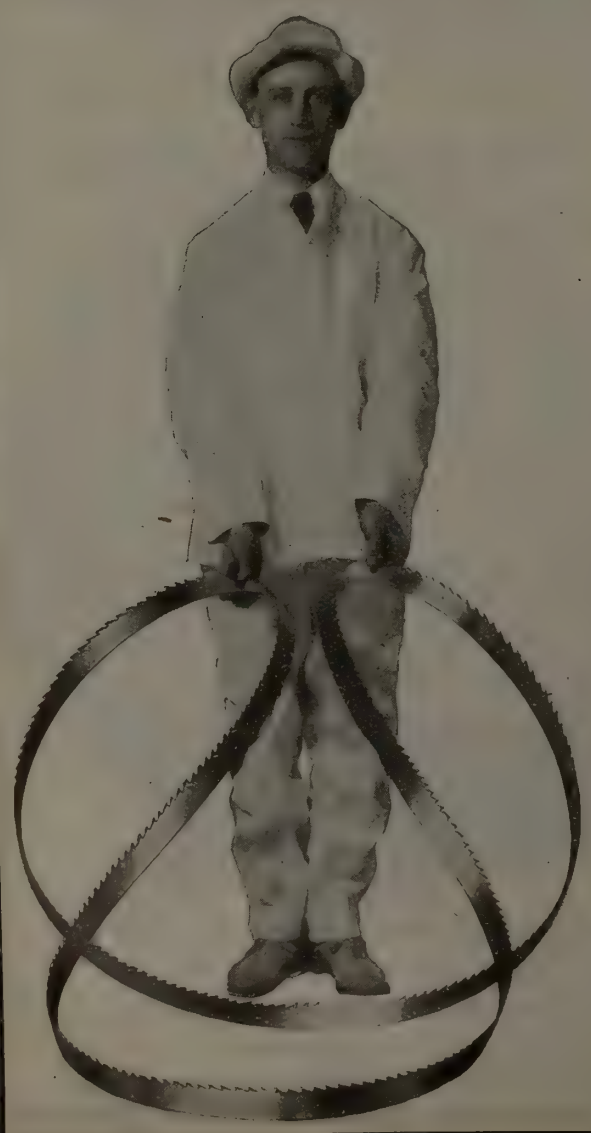
Austin & Nicholson
Becker & Co.
Miller Co., Ltd., W. H.
New Ontario Colonization Co.
River Ouelle Pulp & Lumber Co.

YELLOW PINE
Chicago Lumber & Coal Co.



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BAND and RE-SAWS

We have achieved an enviable reputation for supplying SAWS which stand up to their work longer, with less re-fitting than any other SAWS in the world. If there is any doubt in your mind, we stand ready to prove it to you.

A Perfect Saw for Every Purpose

Send for our 248 page book on Saws. The most valuable and interesting Saw book ever published. Tells you just what you want to know about SAWS, MACHINE KNIVES and SAW FITTING TOOLS.

ASK FOR BOOKLET "C L"

E. C. ATKINS & COMPANY INC.

Makers of Sterling Saws

Factory—HAMILTON, ONT.

Vancouver Branch—109 Powell St.

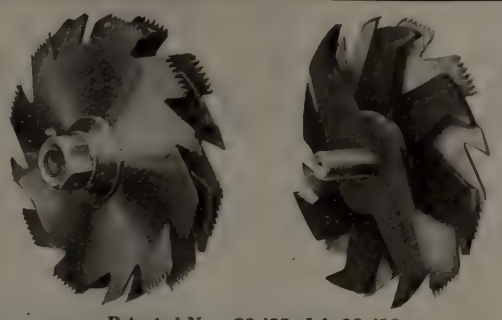
J. J. TURNER & SONS

PETERBOROUGH, ONT.

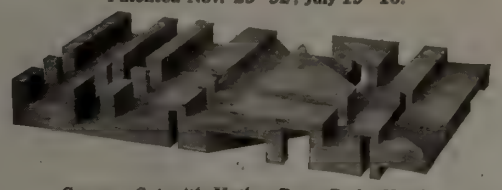
Government Contractors and the largest Manufacturers and Dealers in Canada of

Lumbermen's Tents, Bed Ticks, Grey Blankets, Nose Bags, Waterproof Goods, Steel Ranges and General Camp Outfits.

Write for Catalogue. **Prompt shipments.**



Patented Nov. 29 '92; July 19 '10.



Grooves Cut with Huther Bros. Dado Heads

Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

Write for New Illustrated Catalog.

HUTHER BROS. SAW MFG. COMPANY, Inc.

1103 University Ave.
ROCHESTER, N. Y.

LOGGING LOCOMOTIVES

The designs of our Logging locomotives are the result of wide experience, extending over a period of 80 years.

The material used in their construction is thoroughly tested and is the best of its kind.

All details are accurately finished to standard gauges and are absolutely interchangeable on all locomotives of the same class and size.

This cuts out long delays at critical times of the work, as parts liable to wear can be kept on hand or shipped promptly from our works.

MONTREAL LOCOMOTIVE WORKS, LIMITED,

DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

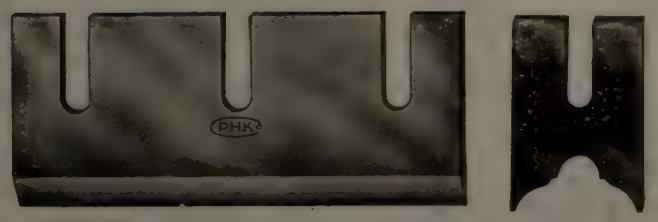
A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

The Peter Hay Knife Co., Limited

GALT, ONTARIO



MANUFACTURING WOODWORKING

Machine Knives, Circular Cutters and Mortise Chisel

No. 3 Lath Machine

For the mill, whose requirements call for an enormous output, we recommend our No. 3 Lath Machine.

Designed primarily to work in conjunction with our No. 4 and No. 3 Bolters. The well known capacities of these Bolters, both in quantity and quality, will give you an idea of the product turned out by our No. 3 Lath Machine.

Covering a period of years, we have placed these Lath Machines in all parts of Canada.

The reputation they have established has led to repeat sales in the majority of cases where increased capacity was desired.

Simple in construction, strong in frame and bearings, with all parts easily accessible for adjustment, our No. 3 Lath Machine is without doubt the leader in this field.

Floor space, 4 feet x 4 feet 6 inches.

Weight, 1,600 pounds.

Maximum power required, 15 H. P.

Send for our catalogue No. 102 and prices.

The E. Long Manufacturing Co.

LIMITED

Orillia, - - Ontario

Waterous Edgers

Opening 48″, 54″, 60″, 66″, 72″, 84″, and 96″
for 8″ Cants

Waterous Edgers

Opening 40″, 48″ and 52″
for 6′ Cants

Waterous Edgers

Opening 30½″
for 5″ Cants

THERE is a Waterous Edger to handle every size cant going through your mill.

They are built with capacities to take 5″, 6″ and 8″ stock and have incorporated in them, every improvement that will best accomplish smooth and accurate sawing with the least time and labor and with the minimum of danger to the operator.

ASK FOR OUR NEW CATALOGUES.

The Waterous Engine Works Co. Ltd.

Head Office and Shops:
Brantford, Ont.

Branch—
Winnipeg, Man.

Agency—H. B. Gilmour,
Vancouver, B. C.

$5,000,000.00
worth of mixed metal sold annually.

"FROST KING" METAL

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. **Price 30c per lb.**, Fort William and East; West of Fort William **35c per lb.**, delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

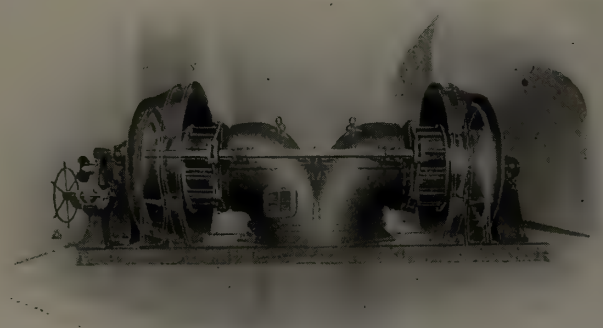
Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— **New York, N. Y.** **London, Eng.** **St. Louis, Mo.**

The Low Head Plant

with

SMITH HYDRAULIC TURBINES



has established a reputation for real service that is second to none in the field of water power utilization. It is the result of all-round efficiency, hydraulic as well as mechanical, and has been attained by the careful consideration of every feature entering into the design of turbine equipment.

Our thorough investigation of the conditions peculiar to any proposition assures a practical and economical solution of the problem.

Write for Bulletin F

S. Morgan Smith Co., York, Pa.

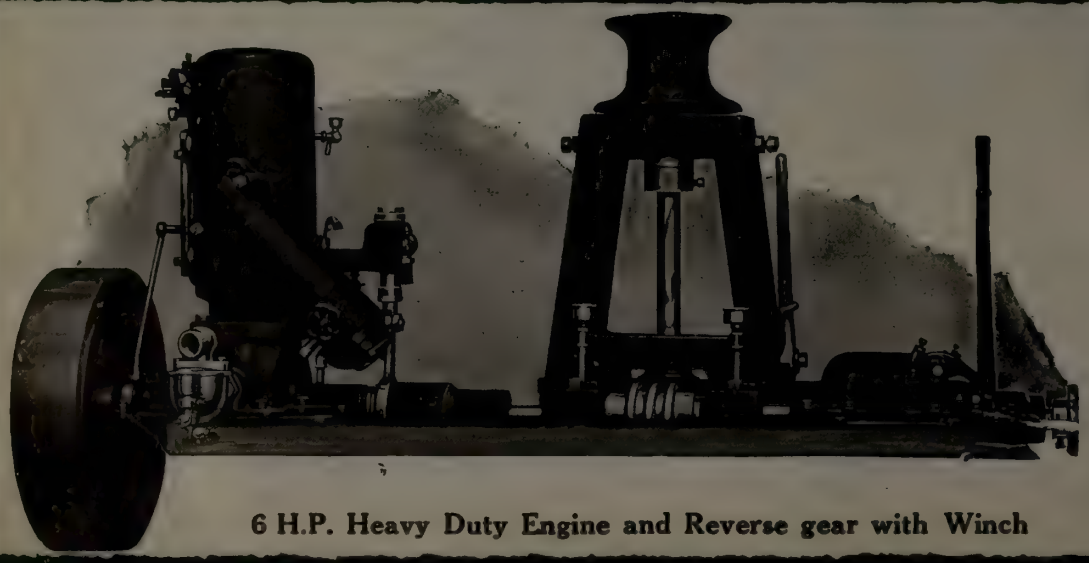
H. B. VanEvery—CANADIAN REPRESENTATIVE
405 Power Bldg. - - - Montreal, Can.

Montreal **Toronto** **Winnipeg**

The J. C. McLaren Belting Co.

Limited

General Mill Supplies **MONTREAL**



6 H.P. Heavy Duty Engine and Reverse gear with Winch

River Driving Costs

will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

Adams Launch & Engine Co.

Penetang, Ont.

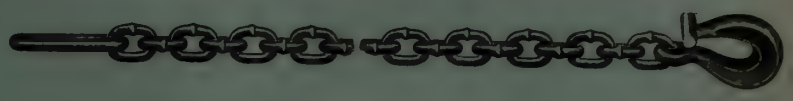
Vol. 36 Toronto, June 15, 1916 No. 12

Canada Lumberman & Wood Worker

WATER WHEELS GOVERNORS, PUMPS

Highest quality

Boving Hydraulic & Engineering Co.
LINDSAY, ONT. Limited



Made in all styles

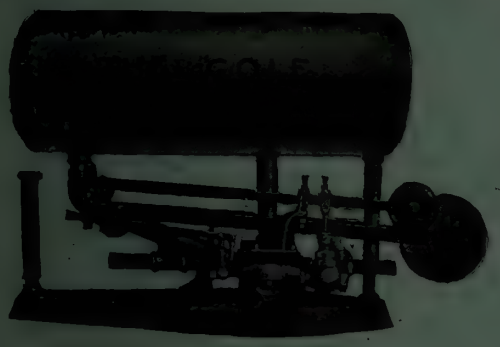
Electric-Welded Boom Chain

We also specialize
Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

A *COLE* MEANS INCREASED CIRCULATION



Mr. Superintendent:

Specify the COLE Steam Trap in your next budget. It returns condensation to boiler one hundred degrees hotter than a pump, and operated one-tenth the steam. The result is a big saving.

Geo. W. Cole Co., 838 Dundas St., Toronto
The "Cole" for Coal Economy

ASBESTOS

We manufacture practically every article that can be made of Asbestos—including

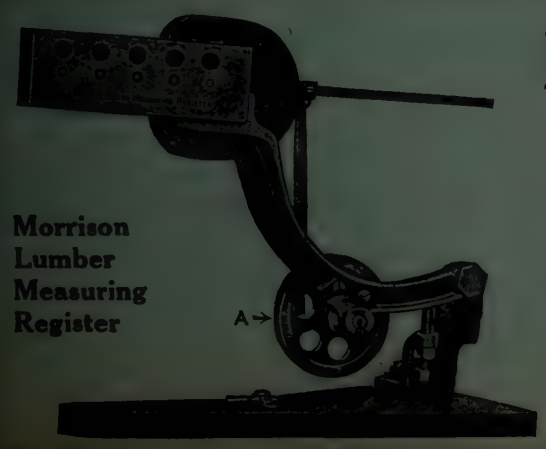
Asbestos { Packings, Boiler Gaskets, Pipe and Boiler Coverings

Turner Brothers Canada, Limited
MONTREAL

There's a
SMART-TURNER PUMP
to meet your every need.

Buy the best, and join the "Don't Worry" Club.

The Smart-Turner Machine Co., Limited
HAMILTON, - CANADA



Morrison Lumber Measuring Register

Keep Tab On Your Stock

The Morrison Lumber Measuring Register can be used in the saw mill, planing mill, woodworking plant and retail lumber yard. It can be quickly attached to any machine and is guaranteed to accurately measure every stick as it is fed under the wheel of the register. It saves you money, time and labor.

Write for detailed information.

The James Morrison Brass Mfg. Co. Limited
93-97 Adelaide St. W., Toronto

J. M. T. Steam Specialties

We make a high-grade line including Reducing Pressure Valves, Pop Safety Valves, Injectors, Ejectors, etc., etc.

Alphabetical Index of Advertisers, Page 62 Classified Directory to Advertisements, Page 64

COSTS LESS PER DAY

AMPHIBIA BELTING

COSTS LESS PER DAY

Put Good Belting

on your

Good Machines

Your machines are expensive, and naturally you expect them to turn out the quality and quantity of work commensurate with their cost.

Then why harness them with belting which cannot begin to do them justice?

Use

"AMPHIBIA"

Planer Belting

and get the most work from your machines, in the quickest time, at the lowest cost per day of service.

Try a sample run of "AMPHIBIA" Planer and prove its merits.

"Leather like gold has no substitute."

Sadler & Haworth

Established 1876

Tanners and Manufacturers

For 40 Years Tanners and Manufacturers of the Best Leather Belts

MONTREAL, 511 William Street

TORONTO	ST. JOHN	WINNIPEG	VANCOUVER
38 Wellington St. E.	149 Prince William St.	Galt Building	107-111 Water St.

The FLEXIBLE WATERPROOF BELT

Geo. Gordon & Co., Limited

Cache Bay, Ontario

RED and WHITE PINE

Cross Arms, Shaped, Bored and Painted

3¼ x 4¼ x 3′ 6″	2000 pcs.
3¼ x 4¼ x 4′	1600 "
3¼ x 4¼ x 6′	2300 "

Cross Arm Material D 4 S

3¼ x 4¼ x 4′	12000 pcs.
3¼ x 4¼ x 6′	9000 "

All Selected Norway.

Dressing done on short notice. ***Send us your inquiries.***

Vancouver Lumber Co., Limited

Fir Mills—South End of Connaught Bridge, Vancouver, B. C.

Cedar Mills—Roche Point, B. C. (Burrard Inlet)

Special Item!

Our Specialties:

XXX and XXXXX B.C. Cedar Shingles

(100% Clear and 100% Edge Grain)

"Clear A" Brand Cedar Bevel Siding

No. 1 Common Cedar Boards
Extra Good Grade Small and Sound
Knotted Type
Makes Excellent Barn Siding
ALL WIDTHS
Ask for Price F. O. B. Your Station

We Manufacture:

Timbers up to 94 Feet

Fir Flooring, Ceiling, Finish and Mouldings

Cedar Silo Stock, Boat Lumber, etc.

Straight or Mixed Cars Shipped Promptly

Send your orders and enquiries to our Eastern Sales Office:

701 Excelsior Life Building, Toronto, Ont.

CHAS. PLANT,
Representative

QUALITY LUMBER

Shell Box Stock

5/8 x 3 and up Spruce
1¼ x 4 and up Spruce
4 x 5″ Spruce
4 x 5″ White Pine
1 x 10″ White Pine

Above all 1915 Sawing

THIS WEEK'S SPECIALS

250,000′ 2 x 4 and up—Spruce Mill Culls, dry
200,000′ 1 x 4 and up—White Pine No. 2 Culls, dry

Prices Right - - Service the Best - - Let us hear from you

Branch Office
852 Cambie Street
Vancouver

Terry & Gordon
Wholesale Lumber Merchants

Head Office
704 Confederation Life Bldg.
Toronto

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26′ long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

DRY HEMLOCK

LONGFORD STOCK

4/4 x 4 and up	No. 2 Hemlock	200,000	8/4 x 6—14	No. 1 Hemlock	60,000
8/4 x 6 and up	No. 2 Hemlock	200,000	8/4 x 6—16	No. 1 Hemlock	700
8/4 x 4	No. 2 Hemlock	300,000	8/4 x 8—14	No. 1 Hemlock	20,000
4/4 x 4	No. 1 Hemlock	40,000	8/4 x 10—10	No. 1 Hemlock	9,000
4/4 x 4 and up	No. 1 Hemlock	180,000	8/4 x 10—12	No. 1 Hemlock	50,000
8/4 x 4—14	No. 1 Hemlock	180,000	8/4 x 10—14	No. 1 Hemlock	100,000
8/4 x 6—10	No. 1 Hemlock	37,000	8/4 x 10—16	No. 1 Hemlock	100,000
8/4 x 6—12	No. 1 Hemlock	50,000			

We are also cutting our new stock and can fill out cars with green stock

The Long Lumber Company

HAMILTON, ONT.

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

1 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

1 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

HIGH GRADE

BRITISH COLUMBIA SOFT PINE

THIS PRODUCT OF THE BRITISH COLUMBIA MOUNTAINS IS THE KING OF ALL SOFT PINES. FREE FROM THE GUM THAT SUGAR PINE CARRIES AND THE SHAKE THAT CORK PINE CARRIES. IS A VERY STRAIGHT GRAINED STOCK, SUITABLE FOR ANY PURPOSE FOR WHICH PINE CAN BE USED. FOR PIANO WORK, SASH, DOORS, PATTERN STOCK AND ALL HIGH GRADE WORK IT IS UNSURPASSED. WE CAN SHIP YOU MIXED CARS IN FLOORING, CEILING, SIDING, CASING, BASE, AND DRESSED OR ROUGH. LUMBER OF EVERY DESCRIPTION AT PRICES THAT WILL SURPRISE AND INTEREST.

LET US QUOTE YOU ON 4/4, 5/4, 6/4 x 8″10″ & 12″, ALSO FLOORING AND SIDING

B. C. RED CEDAR SHINGLES

PROMPT SHIPMENTS—ALL GRADES—100% PERFECT SHINGLES—PRICES RIGHT.

DOUGLAS FIR, HEMLOCK and NORWAY TIMBERS

CEDAR AND FIR SILO AND TANK STOCK. FIR AND SPRUCE LADDER STOCK.
FIR AND LARCH FLOORING. CEILING, SIDING, ETC.

Western Office
1007 Deminion Bldg.,
VANCOUVER, B.C.
GEO. R. POTTER.
Manager

MUIR, KIRKPATRICK & SHARPE

WHITE and NORWAY PINE, HEMLOCK, SPRUCE, JACK PINE

Eastern Office
1123-4 Traders Bank
Bldg. TORONTO, Can.

LUMBER

SPRUCE and PINE LUMBER

Trade *Mark*

Peeled and Rossed Pulpwood

Everything in Wood and Glass for Buildings

Mills at: St. John, N. B., St. Camille and Lake Frontier, Que.

Murray & Gregory Limited

Head Office: St. John, N. B. **Quebec Office: St. Camille, P. Q.**

Bartram Brothers

Cable Address, "Bartram"
Code, ABC 5th edition.

Ottawa, Canada

Limited

1915 Cut

Stock on Hand unsold, May 15th, 1916

Norway Mill Run

1 x 4/5 x 10/16	735,697
1 x 6 x 10/16	203,016
1 x 8 x 10/16	9,424
1¼ x 4 x 10/16	30,292
1¼ x 5 x 10/16	17,798
1¼ x 6 x 10/16	5,143
1¼ x 7 x 10/16	30,521
2 x 4 and up x 10/16	3,900
2 x 5/7 x 10/16	9,900
2 x 6 x 10/16	3,295
3 x 4/6 x 10/16	19,484
3 x 7 and up x 10/16	96,976
4 x 5 x 10/16	6,179

Norway Culls

1 x 4 and up x 6/16 No. 1 and 2	328,012
1 x 4 and up x 6/16 No. 1	391,618
1 x 4 and up x 6/16 No. 2	369,098
1¼ x 4 and up x 6/16 No. 1	31,359
2 x 4 x 6/16 No. 1	3,950
2 x 4 and up x 6/16 No. 1	3,308
2 x 4 and up x 6/16 M.R. Outs	26,656

White Pine, Good

1 x 4 and up x 6/9	1,512
1 x 4 and up x 10/16	5,825

White Pine Mill Run

1 x 4/5 x 10/16	109,256
1 x 7 and up x 10/16	88,550
1 x 10 x 10/16	2,098
1 x 12 x 10/16	9,442
1¼ x 4 x 10/16	4,651
1¼ x 5 x 10/16	2,165
1¼ x 6 x 10/16	3,371
1¼ x 7 x 10/16	7,771
2 x 4 and up x 10/16	4,311
3 x 4 and up x 10/16	117,841
4 x 5 x 10/16	1,562

White Pine Culls

1 x 4 and up x 6/16 No. 1	5,579
1 x 4 and up x 6/16 No. 2	107,913
2 x 4 and up x 6/16 No. 1	5,680
3 x 4 and up x 6/16 No. 1	69,397

Spruce Mill Run

1 x 3 x 8/16	85,000
1 x 4 x 8/16	199,197
1 x 5 x 8/16	254,226
1 x 6 x 8/16	387,930
2 x 4 x 10/16	139,142
2 x 5 x 10/16	222,175
2 x 6 x 10/16	186,544
2 x 7 x 10/16	94,415
2 x 8 x 10/16	29,253
2 x 9 x 10/16	12,570
2 x 10 x 10/16	40,693
3 x 6 x 10/16	200,823
3 x 7 x 10/16	80,887
3 x 8 x 10/16	53,192
3 x 9 x 10/16	55,842

Spruce Culls

1 x 4 and up x 6/16	143,921
2 x 4 and up x 6/16	175,103
3 x 3 and up x 6/16	200,000
3 in. 5th Quality	85,000

Lath Mill Run

1½—32 in. R. Pine	538,000
1½—32 in. W. Pine	187,000
1¼—48 in. Pine and Spruce	90,000

EXPORTERS OF DEALS TO U. K. AND EUROPE

Watson & Todd Limited
OTTAWA
DRY 1½" NORWAY

1915 CUT 1½" SPRUCE
In Good Shipping Condition
Send us your enquiries

The
Harris Tie & Timber Co.
Ottawa - Canada
Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

ESTABLISHED 1855
THE McGIBBON LUMBER CO.
OF PENETANGUISHENE
Manufacturers of and Dealers in
Lumber, Lath, Shingles, Etc.
Hemlock Billstuff a Specialty of which we have the Best Assortment on Georgian Bay.
Don't wait to write. Phone us your requirements.
All stock sized or matched if required.
Our Yards are Unequalled for Drying Lumber

California White Pine
California Sugar Pine
and Arizona Soft Pine
Best Stock for Factory and Pattern Lumber
Ask **LOUIS WUICHET**
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Fraser Bryson Lumber Co., Ltd.
Office, Castle Building 53 Queen St. Ottawa, Can.
Wholesale Lumber Dealers and Selling Agents for
Fraser & Co.
Mills at
DESCHENES - - - QUEBEC
White Pine
Red Pine
Spruce
Lumber and Lath

River Ouelle Pulp & Lumber Co.
Manufacturers of
SPRUCE
Lumber Lath Pulpwood
Head Office and Mills at:
St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of Quebec City
Also Mills at:
Crown Lake, Powerville Riv. Manie
On Nat. Transcontinental Ry.

White Cedar Shingles

We offer for Immediate Shipment
dry stock 1915 cut in all grades.

Our production is the largest in Canada.

Our Shingles are uniform in quality, being well manufactured and graded.

White Cedar Shingles are Good Shingles

Prices and Terms alike to all buyers

The Canadian White Cedar Shingle Association

F. G. WHEATON, Amherst, N.S.

Canadian Sales Agent

QUALITY HARDWOOD

Birch
Beech
Maple

If you are interested in Hardwoods, you will be interested in us.

We are manufacturing high quality Hardwood Lumber, sawing and grading according to National Hardwood Association Rules.

The Logs are cut from our own soil-right Lands, and particular attention given to quality.

Our Mills are located on Canada Eastern Branch and Transcontinental Branch of the Canadian Government Railway, and in the heart of the best forests in New Brunswick.

Our Head Office in St. John will answer all enquiries.

Edward Partington Pulp & Paper Co.

ST. JOHN **Limited** **N. B.**

The best that money can buy

FRASER F QUALITY

10 modern band mills to serve you

SPRUCE
Rough or Dressed

White Cedar Shingles

Spruce Laths

Piano Sounding Board Stock

Fraser Limited
Fredericton, N. B.

JOHN McKERGOW, President
W. K. GRAFFTEY, Managing-Director

The Montreal Lumber Co. Limited

Wholesale Lumber

Ottawa Office: 46 Elgin St.
Montreal Office: 759 Notre Dame St., W

James P. Grant
John K. Campbell

Grant & Campbell

Manufacturers of

SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

New Glasgow, N. S.

PRESSES

Hydraulic and Screw for
VENEER
VENEER DRYERS
PULP

Special machinery made to order

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Being next door to the Patent Office, we have personal interviews with Examiners, thus earlier allowance of your Patents. We have access to all Records and solicit the business of Manufacturers, Engineers, and others who realize the advisability of having their Patent business transacted by Experts. Send for our Booklet, etc.

HAROLD C. SHIPMAN & CO.
Reg. Patent Attorneys Ottawa, Canada

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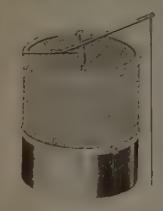
Tie your lath with Laidlaw wire. It saves you money. It means satisfaction to the dealer and contractor.
Write for Quotations.

LAIDLAW BALE-TIE CO., Ltd.
HAMILTON, ONT.

CANADIAN OFFICE & SCHOOL FURNITURE Co. LIMITED
PRESTON ONT.
FINE BANK, OFFICE, COURT HOUSE & DRUG STORE FITTINGS.
OFFICE, SCHOOL, CHURCH & LODGE FURNITURE
SEND FOR CATALOGUE

Spark Arresters



Wire Cloth for Refuse Burners

Our spark arrester is substantially built and will last for years. Don't wait until a fire has visited your property, equip your mill at once.

Prices on application

Canada Wire & Iron Goods Co. Limited
HAMILTON, ONT.

Lumber

Good Grades **Right Prices** **Prompt Shipments**

Canadian Hardwood. National Grading Rules

Birch
Basswood
Maple
Elm
Beech

All Thicknesses

Also full line in

White, Red

and

Jack Pine

All grades and sizes.

Get in touch with us for prices

C. G. Anderson Lumber Company, Limited

Manufacturers and Strictly Wholesale Dealers in Lumber

705 Excelsior Life Building
Toronto

WE Buy, Sell and deal in all kinds of Lumber and Timber in Canada and United States: Spruce, White Pine, White and Basswood, Ash, Cedar, Douglas Fir, Beech, Birch, Walnut, Cherry, Chestnut, Cottonwood, Hemlock, Maple, Norway Pine, Short and Long Leaf Yellow Pine, Oak, Redwood, Birch, Maple and Oak Floorings, Pulpwood Ties, and Cedar Poles.

AUGER & SON
QUEBEC

HAEBERLE LUMBER CO.
LUMBER AND TIMBER
White Pine, Norway, Yellow Pine, Hemlock
Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties,
Yellow Pine Timber a Specialty.
Interior Trim Mill Work.
NIAGARA FALLS, N.Y.

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Eastern and Southern Lumber

We are at all times in the market for dry
WHITE PINE, DIMENSION SPRUCE, SPRUCE BOARDS, HEMLOCK BOARDS, LATH and CLAPBOARDS.

Advise us of your Market Prices and Stocks

A. H. Richardson Lumber Co.
176 Federal Street, BOSTON, MASS.

SPRUCE BIRCH HEMLOCK

Merchantable 100,000' 1" Spruce
" 100,000' 2 x 4 Spruce
" 300,000' 2 x 5 and up to 8" Spruce
100,000' 1" Birch
300,000' 3" Birch
100,000' 1" Hemlock

Prompt shipments

J. A. LAFERTÉ
Room 38-9
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HARDINGE
Watchman's Clocks
Write for details
SIGNAL SYSTEMS CO.
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SPECIALTIES

Sawed Hemlock
Red Cedar Shingles
White Pine Lath
Bass and Poplar Siding

James Gillespie

Pine and Hardwood

Lumber

Lath and Shingles

North Tonawanda, N.Y.

Experience—
Technical Training—
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allow us to render clients correct, reliable and economical service in estimating timber, executing topographic and boundary surveys, and in forest planting. We have crews out on 400,000 acres now.

Let us handle your work also.

JAS. W. SEWALL
OLD TOWN, - MAINE

Lt.-Col. L. J. D. Marquis
FOREST ENGINEER
Timber Estimates and Valuations.
Topographical and Logging Maps.
Forest Management and Operations.
TRANSACTIONS ON TIMBER LANDS
111 Mountain Hill, QUEBEC

A. D. McINNIS
Is prepared to make reports, and estimates on all classes and kinds of Timber, together with Maps, and cost of operating, also sell or buy for you.
25 years practical experience in woods operations and cruising.
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Cant & Kemp
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GLASGOW
Timber Brokers
Cable Address, "Tectona," Glasgow
A1 and A B C Codes used

FARNWORTH & JARDINE
Cable Address: Farnworth, Liverpool
WOOD BROKERS and MEASURERS
2 Dale Street, Liverpool, and Seaforth Road, Seaforth, Liverpool, England

We are Buyers of
Hardwood Lumber
Pine and Spruce
Veneers (3 or more ply) Handles (all descriptions)
Staves Hoops
Headings
James Webster & Bro., Ltd.
Bootle, Liverpool, England
London Office
Dashwood House 9 Broad St. E.C.

"Well Bought is Half Sold"

The following are a few lots of choice Bone Dry

HARDWOODS

we have to offer :

1 car 2" No. 1 Common and Better Hard Maple
1 car 6/4 " " " " "
1 car 1" " " " " "
100 M' 1" No. 3 Common Hard Maple
100 M' 1" No. 2 Common Birch
100 M' 1" No. 3 " "
75 M' 5/4 No. 1 Common and Better Basswood
3 cars 1" No. 1 Common and Better Soft Elm
4 cars 1" No. 2 " " Black Ash

In addition the following :

150 M' 1 x 4—10/16' No. 1 Jack Pine
100 M' 1 x 5 "
50 M' 1 x 8 "
1 car 3 x 9 "
6 M' 8 x 8—10/16' Com. White Pine
18 M' 10 x 10 "

Let us have your inquires.

Graves, Bigwood & Co.

MANUFACTURERS OF

Pine and Hemlock Lumber

1026-32 Traders Bank Bldg, Toronto, Ont.

Mills : Byng Inlet, Ont.

Results That Count

It pays to advertise your wants in the "Canada Lumberman" because you get results. Read this letter.

C. B. Janes & Co. Limited
VENEERS
Orillia, Canada

Canada Lumberman,
Toronto

Gentlemen,

Kindly discontinue our little sale ad., one car lumber.

We got fifteen enquiries for the one car.

Yours truly,

C. B. JANES & CO., LTD.

(signed) C. B. Janes

If an "ad." in our Wanted and For Sale Department will sell lumber for Mr. Janes it will buy or sell for you. What have you to advertise?

Mason, Gordon & Co. 80 St. Francois Xavier Street, Montreal, Que.

Everything in Timber and Lumber

Car and Cargo lots only

Douglas Fir, Pine, Hemlock, Spruce, Yellow Pine and Oak

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Sales Agents for Eastern Canada for Wheeler Osgood Co., Tacoma, Wash.—Doors, Turned Stock &c.

Toronto Office: 510 Lumsden Building
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Let us quote you on your requirements of the following stock.

100,000′ 10 x 10 Hemlock—
heavy to 12′ & 16′ lengths
45,000′ 2″ No. 1 C. & B. Maple
100,000′ 1″ No. 1 C. & B. Birch
30,000′ 1″ & 1½″ Log Run Beech

Above is all dry well manufactured stock.

Spears & Lauder 501 Kent Bldg. Toronto, Ont

JOHN DONOGH & CO.

Wholesale Dealers

Dry Stock

5 Cars 1 x 10 White Pine, Mill Run
6 " 1 x 6 Jack Pine
3 " 1 x 7 "
7 " 1 x 8 "
1 Car 1 x 10 "

Dry Hemlock and Spruce all sizes

1205 TRADERS BANK BUILDING, TORONTO

SPECIAL

100 M. feet 1 x 4 in. and up W. P. Wormy Culls dry, about 50 per cent. 10 and 12 in.
50 M. feet 1 x 4 and up W. P. No. 1 Mill Culls dry.
6 M. feet 1 x 10 and 12 W. P. No. 1 Mill Culls dry.
50 M. feet 1 x 4 and up W. P. No. 2 Mill Culls dry 10 and 12 in.
30 M. feet 1 x 10 and 12 W. P. No. 2 Mill Culls dry.
150 M. feet 1 x 4 and up x 12/16 W. P. No. 2 Mill Culls dry, 75 p. c. 10 in. and up
60 M. feet 1 x 4 and up No 2 Com. and Bt. Soft Maple, 30 p. c. No. 2 Com.
6 M. pcs. 4½ and up x 8 ft. peeled Cedar posts.

A Large and Selected Stock of
SPRUCE, PINE, HEMLOCK AND HARDWOOD LUMBER
ALSO SHINGLES AND LATH

Orders filled carefully and promptly shipped.

Write for quotations, etc.

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Wholesale Lumber Merchant Phone Main 7329

The FESSERTON TIMBER CO., Ltd.

Let us quote you on

BILL TIMBER

Mills Now Sawing

Also

Hemlock, Pine, Spruce and Hardwood

We have large stock of all sizes. Can Ship Quick.

Lath, Shingles, Posts and Cooperage Stock

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GILLIES BROS. Limited

Mills and Head Office
BRAESIDE, ONT.

Manufacturers of

WHITE PINE

RED PINE **SPRUCE**

New York City: Guy E. Robinson, 1123 Broadway

COMPLETE STOCKS

The fact that our stocks are complete and well assorted assures you of **Satisfactory Service, Good Grades** and **Right Prices.** We want your inquiries and orders when in the market for

Railway Ties and Pulpwood

Rough and Dressed Lumber and Lath

We specialize on cutting to order all sizes of

Dimension Timber

Also in Dressing in car or mixed lots 1″, 2″ and 3″ to customers' specifications.

Complete stocks always ready for prompt shipment.

We are the Largest Producers of Railway Ties in the Dominion

Austin & Nicholson

Chapleau, Ontario

Structural Timbers

We have the equipment and the stock to supply every kind of order for structural timbers.

The illustration shows our big planer and handling gear for dressing large timbers.

Get our prices.

The Boake Mfg. Co. Limited

Toronto, Ont.

LINE YARD HEAD

Instructs Eighteen Managers

TO ORDER

Arkansas Soft Pine

Action Denotes Grasp of Dealer Benefits Derived from Selling a Superior Product which is Nationally Advertised.

Circular Letter

———————, Iowa,
May 13, 1916.

TO YARD MANAGERS:

We are asking the Arkansas Soft Pine Bureau to send you a copy of their Home Builders' Book, together with a quantity of letter inserts to be used in connection with any communication that you have occasion to mail to your customers. While the plans shown in these books may or may not be such as will appeal to your customers, we are convinced that the use of Arkansas Soft Pine can be increased materially by our own efforts joined with those of the Arkansas Soft Pine Bureau, and that our customers will receive material that cannot fail to please them.

It has been our custom in the past to buy Short Leaf lumber for our inch stock, and in a large number of instances, we have bought the Arkansas Soft Pine. We are more than ever favorably impressed with the Yellow Pine manufactured by the mills in the Soft Pine district. Particularly is this wood fitted for interior trim, for ceiling and flooring. The Bureau will furnish you, if you desire, a set of framed panels showing the various kinds of finish that can be applied to Arkansas Soft Pine.

In speaking of this wood to your customers, we suggest that you do not use the words, "Yellow Pine," as applying to it, but term it "Arkansas Soft Pine," which more fully expresses the character of the wood, as it is free from pitch, and in many instances, has an appearance similar to the Northern White Pine, which has always met with favor.

On your future orders for inch Southern Pine, particularly those containing finish, flooring, and ceiling, we suggest that you indicate on the requisitions that you prefer Arkansas Soft Pine. This will bring the matter to Mr. 's attention. If we are advocating the use of this wood, it will be necessary for us to have some of it in stock. You perhaps will understand that the wood referred to is a high type of Soft Yellow Pine. The term Arkansas Soft Pine is applied to distinguish it from the Yellow Pine, that is shipped from the other districts in the South. This particular Pine has some merits that the lumber from the other districts does not have.

Yours truly,

———————— Lumber Company,

By ————————
General Manager.

(The foregoing is a bona fide letter, written by one of Iowa's substantial retail lumber concerns.)

This service referred to is yours for the asking.

All stock bearing the Arkansas Soft Pine Trade Mark is manufactured and sold exclusively by the following companies:

Arkansas Lumber Company, Warren, Ark.
Arkansas Land & Lumber Company, Malvern, Ark.
Crossett Lumber Company, Crossett, Ark.
Cotton Belt Lumber Company, Bearden, Ark.
Eagle Lumber Company, Eagle Mills, Ark.
Edgar Lumber Company, Wesson, Ark.
Fordyce Lumber Company, Fordyce, Ark.
Freeman-Smith Lumber Company, Millville, Ark.
Gates Lumber Company, Wilmar, Ark.
Southern Lumber Company, Warren, Ark.
Stout Lumber Company, Thornton, Ark.
Valley Lumber Company, Reader, Ark.
Wisconsin & Arkansas Lumber Company, Malvern, Ark

Composing the

Arkansas Soft Pine Bureau

LITTLE ROCK, ARK.

Our Mills Produce and We Market as Much

GENUINE LOUISIANA RED CYPRESS

As All Other Concerns Combined

CYPRESS DEFIES DECAY

250,000,000 feet constantly in stock insures filling any reasonable order promptly.

Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

Our salaried salesmen receive credit for mail orders. Try us.

CYPRESS "THE WOOD ETERNAL"

LOUISIANA RED CYPRESS COMPANY

Hibernia Building **New Orleans, La.**

ONTARIO

Canada's Banner Province

Ontario's timber production last year valued at $26,774,937 or 40% of Canada's total output.

Pine production,	905,442,000 ft. B.M.
Pulpwood,	246,282 cords.
Railway Ties,	5,704,459.

Ontario's woodworking industries, using 34 different kinds of wood, provide a ready market for the lumberman. Eighty-two per cent. of lumber used in Ontario's industries purchased within the Province.

Ontario's vast resources offer unsurpassed opportunities to the lumberman.

For maps and full information regarding Ontario, apply to

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Hayden & Westcott Lumber Company

823 RAILWAY EXCHANGE BUILDING

Chicago, Ill.,

500,000 ft. British Columbia White Pine

Factory Lumber — DRY and Ready to Ship Direct from Mills on C. P. R.

Good Stock of

California Sugar Pine **California White Pine** **Idaho White Pine**

Send us your Inquiries on above Stocks — — Our Prices and Deliveries will interest you

FIR TIMBERS

Fir Flooring, Ceiling and Siding.
Clear Fir Finish, rough and dressed.
Fir Turning Squares in 4 x 4 to 10 x 10″

B. C. Red Cedar Bevel Siding.
B. C. Red Cedar Shingles in all varieties.
Cedar, Fir and Spruce Factory Lumber.

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Yorkshire Building, VANCOUVER, B. C.

The
Shawnigan Lake Lumber Co., Ltd.
Head Office: VICTORIA, B.C. Mills: SHAWNIGAN LAKE, B.C.

Manufacturers of all grades and sizes of

Fir and Cedar Lumber

OUR SPECIALTY IS
Long Timbers and Prompt Shipment

P. O. BOX 298 - VICTORIA, B. C.

Heavy Fir Dimension
Is Our Particular Specialty

The Heavier it is the Better we like it

We Dress from 1 to 4 Sides up to 16-in. x 20-in., 60-ft.

Our grade is posstively right, and prices will please

Timberland Lumber Co., Limited
Head Office, Westminster Trust Bldg., NEW WESTMINSTER, B.C.
Mills at Craigs on the B.C.E.R.
Shipments by C. P. R., C. N. R., G. N. R., and N. P. R.

"Federal" Shingles

Our "Federal" Shingles, cut from live timber, are just what we call them—"Best Ever." "Federal" means quality.

Quality Lumber

Ask us for prices on heavy timbers, moulding and tank stock, high grade spruce, fir, red cedar and hemlock.

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470 Granville Street - VANCOUVER

Thurston-Flavelle Lumber Company

MANUFACTURERS OF

British Columbia Red Cedar Exclusively

4, 5 and 6 inch "CLEAR A" Cedar Bevel Siding.
8, 10 and 12 inch CLEAR CEDAR FINISH.
RITE-GRADE PERFECTS 5/2 and 6/2 RED CEDAR SHINGLES.

Eastern Agents, Gull River Lumber Co., Ltd., Lindsay, Ont.

Head Office and Mills, Port Moody, B.C.

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SHOE PACKS

THE P.T. GENDRON SHOE PACK CO. MIDLAND GENDRON MIDLAND ONT. CAN.

Made in Canada

Gendron Genuine Draw String Shoe Packs embody the latest and best ideas of manufacture. They wear, they keep the feet dry, they are comfortable under all conditions. These are the main points.

The price is reasonable. The value is away above the price. You will like these shoe packs if you try them. Hundreds of lumbermen facing the same conditions as you, are enthusiastic about them.

Our manufacturing process is thorough from start to finish. We are careful with every pair.

Send for our catalogue and prices.

P. T. Gendron
Shoe Pack Co.
Limited

MIDLAND, ONT.

Original "Dunbar" Machines

We are the original and the only makers of "Dunbar" Shingle Machines, Lath Machines, Clapboard Machines, Steam and Gasoline Logging Engines. Each is the best for its particular work. Are you using the best?

Lath Machine

From our many years of experience we evolved this "Dunbar" Original Lath Machine. Every improvement that could be suggested, every time-tested idea for the betterment of product and for greater speed, has been incorporated in this machine. We believe it has no equal, and there are a great number of mill men throughout Canada who share this belief with us. Carefully constructed of high grade materials and designed to work steadily under the hardest conditions.

Steam and Gasoline Logging Engines

Conditions in Canada necessitate an engine that will stand any amount of strain and hard work in the lumber industry. With this idea in mind we have brought out the "Dunbar" engines perhaps a little stronger than is really needed. They do their work easily and willingly, and stand a great amount of hard usage. Built entirely in Canada for the Canadian lumber trade.

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You will need no excuse for the quality of your product if you use the original "Dunbar" Clapboard Machine. Expert in every detail. This machine will give you the very best service under most trying conditions. It will turn out work without delays. It will need practically no repairs and will increase your output. We cannot recommend it too highly because it is giving this very service to lumbermen in all parts of this country.

Send for catalogues of any or all of these machines.

Dunbar Engine & Foundry Co.
WOODSTOCK, N.B.

Let us quote you on your requirements for:

Spruce and Pine Lumber

We manufacture and export all kinds of it

W.H.MILLER CO LIMITED EXTRA CAMPBELLTON N.B.
W.H.MILLER CO LIMITED CLEAR CAMPBELLTON N.B.
W.H.MILLER CO LIMITED 2nd CLEAR CAMPBELLTON N.B.
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W.H.MILLER CO LIMITED EX No1 CAMPBELLTON N.B.
W.H.MILLER CO LIMITED No1 CAMPBELLTON N.B.

WE SPECIALIZE IN

New Brunswick White Cedar Shingles

LET US QUOTE YOU

We also manufacture

Laths and Ties Pulpwood

Shipments by Rail and Water

PROMPT—RELIABLE—CAREFULLY HANDLED

W. H. Miller Co., Limited

CAMPBELLTON, N.B.

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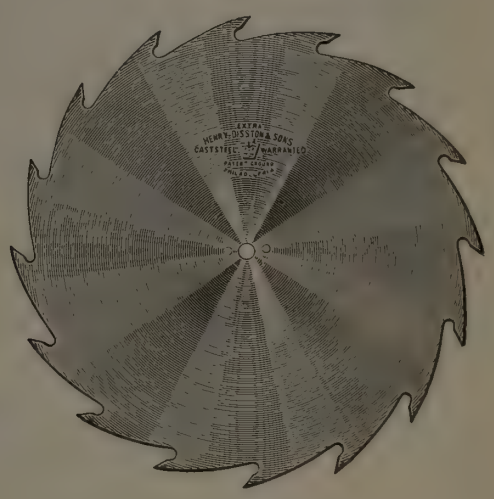
have been made from steel made by us in our own plant since 1855. More than sixty years experience in the manufacture of saw-steel coupled with a study of operating requirements extending over three quarters of a century have resulted in saws of highest excellence.

In tension—, set—and edge-holding qualities Disston Saws are as near perfection as the world's foremost saw-makers can make them.



Where quality means economy, the proper test is service.

DISSTON CIRCULAR SAWS
DISSTON BAND SAWS
DISSTON CHISEL-TOOTH EDGERS

Henry Disston & Sons, Inc.

2-20 Fraser Ave., Toronto, Can.

Dressed and Rough Spruce, White Pine and Banksian Pine

ALL WELL MANUFACTURED AND AIR DRIED

Our mills at La Tuque, P. Q. have first-class equipment for all sorts of dressing, also for resawing.

Let us send you our stock list with prices

BROWN CORPORATION

Sales Office: — — — PORTLAND, MAINE

Plant of The Stearns Salt and Lumber Co.

Stearns Quality

Michigan Forest Products
Hardwood, Hemlock, White Pine
LUMBER and TIMBER

40 Million Feet Dry Stock in pile containing a complete assortment for rush shipment.

Grades— GUARANTEED —Quality

Hardwood Specialists

The
Stearns Salt & Lumber Co.
Ludington, Mich.

Hoffman Brothers Company

Fort Wayne, Indiana

Manufacturers of Hardwoods—Any Thickness From

HB Reg U.S. Pat. Off.

1/30″ SLICE CUT VENEER
1/20″ SAWED VENEER
to
2″ BAND SAWED LUMBER

HB Reg U.S. Pat. Off.

Specialty:

QUARTERED WHITE OAK

LOUISIANA RED CYPRESS

QUARTERED OAK **PLAIN OAK**
POPLAR **ASH**

***Yards at*—Nashville, Tenn. Basic, Va.** ***Mills at*—Sumter, S.C. Winchester, Idaho**

We can ship you promptly any of the above Stock, Carefully Inspected

WE WOULD LIKE TO HEAR FROM YOU

WISTAR, UNDERHILL & NIXON

Real Estate Trust Bldg., Philadelphia, Pa.

The Rat Portage Lumber Co., Limited, Vancouver

MANUFACTURERS OF

Douglas Fir, Spruce, Cedar and Hemlock Lumber

Rough Timbers, Dimension, Flooring, Ceiling, Siding, Interior and Exterior Finish of all kinds including Mouldings. Fir, Spruce and Cedar Lath

Prompt shipment of Fir timbers in all sizes and up to 80 feet in length

AIR DRIED CEDAR SHINGLES

We specialize in supplying air dried Cedar Shingles, these cost more than kiln dried Shingles but make a better roof and last much longer

We handle

Everything in Lumber

Write or wire for prices and stock lists.

The McLennan Lumber Co.
Limited
21 Dorchester St. W. Montreal, Que.

Live Lumber Dealers—Look!

$2.00 or $3.00 Extra Profits

on every lot of shingles you sell. It means a lot in a season's business. You can make this extra money by selling Trimmings with your shingles. Every roof needs Ridge Cap or Valley, so why don't you sell it. Write for booklet C. L. and Price List.

The Metallic Roofing Co., Limited
Manufacturers of
Corrugated Iron, Metallic Shingles and Siding, Metallic Ceilings, Ventilators, etc.
Winnipeg and Toronto

I HAVE IT

All Grades in White Pine Lath A Specialty

Milling in Connection

E. J. MOORES, Jr.
MIDLAND CANADA

LET'S GET TOGETHER

Chicago Lumber & Coal Co.

Capital $6,500,000 MANUFACTURERS Established 1866
General Offices: EAST ST. LOUIS, ILLS.

OUR REPUTATION is your guarantee of satisfactory service and responsible attention.

WE UNDERSTAND the select structural specifications of the Southern Pine Association and also Associated Factory Mutual Fire Insurance Companies specifications, and can make prompt deliveries of long leaf yellow pine in accordance therewith.

SOUTHERN YELLOW PINE
LOUISIANA RED GULF CYPRESS

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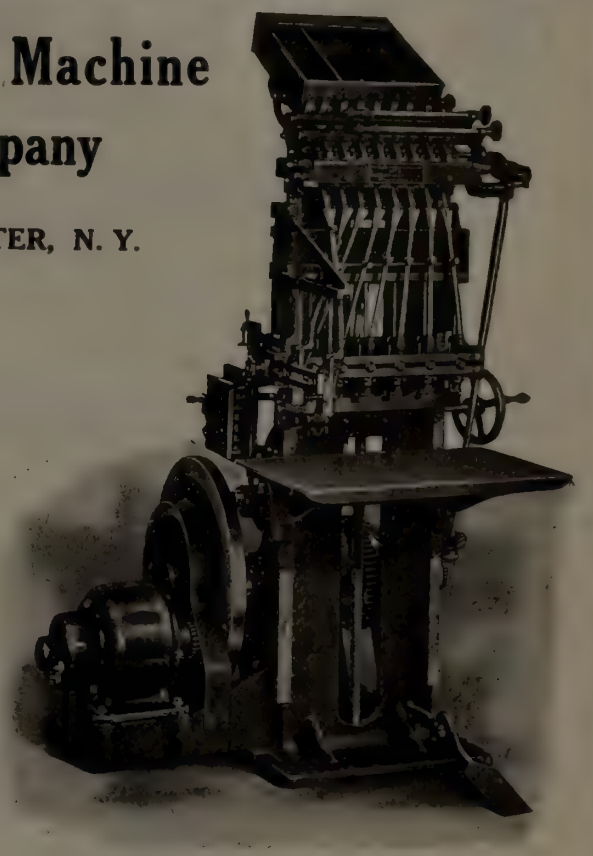
ROCHESTER, N. Y.



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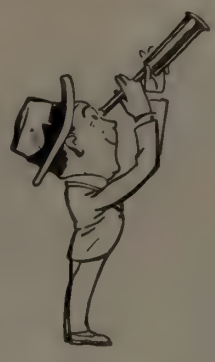

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MONTREAL TORONTO WINNIPEG

Canada Lumberman & Wood Worker

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Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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Overhead Expense—How Do You Figure It Out?

A few retail lumbermen were having a talk about business matters recently and came, before long, to a discussion of estimating overhead expenses. It was not many minutes before they realized that their ways of getting at this important matter varied greatly. They may have been able to reach fairly satisfactory estimates by their various methods, but the differences in their ways of doing it showed clearly the necessity for having the problem worked out in a co-operative way, so that it may be reduced to a fairly standard basis. If a standard of this nature can be introduced there is no question that the great majority of the retailers will jump at it and soon gain a far more practical conception of the important details of their business.

As things are at present, many a retailer gives little or no attention to the overhead cost, or even—in some cases—to many other important details of his accounting.

One of the men taking part in the above discussion told of a retailer who used to do business in the good old-fashioned way, involving the least possible amount of bookkeeping. When he wanted to know how he was getting along he looked up his balance at the bank. When he wanted some money, either for the business or for personal use he cashed a cheque. Somehow or other, there always seemed to be funds in the bank, and he did not see the necessity for keeping an intricate set of books. How many lumbermen would last out a whole year nowadays if they did things in this manner? Another retailer we heard of at the same time had quite a good memory and at the end of the day—after he had been home for his supper—he returned to the office and entered up the day's sales and receipts. He did not bother about them at the time of the transaction. A third party was reported who had never taken stock since the day he commenced business, some six years before; and so on. Many a case was related which showed how important it is under modern competitive methods to know accurately what it costs to do business, so that you may be able to charge a proper price for your goods and your service.

Once upon a time there was a certain dealer who was discussing trade conditions with a friend. "How are things going," the friend asked. "Fine," the dealer replied. "I have been striking some pretty hard competition, but I have no trouble in meeting it, as the other fellows have to buy land for their yards and I own my place." The friend rubbed his eyes and asked the value of the yard, from a real estate point of view. It was probably worth about $40,000, as it was located in an important part of the city. When the friend was leaving he made a remark which rather puzzled the dealer for a time, saying to him that he intended to take up some property in that neighborhood upon which he would probably come to the dealer for a mortgage. Of course, he would count upon getting the mortgage without paying any interest upon it, as he expected the dealer would do as well by him as he had done by himself. After the dealer had puzzled over this remark for a time, he rubbed his own eyes and changed his accounting system so that it includes an annual charge of $2,000 as interest upon his investment.

It is important that everyone engaged in the retail lumber business should figure out this overhead question fully until he is satisfied that he has included every item that should be included. Only in such a manner can one be sure that he is going ahead and making enough profit to continue in business. Failure to do this is the chief cause of price-cutting. It is safe to say that any man who intends to commence a price-cutting campaign will be cured of his folly if he devotes a few days to a study of his overhead expenses, before cutting his prices. Just so surely as he does not, so surely will all the items of overhead co-operate ruthlessly and continuously in favor of his competitor whom he is trying to force out of business, and finally involve him instead of his competitor in extensive loss or complete failure.

For these reasons we would like to see the problem of overhead expense accounting reduced to its simplest form, so that it may be, to a very great extent, standardized. This is a work which could be handled by a number of retailers getting together and submitting their own methods as a basis for study. It would not be long before a practical plan could be worked out which would be a great improvement upon most of the individual plans submitted, and would enable all retailers who wish to take advantage of it, not only to understand their own costs and selling prices better, but to know that the other fellow was basing his quotations upon similarly accurate information.

The Lumberman, the Architect and the Contractor

At a recent meeting of the Lumbermen's Section of the Toronto Board of Trade an address was delivered by one of the leading architects of Toronto, who discussed, among other things, a plan which he had in mind for enabling lumber dealers to be far more certain than they are at present of securing pay for the materials they deliver on a job. One could not help feeling, when listening to this address, that it might be made the beginning of a much closer approach between architects, contractors and lumber dealers than has existed in the past. It is a peculiar thing that the architect and the lumber dealer are, in the majority of cases, quite good friends, and that the lumber dealer and the contractor also are good friends, but that the architect and the contractor do not, in many cases, pull well together. There seems to be some antagonistic spirit at large between architects and contractors that often leads to trouble. We hear, many and many a time, in connection with a building that has been poorly constructed, that the trouble was the result of bickering between the architect and the contractor. We hear also that such and such an architect was not onto his job, did not watch the contractor close enough and that the latter "put it over him" in one way or another, so that the job suffered. Why is it that these two parties, whose harmonious relation has so much to do with the success of a job, are fre-

quently unable to get along amicably, while each of them is able to make good friends with the lumber dealer? The reason we bring this question up is that whenever the architect and the contractor do not get along well together the lumber dealer suffers along with the others, both because of the uncertainties connected with a job on which there is frequent trouble, and because of the danger that the job may be stopped.

It occurs to us, in this connection, that the lumber dealer may be able to act the part of the peacemaker. Frequently he does take this part in connection with a particular job. Possibly he could go further, that is to say, he and his fellow lumber dealers might do the same thing collectively. The lumber dealers in a large city, for instance, might get together in their association and discuss ways and means of bringing about better relations between the architects and contractors with whom they do business; that is to say, those responsible architects and contractors who show a desire to get along amicably together, but so frequently are not able to do so. How the thing can be brought about is not just an easy matter to figure out off hand, but we believe that, in the first place, a body of lumber dealers might invite representatives of the architects to discuss matters with them, and similarly have a conference with representatives of the contractors; then perhaps have joint meetings of all three bodies and discuss practical ways of reducing friction.

The architect and the contractor are very essential to the progress of any community. The architects' services are important and are not overpaid. The contractor is a man who does things. He naturally looks for practical and concrete results. The architect, to some extent, while imbued with a desire for practical results, is also a man of high ideals in regard to his work. It is in the clashing of these opposite elements of character that much of the trouble arises. The contractor will tell you that when the architect takes charge of a job its cost immediately advances. The architect, on the other hand, knows of many cases where only the careful supervision of an architect will prevent an unscrupulous contractor from putting up an inferior class of building as compared with the one required by specifications.

There are good and bad men in all classes and in all professions —except perhaps among retail lumbermen—and it should be possible to group together the good ones in an effort to weed out the difficulties that develop when the bad ones get together or clash with the good ones. That is just what we are trying to bring out. We would like to see the lumber dealers of such a centre as Toronto, for instance, make a dead set upon the architects and contractors so as to get them to work together as harmoniously as possible, and incidentally so as to have each of them use up as much lumber as they possibly can. We believe big results would be secured to all three classes and the poor lumber consumer or owner of a building under construction would get better service and better buildings than he ever got before.

Lumber Trade Needs More Knowledge About Lumber

We have had something to say in recent issues of the Canada Lumberman about the extent to which cement and other building materials have been replacing wood, and we have done what we could to place the matter before our readers forcibly enough to lead them to realize that, to quite a considerable extent, they may, by a united effort, reduce the loss to the lumber trade which results from this competition. There is no question that much of the old time trade of lumber has gone over to the substitute materials, never to return, but there is still plenty of room to do something to prevent the movement from going further and at the same time to educate lumbermen, architects, engineers and consumers generally to a better understanding of the uses of wood. It is not possible to improve the lumber trade by running down the use of steel and cement, but it is possible to teach engineers, architects, contractors and prospective home builders that they can make far greater use of wood than is usual and get splendid satisfaction by so doing.

While we have expert engineers all over the world working out problems in steel and concrete construction, where will you find anything that can be called a wood engineer? Architects are supposed to know all that is necessary regarding the qualities of wood for construction purposes, but how many of them really have any such knowledge? Probably about one in fifty. And who is to blame? Not the architect, surely, as he is not interested in the sale of lumber. He informs himself mostly about those materials for which he finds the greatest demand, and he finds that the ordinary layman's knowledge of lumber is almost sufficient for him in order to deal with such varieties and qualities of lumber as his work calls upon him to include in his buildings. The blame attaches definitely and solely to the men who are interested in the sale of lumber. They will talk to one another about the ignorance of architects, whereas they are the ones who are ignorant of the methods that should be followed in order to educate architects regarding wood.

Until quite recently very few lumbermen or lumber associations have done anything in the way of getting out useful or commercial information about what their wood products will do, where they should be used and how to avoid certain dangerous tendencies in certain grades and varieties. The aim of the manufacturer has been to move his stock and, if the wrong stock often found its way into a building, so much the better, as it afforded an opportunity for selling some more. Little wonder that steel and concrete, backed up by scientific engineering data and experience, found it a simple matter to take over much of the business that formerly went to wood.

Throughout the greater part of the past, everything has been haphazard in the lumber business, so far as educating the consumer or the architect was concerned. With the completion of the sale the producer has felt that his end of the business was over and that the next thing was to look for another customer. There has been far too little consideration of the interest of the man who pays for the lumber and uses it. And, seeing that this was the disposition of the lumbermen, who could expect the architects to take much more interest than the lumbermen themselves in the use of wood?

How many architects or lumbermen can tell the carrying capacity of a 10-inch floor constructed of 2 x 10 on edge for a mill constructed building? How many can tell whether 2 x 10 or 3 x 10 is better for such a purpose, and why? And so on through a hundred and one questions, the answer to which should be at the immediate disposal of everyone who is interested in the sale of lumber. These are practical questions, not matters of theory. They come up every day in construction work. Many first class architects and engineers know the answer, but the body of the trade and many of the architects do not Why should not all the information upon these points be accumulated so that any architect or builder will be able to get possession of it readily?

Take the matter of concrete construction itself. How many lumbermen have a definite idea of the extent to which lumber can be used in the erection of a concrete building and the best ways of using it? Don't they leave all such matters to the man who is interested in concrete, instead of studying them and seeing that lumber gets all that is coming to it, even in the erection of a concrete building? As sellers of wood, lumbermen should be able to say that such a size and such a grade are best suited to the needs of a certain class of concrete building work. They should be able to show the man who is putting up a concrete building how to make a saving in connection with such lumber as he has to use and thereby make sure that he gets good results when using lumber and becomes, to some extent, a friend of lumber.

The whole question gets down to the old one of grades. Grades worked out intelligently and understood by the trade will be the basis upon which to establish a greater volume of trade. Such grading rules as have already been put into effect have proven this conclusively, and as the grading rule movement grows, the markets will improve. When we have reached a fairly good understanding about grades we will be in a sound position for accumulating scientific data

upon which to base our efforts to give wood a sound position among architects and engineers, and it will be possible for us to exploit every possible market for lumber, instead of the comparatively few that are now exploited to anything like their full extent. We believe that the recently developed tendency to advertise lumber is clearly working along these lines. Lumber cannot be advertised successfully unless those who do the advertising know its uses intimately. The two movements go hand in hand, and if they are worked out logically and followed up relentlessly to their natural limits there is a great day ahead of the lumber trade.

Keeping in Touch with Prospective Customers

Keeping track of prospective business is a pretty important matter in connection with any branch of the lumber business. For the retailer it is perhaps of greater importance than for others, as the sources of his business vary so greatly from day to day, whereas in connection with the wholesaler and the manufacturer it is possible to carry, even in one's head, a large proportion of the important information regarding customers.

The retail lumber dealer must not only keep in close touch with the regular customers upon whom he can, to a certain extent, depend for an average amount of trade, year in and year out, but he must watch keenly for the transient customer, or for the man who is breaking into a new line of business involving the consumption of considerable stocks of lumber and who is likely to become an important consumer in the near future. Probably every retailer has his own special method of handling this part of his business. Some allow it to look after itself, and unquestionably lose a great deal of good business by so doing. In looking after itself, it will quickly learn to follow the line of least resistance, which, in all cases, leads directly towards the yard of the man who keeps closely in touch with prospects and tries to turn them into customers. Therefore, the argument is all in favor of a system which will simplify this work and put it upon a good result-giving basis.

According to the variety of business found in each locality, the best method of working out a system for keeping track of prospective business will vary, but the main points are common to all systems. They are all based upon eternal vigilance, coupled with a good system of tabulating and filing the information secured. The manager of any retail lumber yard should give much of his time to this work. If he is also the chief, or the only salesman, he should find that by reducing this work to a systematic basis, the yard's business will soon be increased to such an extent that other salesmen will be needed, and his own work can be given over more definitely to the management end.

We have no intention, at this time, of going into details regarding a system for conducting this work. Our idea is only to lay emphasis upon its importance and urge those who are inclined to neglect it, to change their ways. At the same time we may outline roughly the way in which the work is done in connection with many large and small yards. A good system of this sort depends upon two factors; first, the securing of information, and second, its being filed conveniently so that it can be made of use to good effect. Securing information about prospects depends upon keen work on the part of salesmen and managers, upon the service given to customers which induces them to come back and also to send in information when they know of other men who are likely to be in the market, and upon many little things in connection with the working of a business which show the public that your stocks are good and your service is complete.

Those who are engaged in selling, either for a single yard or for a number of related yards, should make an absolute rule of recording all information they receive about prospects and sending it to the manager to be placed upon file in a systematic manner. This information should all come before the manager regularly. All the information regarding a particular job, or a particular customer's probable and actual requirements, should be filed in correspondence folders and laid before the manager at such time as he requires it. In order to put this into effect, the usual method is to handle it in connection with a card index, using date ticklers in connection therewith. When the information has been considered and acted upon by the manager he instructs the stenographer at what date he wishes it to come before him again and a date tickler is attached to the card index accordingly. At the beginning of each day the stenographer lays before him all the correspondence and information regarding each prospect which is to be dealt with on that day. The files for the day are attended to and each is advanced to a later date, or otherwise disposed of according to its requirements. When a prospect has been converted into a customer, the correspondence or information in the file may be transferred to the files of the department which handles shipment or the production and shipment of the goods sold. If a job is lost, the file may be handled as seems best, either by being "killed," or by being filed in connection with an index card and tickler which will bring it up for consideration at a more distant date, when it is possible that the same party may again become a prospect.

A system based upon these ideas, worked out in detail to suit the different cases, will make all the difference between a progressive business and a dead one. It will, to a great extent, enable a firm to eliminate much of its circular letter work and confine itself to correspondence bearing upon actual prospects which are live at the time they are being dealt with. Information may be gathered a long time in advance and filed away with a confident assurance that when it is needed it will come up. There is no possibility of forgetting a prospect if this plan is followed. It may seem rather a cumbersome plan at first, but once it has been got into working shape, it will look after itself and will introduce into the whole routine of the office and yard an element of orderliness that will be one of its greatest assets. Moreover, in the course of a comparatively short time a system of this sort will enable a manager, by going through his files to obtain a practical idea of how much business he can count upon in the near future, as it is a fairly simple matter to figure out from past records the percentage of prospective business that materializes into orders.

Canada's exports of forest products for the month of April, 1916, were valued at $2,287,939. In April of the two preceding years the values were as follows:—1915, $1,929,440; 1914, $1,874,739. For the twelve months ending April the exports of forest products were valued as follows:—1916, $51,629,899; 1915, $42,705,384; 1914, $42,797,161.

Import of lumber into Barbados, B.W.I., was affected more than any other line during the early days of the war. There has been a recovery, however, and the imports of white pine and spruce from Canada have come up to the average, increasing from £21,228 to £32,832 last year. Less pitch pine was imported from the United States, and fewer staves and shooks, though since January 1, 1916, a large falling off has taken place in the value of imported shingles from Canada, amounting to nearly £10,000, which appears to be due partly to the fact that a large quantity was in stock in the island at the beginning of the year. Large quantities of pncheon staves are required in Barbados each year and also in the other West Indian islands, the annual value being about £100,000. A serious attempt is recommended by Canadian firms to produce a stave from some hardwood other than oak, or from Douglas fir, to meet this demand.

The recent reference in news dispatches to the idea of a department store in Portland, Ore., by which lumber is sold in the store, in "Short Lengths for Odd Jobs," has been followed by the establishment of similar departments in a dozen big American cities, where bits of board are sold for 2, 3 or 5 cents. The idea has spread so rapidly that a company has been formed at Portland under the name of the Miniature Lumber Company, to supply department stores with cabinets for display of such lumber.

Death of Flight Sub-Lieut. J. R. Chamberlin

The Late Flight Sub-Lieut. J. Russel Chamberlin

News of the death of Flight Sub-Lieut. J. Russell Chamberlin, of the Royal Flying Corps, which was received in Toronto on June 3rd, was a great shock to his many friends in the lumber trade. The late Flight Sub-Lieut. Chamberlin was a son of Mr. Jas. E. Chamberlin (of the Hugh McLean Lumber Company), 86 Pleasant Blvd., Toronto. His death was the result of an aeroplane accident which occurred at Netheravon, England, on the morning of June 2nd. Mr. Jas. E. Chamberlin got in touch with friends in England by cable and made arrangements for having the body of his son brought to Canada for burial.

Flight Sub-Lieut. J. Russell Chamberlin was born in Ottawa 25 years ago. He was educated at Jarvis Collegiate Institute, Toronto, and subsequently attended the University of Toronto, where he graduated from the Department of Forestry two years ago. During his course at the University he was proprietor of the J. R. Chamberlin Company, dealers in typewriter supplies, and in this way helped to finance his University course. Upon graduation he went to Victoria, B. C., where he had already secured an appointment with the Forestry Branch of the Department of Lands of B. C. In this position he did excellent work and was sent to Toronto last fall to install an exhibit of B. C. forest products at the Canadian National Exhibition. While in Toronto at that time he applied to be taken on as a student at the flying school in Toronto. He found that he would have to wait his turn, however, and in the interval returned to B. C. He was back again in Toronto early in the winter and sailed from St. John, N. B., on January 1st to take the aviation course in England. He had recently completed the course and was doing practical work preparatory to going across to France. Letters received recently by Mr. J. E. Chamberlin from his son stated that he had been in hospital for a short time as the result of a cold, but on May 20th he was back again at his aviation work.

The late Flight Sub-Lieut. Chamberlin will be well remembered by many lumbermen in Toronto, who will recall having heard him deliver an excellent address before the Lumbermen's Section of the Toronto Board of Trade on September 10th, in the course of which he explained the qualities and advantages of B. C. timber and lumber. His address at that time was an important factor in developing the remarkable interest in B. C. products which has since been increased greatly by the publicity work of the Forest Branch. The late Flight Sub-Lieut. Chamberlin also addressed the retail lumber dealers of Winnipeg on July 14th.

Mr. L. B. Beale, B. C. Lumber Commissioner at Toronto, when told of the death of Flight Sub-Lieut. Chamberlin, expressed great regret at the loss of such a promising young man. "J. R. Chamberlin," he said, "was one of the bright spots in the market extension and publicity work of the Forest Service. He had an excellent grasp of his subject and what was perhaps more, had a very attractive personality. He was esteemed highly for these qualities amongst all his confreres and his loss will be felt personally by many of them. He had a peculiarly winning manner and was a good mixer. These qualities, coupled with energy in his work, made him a splendid official of the Department."

Lumber Trade Between Canada and the United States

The annual report upon the lumber industry of the United States, issued by the Government, gives the following report of the quantities exported to Canada and their values, during the past three years:—

Export of Lumber from the United States to Canada

		1912	1913	1914
Logs and round timbers	Feet	55,973,000	66,448,000	3,561,000
	Value	$610,603.00	$715,126.00	$158,557.00
Yellow pine sawed timbers	Feet	13,183,000	16,698,000	18,398,000
	Value	$289,534.00	$425,158.00	$454,616.00
	Average	$21.96	$25.46	$24.71
Cypress—	Feet	.....	9,704,000	9,219,000
	Value	.....	$280,880.00	$254,907.00
	Average	.....	$28.93	$27.64
Fir—	Feet	189,185,000	140,335,000	71,053,000
	Value	$2,304,509.00	$1,931,485.00	$917,541.00
	Average	$12.18	$13.76	$12.91
Gum—	Feet	5,916,000	12,011,000	8,669,000
	Value	$152,998.00	$301,971.00	$208,992.00
	Average	$25.86	$25.14	$24.10
Oak—	Feet	57,504,000	72,351,000	56,712,000
	Value	$2,334,230.00	$2,877,282.00	$2,326,918.00
	Average	$40.50	$39.76	$41.30
White pine—	Feet	.....	4,482,000	9,308,000
	Value	.....	$155,731.00	$308,941.00
	Average	.....	$34.74	$33.19
Yellow pine—	Feet	150,882,000	171,880,000	158,787,000
	Value	$3,186,150.00	$3,898,314.00	$3,410,380.00
	Average	$21.11	$22.67	$21.47
Poplar—	Feet	6,902,000	5,537,000	3,808,000
	Value	$307,533.00	$222,470.00	$155,227.00
	Average	$44.41	$41.98	$40.76
Spruce—	Feet	2,229,000	3,013,000	2,495,000
	Value	$47,294.00	$49,876.00	$39,081.00
	Average	$21.21	$13.23	$15.68
Redwood—	Feet	.....	236,000	346,000
	Value	.....	$8,932.00	$11,081.00
	Average	.....	$37.84	$32.05
Railroad ties—	Number	.....	3,781,768	3,492,928
	Value	.....	$1,643,303.00	$1,597,894.00
	Average	.....	.43	.45
Box shooks—	Value	$10,572.00	$25,046.00	$78,779.00
Sash, doors, bl'ds—	Value	$573,875.00	$1,011,578.00	$574,823.00

Note.—The above named prices are f.o.b. cars at the port of entry from the United States and are not delivered prices into Canada.

Imports from Canada

The import of logs, lumber, lath and shingles from Canada into the United States for 1913-1914, as per classification made by the United States Department of Commerce, was as follows:—

	Duty		1913	1914
Logs and round timbers—	(Free)	Feet	130,406,000	140,641,000
		Value	$1,355,507	$1,564,572
Pulp wood—	(Free)	Cords	1,035,890	1,073,023
		Value	$6,954,939	$7,245,456
Lumber of all kinds—	(Free)	Feet	.....	617,832,000
		Value	.....	$11,768,413
	(Duty)	Feet	1,021,810,000	$275,001,000
		Value	$17,972,712	$5,168,413
Shingles—	(Free)	No.	.....	745,558,000
		Value	.....	$1,791,124
	(Duty)	No.	560,297,000	149,474,000
		Value	$1,399,751	$398,925
Lath—	(Free)	No.	.....	373,944,000
		Value	.....	$1,065,387
	(Duty)	No.	707,464,000	189,461,000
		Value	$1,895,390	$544,416

Full of Practical Things

Grand'Mere, P.Q.

Editor, Canada Lumberman:—

I congratulate you most highly on your Annual Number. It is the best thing that you have done yet, full of interest and of practical things from cover to cover, and shows us that you are keeping up with all the different branches of the lumber industry.

Yours very truly,
Ellwood Wilson,
Supt. Forestry Division,
Laurentide Company, Limited.

Filled With Instructive Matter

Campbellton, N.B.

Editor Canada Lumberman:

I have been very much interested in the annual number of The Canada Lumberman. The make-up is particularly attractive, and the issue is well filled with instructive matter.

I am sure you are to be congratulated upon such a splendid production.

Yours truly,
John M. Maclean.

Pulpwood Consumption in Canada, 1915

Canadian Pulp Mills Used 1,405,836 Cords, United States Mills, 949,714 Cords— Average Value at Mill Increaseed 10 Cents Per Cord

A report upon the consumption of wood in Canada for the manufacture of pulp during 1915, has been prepared by the Forestry Branch of the Department of the Interior and will be published in bulletin form in the near future. The report will show that since 1908, when reliable statistics were first gathered, the consumption has increased almost threefold. This increase has been extended each year with the exception of 1910, when a decrease of 3.8 per cent. was shown. The increases have varied between 10.04 and 28.9 per cent. The actual figures for the 8 years are as follows:—

1908	482,777	Cords, valued at	$2,931,653
1909	622,129	" " "	3,464,080
1910	598,487	" " "	3,585,154
1911	672,288	" " "	4,338,024
1912	866,042	" " "	5,215,582
1913	1,109,034	" " "	7,243,368
1914	1,224,376	" " "	8,089,868
1915	1,405,836	" " "	9,426,217

The Canadian pulp mills in 1915 consumed a total of 1,405,836 cords of pulpwood, valued at $9,426,217. During the same year 949,714 cords, valued at $6,164,113, were exported to the United States, making a total of 2,355,550 cords, valued at $15,590,330, as the cut of pulpwood from Canada's forests in 1915.

Although the cost of raw material has increased, and labor conditions have been disturbed by the war, the demand for pulp has increased for American consumption, and the difficulty of obtaining this commodity from Scandinavian sources has increased the overseas demand. The consumption of wood for pulp manufacture in Canada shows an increase of 14.8 per cent. in 1915. Increases are to be noted in every province in Canada, as follows: Quebec, 9.7 per cent.; Ontario,, 7.3; New Brunswick, 134.8; (bringing this province up to third on the list in place of British Columbia); British Columbia, 13.2, and Nova Scotia, 93.7.

The average value of pulpwood at the mill showed an increase of 10 cents over that of 1914. The value incerased in every province but Quebec.

Jack Pine Consumption Increasing

The report calls attention to the fact that the manufacture of sulphate, or kraft pulp, has opened a new market for the consumption of jackpine, a wood that has not been cut extensively for lumber. In 1912 only 40 cords of this wood were reported as having been used for pulp making. In 1913, when the kraft pulp was first made extensively, 19,383 cords were reported, all of which was used in the sulphate process. The increase from 1914 to 1915 was almost 70 per cent.

There was a smaller increase in the use of spruce and hemlock, and a decrease with balsam fir and poplar. While these five woods are the only ones reported, small quantities of white and red pine, and tamarack, are often used. Spruce and balsam fir pulpwood, as purchased by the mills, frequently contain a small accidental proportion of these woods, which is not reported.

The proportion of wood used in the mechanical and chemical processes of pulp making remained about the same in 1915 as in 1914. The use of wood in the chemical process increased from 36.5 per cent. in 1908, to 47.3 per cent. in 1914, and 47.1 per cent. in 1915, now forming almost half the wood consumed in the industry. The use of wood has increased in actual quantity with all four of the processes used.

Approximately 1,074,805 tons of air-dry pulp were manufactured in Canada in 1915, assuming that one cord of wood will produce one ton of ground wood pulp, or one-half ton of chemical fibre. This total is an increase of 15 per cent. over 1914. With groundwood pulp the increase was 15.3, and with chemical fibre, made by the three processes together, 14.2. The manufacture of chemical fibre by the sulphite process shows an increase of 8.2, by the sulphate process 31.4, and by the soda process 66.4.

Spruce and balsam fir are used in all five provinces and in all four processes of pulp manufacture. Hemlock was not reported from New Brunswick nor used in making soda pulp. Jackpine was reported only from Ontario and Quebec, and was used in making sulphate pulp alone. Poplar was reported from Ontario and Quebec only, and was not used in making sulphate pulp.

In 1908, the quantity of pulpwood exported in the raw state exceeded the quantity manufactured in Canada by 312,119 cords. The proportion of manufactured wood increased steadily until the two were almost equal in 1912, and in 1915 the home consumption exceeded the export by 456,122 cords. The quantity exported has increased by only 19.5 per cent. during that period, while the quantity consumed in Canadian pulp mills has increased by 191.2 per cent.

The total production of pulpwood increased in Canada by 7.2 per cent. The quantity manufactured in Canada increased by 14.8 per cent., while the quantity exported unmanufactured decreased by 2.3 per cent. Increases in proportion are to be noted in every province but Quebec; increases in manufacture in every province, and increases in export in Ontario and Nova Scotia, with decreases in Quebec and New Brunswick. No pulpwood has been exported from British Columbia since 1913.

Woodpulp

The export of woodpulp from Canada has alternately increased and decreased every year from 1909 to 1915. The total in 1915 is a decrease of 14.3 per cent. from that of 1914. The United States, France, and Japan purchased Canadian pulp in greater quantities than in the previous year, and China, Australia, Cuba, and New Zealand were added to the list, but the exports to Great Britain fell off by over ninety-eight thousand tons, bringing the total export below that of 1914.

The export of mechanical pulp decreased by 34.3 per cent., decreasing to the United States and Great Britain, and increasing to France. The export of chemical fibre showed an increase of 42.6 per cent., increasing to the United States, Great Britain, and Japan. No chemical pulp was exported to France in 1915.

The average value per ton of pulp exported increased by $4.61, increasing with ground wood and decreasing with chemical fibre.

The importation of wood pulp into Canada showed a slight decrease from 1914 to 1915. The quantity purchased from the United States increased, while that from Sweden and Great Britain decreased. No pulp was imported from Norway, Switzerland, or Austria-Hungary. The importation in 1914 of a small quantity from the latter country was stock purchased early in the year before the outbreak of the war.

Pulpwood, 1914 and 1915, by provinces: quantity used and total value, 1915; average value, 1914 and 1915:—

Pulpwood Consumption by Provinces.

Province	No. of firms reporting	Quantity 1914 Cords	Quantity 1915 Cords	Total value 1915	Average value per M. Ft. B.M. 1914	Average value per M. Ft. B.M. 1915
Canada	50	1,224,376	1,405,836	$9,426,217	$6.61	$6.71
Quebec	24	636,496	697,962	4,227,033	6.52	6.06
Ontario	15	447,751	480,627	3,806,804	7.08	7.92
New Brunswick	4	49,339	115,842	732,521	6.01	6.32
British Columbia	2	80,013	90,535	550,809	5.33	6.08
Nova Scotia	5	10,777	20,870	99,050	4.27	4.75

Pulpwood Consumption by Kinds of Wood

Pulpwood, 1914 and 1915, by kinds of wood: quantity used and total value, 1915; average value, 1914:—

Kinds of Wood	No. of firms reporting	Quantity 1914 Cords	Quantity 1915 Cords	Total value 1915	Average value per M Ft. B.M. 1914
Total	50	1,224,376	1,405,836	$9,426,217	$6.61
Spruce	50	836,387	998,156	7,057,672	6.70
Balsam Fir	33	314,183	307,219	1,785,372	6.58
Hemlock	6	45,246	55,265	325,411	5.63
Jack Pine	4	24,715	41,953	225,259	5.49
Poplar	3	3,845	3,243	22,403	6.81

Pulpwood Consumption by Processes

Pulpwood, 1914 and 1915, by processes: quantity used and total value, 1915; average value, 1914 and 1915:—

Processes	No. of firms reporting	Quantity 1914 Cords	Quantity 1915 Cords	Total value 1915	Average value per M. Ft. B.M. 1914	Average value per M. Ft. B.M. 1915
Total	50	1,224,376	1,405,836	$9,426,217	$6.61	$6.71
Mechanical	40	644,924	743,776	4,821,227	6.86	6.48
Sulphite	16	435,101	470,949	3,434,015	6.76	7.29
Sulphate	5	140,666	184,811	1,128,318	4.96	6.11
Soda	1	3,785	6,300	42,657	7.00	6.77

Exports Unmanufactured

Canadian pulpwood, exported unmanufactured vs. that manufactured in Canada, 1914 and 1915; quantity and average value per cord:—

	1914 Quantity cords	1914 Value per cord	1915 Quantity cords	1915 Value per cord
Production	2,196,884	$6.72	2,355,550	$6.62
Manufacture	1,224,376	6.60	1,405,836	6.71
Export	972,508	6.87	949,714	6.49

From the Canada Lumberman of Thirty-Five Years Ago

"Loss on Square Pine Timber."—The Commissioner of Crown Lands for Ontario in his able report for last year, says:—

The following will show the estimated loss to the Province and the revenue from waste in getting out square pine, from 1868 to 1877, both inclusive:—Total quantity taken from public and private lands during the ten years, 119,250,420 cubic feet; waste, one-fourth of each tree, equal to one-third of the total mentioned, viz.: 39,750,140 cubic feet, or say, in round numbers 477 million feet board measure, which may be valued one-half at $10 per 1,000 feet, and one-half at $5 per 1,000 feet, representing relatively the prime timber beaten off and the inferior timber from the upper part of the tree, average value, say $7.50 per 1,000 feet, equal to $3,577,500 loss to the province for ten years, or an annual loss in material wealth of $357,750.

The quantity taken from public lands during the ten years is 87,620,135 cubic feet, the waste on which on the basis given being equal to 29,206,711 cubic feet, or 350 million feet board measure, subject to Crown dues at $750 per million feet equal to $262,600 lost to the Revenue during the ten years.

The loss to the country in revenue from timber destroyed by fires which might have been confined to a limited area, and possibly extinguished, before great damage had been done to the forest, had they not been fed by the debris of trees left to rot and dry, is incalculable.

Lumbering on the Pacific Coast:—Saw-logging on the Pacific Coast is carried on somewhat differently to what it is in Muskoka. When all orders have been filled, stock lumber is cut pretty much as follows:—Butt log, 24 feet; second, 32 feet; then 40 feet, until stopped by knots. The roads are graded 16 feet, with a skid let in across the road every 8 feet. The logs are barked when the sap is up—failing this they are "rossed" on the running side. Four yoke of oxen constitute a team, the hind yoke having a tongue and dog chain. The logs are strung one behind the other, with dogs and chains; one log, however, containing 6,000 feet, being considered a load. The greaser goes ahead of the team, with a swab and can of dog fish oil, and greases the skids. With regard to the wages paid, the chopper, who stands on a spring board while working, receives $75 a month and board; hook tender, who snips the ends of the logs, drives the hooks and attends to snatch blocks and snubbing lines, gets $50; sawyer, $60; barker, $35; head skidder, $40; second skidder, $35; teamster, $75; swamper, $40; greaser (a boy), $20. All payments are made in gold. Land that has less than 200,000 feet to the acre is not considered pine land. A stock was lately cut out of a saw-log in the mill at Tacoma, which measured 34 x 14 inches, and 120 ft. long.

Ottawa.—The value of sawn lumber exported from Ottawa during the months of May, June, July, August and September, 1877, is given at $859,616; in 1878, at $686,671; in 1879 at $813,211. During the year 1880, for May, June, July and August, the value exported is $100,320. When September returns come to be added, it is expected that the increase over the five months of last year will be in the vicinity of half a million dollars.

B. C. Lumber Exhibit Installed at Montreal

In pursuance of the publicity campaign of the British Columbia Government, to push the sale of B. C. lumber in the east, the consent of the Montreal Board of Trade was obtained recently for exhibiting samples of B. C. lumber products in the principal room of that organization. The exhibits were installed under the supervision of Mr. L. B. Beale, B. C. Lumber Commissioner for Eastern Canada. Invitations were sent out to lumbermen, architects, and contractors, and these were freely responded to.

The exhibits consisted of finished specimens of seven woods—Douglas fir, Sitka spruce, Western red cedar, Western soft and white pine, Western hemlock, and Western larch, in doors, pannelling, moulding, and in fact in all the main forms of manufactured lumber. All the woods, except the doors, were arranged on large frames, the upper portions of which contained photos showing the lumber from the forest to the finished article. The photos included mills and paper and pulp plants. Underneath were printed descriptions of each wood, giving their strength values, uses, and other information. Particular interest was shown in the exhibit of B. C. pine.

Mr. Beale explained to a representative of the Canada Lumberman that the B. C. Government is anxious to impress upon the consumer the advantages of using these woods, and that the publicity campaign is a means of educating the public to specify and purchase Canadian lumber instead of the imported article, particularly Georgia pine. In creating this demand the wholesale and retail lumbermen will naturally receive a part of the benefit of the trade created. The British Columbia Government is convinced that the province can supply the lumber required in the east which now comes from foreign points, and thus at the same time develop our resources and promote inter-provincial trade. B. C. lumber has unsurpassed qualities, and there is no reason why we should purchase foreign supplies when we can obtain suitable lumber within our own borders. The publicity campaign has already resulted in a much better demand for B. C. lumber products.

The exhibit is to be a permanent one in Montreal. Later on it will be located in the Builders' Exchange. Similar exhibits are installed at Hamilton and London.

In a few days, Mr. Beale will visit the principal cities and towns in Quebec and the Maritime Provinces, in furtherance of the educational programme of the Forest Branch of the British Columbia Government.

Thirty-six Million Cords of Wood Waste Annually

There are more than 48,000 sawmills in the United States. and their output of waste in the form of sawdust, shavings, slabs, and other wood refuse, is estimated as 36 million cords per year. This is equal to over 4½ billion cubic feet of waste.

Perhaps one-half of this so-called waste product is not, strictly speaking, wasted, but serves a useful purpose as fuel under the boilers. Much of the remaining 18 million cords not only serves no useful purpose, but in most cases is a source of inconvenience and danger, and costs the mill time and money.

It is estimated that for a mill of one hundred thousand feet capacity the cost of conveying the waste from the machine where it is made and destroying it in a closed burner, is 42 cents per cord, or $10.05 per day. Burners seldom bring in any revenue, although in a few cases ashes are sold for fertilizer, and in a number of others the burner furnishes hot feed water for the boilers.

Both burners and fire-pits add to the insurance rates on lumber, and in the case of the pit, on the mill itself. In order to reduce the fire hazard to zero, in the case of the burners, it is necessary to keep all lumber piles at least one hundred and fifty feet away from the burner. The matter is much worse in the case of pits, especially the open ones. which must be kept three hundred feet away from the mill and five hundred feet away from any lumber piles. When nearer than these distances from the mill and yard respectively, the insurance rates mount up rapidly with closer proximity until they become practically prohibitive when the fire-pit is nearer than one hundred feet.

A New Lumbering Concern for Northern Ontario

Another new lumbering concern has this year been added to those so successfully operating along the line of the Temiskaming and Northern Ontario Railway, the Monteith Pulp & Timber Company, Limited. The headquarters of the company's operations are at Monteith, on the Driftwood River. about 30 miles from Cochrane, where a combination circular saw and rossing mill has been constructed and is now running, with a capacity of 35,000 feet of lumber and 100 cords of rossed pulpwood a day. The limits of the company, located along the Driftwood River and in close proximity to the mill, were first logged by the company during the past winter, and in addition they have contracted for the entire output of two sawmills and five rossing plants in the district. It is anticipated that their own output will amount to six million feet of lumber and 20,000 cords of pulpwood this season. The company's location and manufacturing conditions augur well for a most successful operation. The supply of spruce pulpwood along the Driftwood River and its tributaries is enormous, estimated at well over 1,000,000 cords. Much of this spruce is large enough to profitably cut into lumber, and as this supply is close to the mill operations of the company and practically on the line of railway, the cost of transportation is reduced to a minimum. Besides the mill buildings, the company is also operating a large general store at Monteith.

The personnel of the Monteith Pulp & Timber Co., Limited, is made up principally of lumbermen of wide experience. The officers are: James Thompson, M.P.P., Havelock, Ont., president; J. L. Squire, Norwood, Ont., vice-president; Peter Yousey, Monteith, Ont., production manager; E. R. Heyland, Toronto, secretary-treasurer. The head office of the company is at 123 Bay Street, Toronto.

A Hummer This Time

Editor, Canada Lumberman:— Glencoe, Ont.

I have received a copy of the Annual Number of the Canada Lumberman, and may say that you have gotten out a hummer this time.

Yours very truly,
B. F. Clarke.

Purchaser's Risk Upheld by Court

Let the Buyer Beware is Maxim Regulating Lumber Transaction as Court Sees It.

Judgment was recently given in the Court of Appeal in an appeal against the judgment of a county court judge in the County of Elgin, Ont., in the action of Oldrieve vs. C. G. Anderson Company, Limited. In the County Court case the plaintiff had obtained judgment in an action to recover a balance of the price of lumber sold to the defendant company. The defendant company had claimed that they purchased 28,000 feet 12/4 firsts and seconds white ash, carrying 20 per cent. No. 1 common, at $45 per thousand feet, f.o.b. cars, Dutton, inspection at shipping point, the purchase to be subject to "National inspection." The lumber was inspected at Dutton, loaded on cars, and shipped to a sub-purchaser, the Fisher Car Body Company, of Detroit, who were represented at the inspection. The defendant company contended that the shipment contained 9,920 feet more of No. 1 than the terms of the agreement obliged them to take. They also claimed a cash allowance of 2 per cent. These two claims were both dismissed by the County Court judge.

When the case came up for appeal, a majority of the Court held that the goods were in actual existence from the beginning of the negotiations and that the rule "let the purchaser beware" applied to exclude implied warranties. The inspection followed by the acceptance and shipment, settled all other questions, both of quantity and quality. The appeal was therefore dismissed with costs.

One of the judges of the Court of Appeal, however, dissented from the finding of the others, taking the position that the appellant company had not been aware of the amount or the proportion of the excess of No. 1 common, though it might be fairly said that they had known that there was some excess. They had resold, and the delivery to them was made by placing the lumber on cars. Until the loading was complete the quantity and quality, or the proportions of the latter, could not be ascertained in fact. Upon complete delivery on the cars, and then alone, could the appellant company have ascertained the proportions and known whether the contract had been observed. It would be rather a hard position in which to put a purchaser who had resold, to say that he must then and there reject and lose his resale. The respondent, moreover, had known, but had not disclosed, the true state of affairs and could not complain if required to fulfil his contract.

At the annual meeting of the Montreal branch of the Canadian Manufacturers' Association, held on June 6, Mr. William Rutherford, of William Rutherford and Sons Company, Limited, was elected vice-chairman, while Mr. J. H. A. Acer, Laurentide Co., Ltd., Mr. S. H. B. Rolland, Rolland Paper Co., Ltd., and Lieut.-Col. W. J. Sadler, Sadler and Haworth, Ltd., were elected members of the executive committee.

Something to be Proud of

Editor, Canada Lumberman:— Ludington, Mich.

I have just received a copy of your Annual Number and feel that I ought to congratulate you on the excellence of its typographical appearance as well as the merits of its contents. The trade in Canada certainly has a representative in your publication of which they may well be proud. The breadth of the editorial policy is apparent on every page, and the general readableness of the publication is in marked contrast with the average trade paper.

I cannot refrain from saying a word here in reference to the attitude of the American people toward Canada. We are proud of the Dominion, we are proud of her resources and her virility; we are proud of the part she is playing in the great war. We feel that we are the same people with common ideals and identical ambitions. The blood of Canada's sons was shed that this Union might be preserved and, to-day, not a few of the flower of our own manhood are standing shoulder to shoulder with the soldiers of the Dominion in the trenches of Europe. We have lived beside each other in peace for a hundred years because we understand each other, have the same heritage and the same destiny. It is our hope that this terrible scourge of war will soon pass away and the victories of war give place to the no less glorious victories of peace.

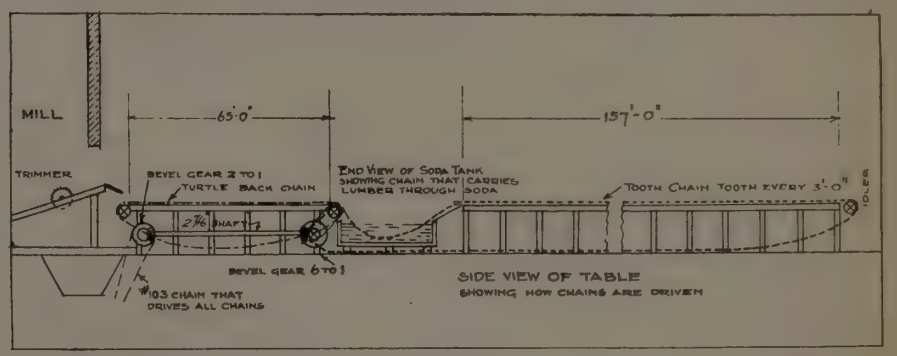
Again I congratulate you and hope that you will go on as you have begun and that the success which you certainly deserve will always be with you.

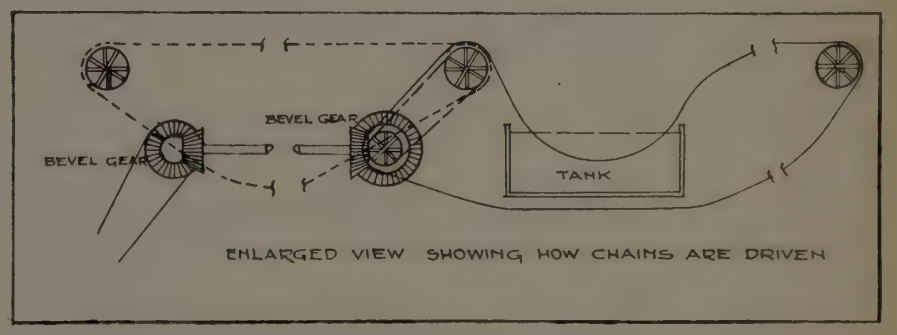
Yours very truly,
The Stearns Salt & Lumber Company,
By W. T. Culver, Vice-president.

Soda Dip for Preventing Sap Stain in Lumber

The practice of dipping lumber in a tank containing a solution of soda, in order to prevent sappy lumber from staining, is not very general in Canada, but is used in some of the larger mills. The Hope Lumber Company, Thessalon, Ont., have been using a tank of this nature for several years and report that they have obtained good results in this way. The accompanying illustration gives a clear idea of the tank and its operation. The entire length of the table shown is 229 feet. The company use both sides of the table and thus have 100 separate sortings of lumber. The tank is placed 65 feet from the mill or trimmer, which gives plenty of space for pulling off such lumber as they do not wish to put through the soda tank. From the tank to the end of the table they have 157 feet, which gives them plenty of room for the lumber that passes through the tank. In the tank they have a mixture of soda and water which kills sap in lumber. A good many mills use a sprinkling system for the same purpose, but the Hope Lumber Company find that a sprinkling system does not get at all the sap on both sides of the board, while the tank system does, as the board when leaving the table slides down the chains and is submerged in the soda.

On the mill side of the tank the chains return on drivers located at the end of the table near the edge of the tank. Underneath the table, at the mill end, there is located a bevelled gear which drives





all chains on both sides of the tank. The method of drive is shown in one of our illustrations. On the driving shaft there are five sprockets just outside of the tank on the mill side. Two of them are idlers and the other three are drivers, one of them driving all the chains from a shaft under a table. The chains on the sorting side of the tank run through the soda, along the sorting table and return under the tank and table being driven by a driving sprocket at the mill side of the tank.

The tank is built of 12/4 in. Norway. It is 26 ft. long, 7 ft. 6 ins. wide and 16 ins. deep. The table on each side of the tank is 9 ft. wide.

The Quebec Government was represented at the recent Lyons fair of samples, at Lyons, France. The exhibit included specimens of lumber mounted on a large stand, together with samples of pulp. The Riordon Pulp and Paper Company, Ltd., Montreal, showed samples of their sulphite pulp, while the Canadian Boomer and Boschert Press Company, Limited, Montreal, had on view photographs of their productions. The British Columbia Government also sent a large number of photos showing standing timber.

"The Finest I Have Ever Seen"

Editor, Canada Lumberman:— Parrsboro, N.S.

I have received a copy of your splendid Annual Number. It is, I think, the finest of any I have seen, and would be highly creditable to any printing office, of any city. I am proud to know that Canada can turn out such an excellent trade journal.

Yours very truly,
E. Woodworth.

Early Days in New Brunswick Logging

Interesting Reminiscences of the Beginnings of a Great Industry—By One Who Lived Through Much of Them*

In August, 1840, when I was little more than eleven years old, I began my career in lumbering. With seven men—five of whom had blackened eyes, evidence of the rum-drinking and fighting commonly indulged in by the Irish, Scotch, and English along the river at this time—I set out for my father's camp on the Miramichi Road, six miles up the Shiktehawk River, about ten miles from my home in Greenfield. I rode a black horse with which we "snaked" our two canoes around the rocks where the current was swift, and twice swam across intersecting streams, clinging to the hames of my mount.

At the camp were fifteen men, with fourteen horses, felling the trees, hewing them into ton timber and piling them on rollways on the banks of the river, whence they were floated down the St. John for the export trade. In accordance with the system of the time Sherman Tapley, an associate of Squire Nevers, as the "supply man," advanced the equipment and provisions for the camp. My father as contractor had full charge of, and was responsible for, the operations carried on.

The winter in 1840 and 1841 was unusually rigorous. The snow was seven feet deep, and whether for this or some other reason the country was overrun with a horde of wolves which, it was supposed, had migrated from the ice-bound wilderness to the north, in search of food. At the camp they did not molest us, but they invaded the sheep folds at the farms in packs and slaughtered the unfortunate animals by the scores. Some of the poorer families, for lack of secure stables, were obliged to take their small flocks into their houses at night for safe keeping.

Work at the camp moved according to a well-measured routine. The men arose shortly before daybreak and went to work in the woods on snowshoes, beginning as soon as the light was sufficient to enable them to see clearly. Except for the brief interval of rest at midday for dinner, which I brought to them, they kept at it steadily until nightfall, when they returned to camp. Being too tired for diversion, as a rule, they went to bed shortly after supper. So life moved for them day after day until the approach of spring unlocked the fast-frozen streams, and the timber was floated down to market. The only respite from labor was afforded by Sunday, and on that day axes were ground, repairs made, and the camp set in order for operations during the week.

To me was assigned the duty of cooking. Although not very proficient, I managed well enough, as our fare was limited to pork, beans, bread, molasses, tea, and dried apples—not a well diversified diet, but as good as could be obtained under the circumstances. The men were satisfied mainly, perhaps because the time did not afford a higher standard by which they might measure the shortcomings of their own lot. Nor did their health suffer for lack of luxuries, edible or otherwise. Sickness was rare. In my long experience in the woods in New Brunswick, in Maine, and in later years in Wisconsin and Michigan, I discovered that ordinary ailments and diseases were phenomena of community life and that their prevalence was largely in proportion to the complexities of the modern way of living. In the isolated camps in the pine forests they had no place.

Logging and timber making, of course, had its dangers. During this same winter one of the men of our camp, Kinney Landers, was killed, and another, named Hoyt, was injured while breaking out a rollway. Both men, citizens of the United States, were pinned under the rolling logs, and Landers was crushed to death. For the funeral, I remember, the activities of the camp were suspended for three or four days, when time was most valuable. There were also many cuts and gashes due to slipping of axes on the frozen timber, but infection of the wounds was extremely rare—I do not remember a case of what has been called blood-poisoning—and recovery rapid.

The Lot of the Logging Contractor

Most of the lumbering at this time was done by men who, like my father, contracted to fell the trees and hew the logs into square timber. Capital was scarce and the contractors generally were obliged to obtain their supplies on credit, a condition that was unfortunate, for those capitalists, in many instances, took avery advantage of the debtors' laws to acquire possession of the fruits of the labor of the men who suffered hardship and privation in the forest, and upon whom the burden of production rested most heavily. When the timber had been cut the creditors, under cover of the drastic law, swooped down upon the contractors and seized it for debt before it could be delivered. The contractor himself was thrown into a debtor's cell. Some of the largest lumbering firms in Canada resorted to this practice, which became a positive evil, and hundreds of the most efficient lumbermen in New Brunswick, to escape the sheriff, fled across the border and took refuge in Maine, where they contributed much to the prosperity and upbuilding of the country.

In the winter of 1840 and 1841 one Purdy, of the firm of Purdy and Dibble, storekeepers, arrived at our camp with a deputy sheriff of the county, named Craven, on their way to arrest William Rogers, a neighboring contractor, and to seize his timber and equipment for debt. My father's sympathies were naturally with Rogers and, while acting as host to Craven and Purdy, who remained over night, he sent a boy, William Coulter, out surreptitiously to warn him of their coming. Rogers entrenched himself behind natural barriers by driving his horses up the byroads and blocking the main thoroughfare by felling trees across it. When Craven and Purdy arrived at his camp on foot they found it deserted and returned home without accomplishing their purpose. Before they could renew their attempt Rogers succeeded in making arrangements to tide himself over the difficulty.

According to the methods of logging which prevailed in Maine, when a tree was felled a pathway was cleared through the deep snow to the main road and the log, with one end chained to a sled, was dragged from the stump. The hauling was done by teams of three yoke of oxen, the driving of which was one of the most difficult and remunerative accomplishments of the lumbering craft. Ox teamsters, who were looked upon as persons of a higher category by the swampers and axemen, were paid, in some cases, as much as sixty dollars a month, while the foreman of the camp received only twenty-six to thirty dollars, and their wages were little short of munificent according to the scale then maintained.

The use of oxen in logging can be traced back directly to the period before the American Revolution when the English and French governments began to draw upon the forests of Maine and New Brunswick for white pine for masts and spars. Only the oxen trained for that purpose, with their slow, steady pull, were strong enough to drag the huge trunks, some of them more than three feet in diameter and a hundred feet in length, out of the woods. In 1815 and later it was the practice in Maine to drive them even singly in hauling timber to the rivers. In my father's camps I set out to master the art, for such it was, learning not only to drive the oxen, but to train them. This latter task required about two months for a team of six and could be accomplished at all only by the exercise of the greatest patience and forbearance. The animals were driven with a goad stick, about four feet long, five eighths of an inch thick at the large end and a half-inch at the smaller, with a brad about a half-inch in length. Outside of Maine and New Brunswick whips were commonly used.

Rivalry Among River Drivers

The rivalry among the drivers in the Maine forests, of whom there were hundreds, perhaps thousands, was extraordinarily keen. Contests in hauling trees or starting boats laden with stone held as important a place in the diversions of the day as the more athletic sports or races of the present. Fortunately, I made the most of my opportunity. The knowledge I acquired stood me in good stead in after years, when we did most of the masting on the upper lakes. At Escanaba, Michigan, sixty-five years ago, I ranked among the best drivers; and I took, and still take, a great deal of pride in that accomplishment.

In 1844 I went down the Fish River and the St. John on the

* Reprinted from "Recollections of a Long Life, 1829-1915." By Isaac Stephenson, rivately printed.

Annual Number Much Appreciated

Glens Falls, N.Y.

Editor Canada Lumberman:

I have looked over your annual number with much interest and wish to congratulate you upon the interesting and very practical articles which it contains. The article on pages 92 and 93, "Hire and Fire vs. Hire and Inspire," is especially worthy of praise. I was also much interested in the articles regarding old and new lumbering methods and sawmill equipment in eastern Canada. The article by Ellwood Wilson, regarding the careful study of timber lands made by the Laurentide Company, could be read with profit by holders of timber land from all sections.

Yours very truly,

H. Lincoln Churchill,

Forester, Finch Pruyn & Company, Inc.

first log drive of large proportions in those waters. Before this time timber and logs were brought down from the upper river loose in small quantities to a point below Grand Falls, where they were gathered together into small rafts. These were poled as far as Spring Hill, at the head of tidewater, made into larger rafts, and floated down with the tide to St. John.

The Yankee lumbermen first adopted the practice of bringing the timber down the rivers loose in large quantities and established the methods of log driving which were followed in the west. Here again I was to profit by my experience. The lessons I learned from Jefferson Sinclair, who built the boom at Oldtown and superintended this first great drive down the St. John, I applied to great advantage on the Menominee River, which came to be as important in the fifties and later, as the Penobscot had been before, and produced hundreds of millions of feet of timber every year.

On the St. John drive there were two crews, each consisting of one hundred men, one under the direction of George Lincoln, the other under Henry Colton. My function was to serve as "cookee," or assistant to the cook, in which capacity I accompanied Colton's crew. The position was not so difficult as might be supposed. The cook, a personage of some importance in the environment in which he moved, was not merely my superior, but a very good friend. For three months, or until the drive was completed, we tented together, and during our leisure moments I taught him to read and write, while he taught me French. Colton, who afterwards went to Pennsylvania, where he had charge of the boom at Williamsport, also took me under his special protection and asked me to come and live with him. We constituted, if not a picturesque, at least a very congenial trio.

The course of the drive was through Portage, Eagle, and Long Lakes to the north of Fish River, and thence down the St. John. In the hazards encountered—the breaking of jams and the passage of dangerous rapids—I, of course, did not share. None the less the journey was eventful. The timber was to have been collected at Glazier's boom, seven miles below Fredericton, and rafted the remainder of the distance; but the boom proved unequal to the strain put upon it and broke, and we were compelled to continue our operations down to St. John.

This enabled me to secure my first glimpse of a city and the vessels at anchor in the harbor. It was taken, however, under the protection of some of the members of the crew, as the belligerent Irish boys around the wharves were only too glad of an opportunity to war upon an unsuspecting lad from the country, who undoubtedly indicated by his actions that the environment was a novel one. It was July by the time we returned to Aroostook.

Hugh Munro Again in Harness

The Canada Lumberman is pleased to announce that Mr. Hugh Munro, whose health failed him some months ago, is gradually recovering his old-time vigor and looking fit again. He has severed his connection with the Oliver Lumber Company and is making arrangements to start in business on his own account, under the name of the Hugh Munro Lumber Company, Limited. Few lumbermen are more widely known than "Hugh" Munro—and few have more friends in the trade. He was associated for many years with the old firm of Donogh & Oliver, while latterly being a stockholder in the Oliver Lumber Company. An extensive experience in the buying and selling of lumber, coupled with a natural disposition to study the requirements of the consumer, has brought to him a very thorough knowledge of the lumber business, and his entry into the wholesale lumber field, by himself as it were, will doubtless mean further success.

B. C. Scaling Report for April

The timber returns for the month of April, issued by the Minister of Lands for British Columbia, shows that the total scale of saw-logs for the province amounted to 55,061,261 feet board measure, in addition to 309,678 lineal feet of piles and poles, and 21,990 cords of ties, shingle bolts, etc.

The saw-logs scaled in the various districts include Vancouver, 37,613,742 feet; Island, 9,804,994 feet; Cranbrook, 4,491,277 feet; Vernon, 1,001,378 feet; Nelson, 988,604 feet; and Prince Rupert, 620,711 feet.

In the Vancouver district there were scaled 117,945 lineal feet of poles and piles, Island district 58,937 lin. ft., Prince Rupert 42,680 lin. ft., Kamloops 36,974 lin. ft., and Nelson 32,077 lin. ft.

Timber sales recorded during April cover an estimated total of 2,234,000 ft. B.M. sawlogs, to produce a revenue of $3,927.

Robert K. Anderson, widely known through New Brunswick as a successful lumberman, died at his home, Lawrence Station, recently, after a lengthy illness. The late Mr. Anderson was 68 years of age and is survived by his widow and four sons.

Newfoundland Industries Growing

Important Company Started to Develop Pulp, Lumber, etc.—Barrel Industry Developing.

St. Johns, Nfld., June 5; (Special to the Canada Lumberman):—The Newfoundland Products Corporation, which was incorporated during the last session of the Legislature, has obtained large and important concessions from the Government. The company will establish an extensive industry for the manufacture, among other things, of pulp and lumber, and a fertilizer known as amonium sulphate. Several plants are to be erected, at a cost of $18,000,000. The necessary capital has been obtained, we are informed, from the banking firm of Stone & Heyden, New York. When incorporated, the company included Messrs. Thos. L. Wilson, of Woodstock, Ont., and the Reid Newfoundland Company of Newfoundland. Mr. Wilson, well known for his carbide industry, has since died, and the Reid Newfoundland Company are now the chief promoters. The Reid Company have included in the new company a large portion of their timber limits. These are among the most important and best watered in the country. More than one million dollars has already been spent upon the preliminary work since last spring, chiefly in surveying the holdings. Construction work will probably be commenced this summer. The company will put up two sawmills at a cost of $211,800. Sulphite pulp mills, electrolytic bleaching plants and wood preparation equipment will be installed at a cost of $1,568,300. The sulphite pulp mills will consume 100,000 cords of spruce pulpwood yearly and will produce 36,500 tons of sulphite pulp, valued at $1,825,000. The company have acquired for a period of 99 years the entire water power on the Humber River (the largest river in Newfoundland), and on Junction Brook, together with numerous water powers on the Hamilton River, Labrador. They have agreed to sell any amount of water power up to 500,000 h.p. to any saw or pulp mills operating in their vicinities. The survey work is being carried on by Messrs. Jos. Wallace & Sons, New York.

The barrel making industry is developing to considerable proportions in Newfoundland, to meet the demands for packing herring for the American markets. Newfoundland firms are going in extensively for the herring trade. Last winter the herring pack for export amounted to 85,660 barrels. The spring fishery is expected to have an even larger output. The only hardwood available in the country is birch, and it is only in limited quantities. Staves for this industry will have to be imported from Canada.

W. E. B. Wally, a well-known English timber expert, visited Bonne Bay, on the West Coast, recently, to look over timber areas for English capitalists, who are thinking of purchasing from the present owners, Messrs. Salter & Sons, of Nova Scotia. Mr. Wally was favorably impressed with the property and it is probable that a sale will result at a substantial figure.

The shortage of tonnage for trans-Atlantic shipment is affecting the export of pit-props to England. About 300,000 cords of pit-props and a quantity of pit wood are lying upon the banks around the coast waiting to be shipped. Eight large cargoes have already been shipped this season, but the quantity remaining is many times greater than that which has been shipped. Unless sufficient steamers are obtained, it is likely that there will be a considerable loss to those engaged in the work. A number of old wooden sealing vessels have been pressed into this service.

Mr, George Esplin, who died at Lachine, P. Q., on May 28, aged 70, was senior member of the firm of G. and J. Esplin, box manufacturers, Duke Street, Montreal. Mr. Esplin had been ill for some time, and recently had attended to his business only at intervals. He took a deep interest in educational and hospital work, being chairman of the Lachine School Board and governor of three or four hospitals. The firm is one of the largest box manufacturers in Montreal.

Setting a High Standard

Editor, Canada Lumberman:— Toronto, Ont.

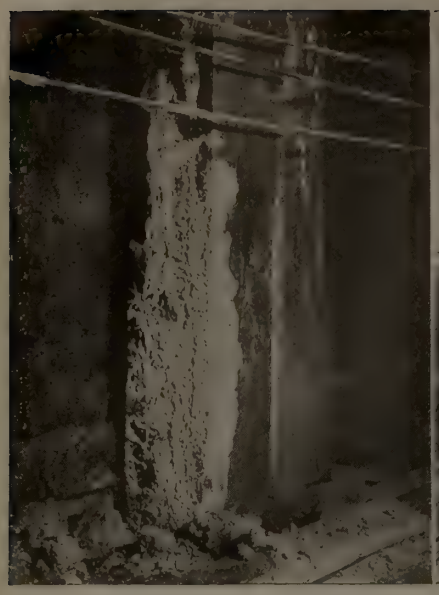
The copy of the Annual Number of your paper has been gone over carefully in our office, and we wish to compliment you and your editor on the high standard you have set in this copy. There is more interesting and useful information in this copy than we have seen in any of the lumber trade journals for some time. We think that you have taken up a line of articles that must interest anyone who is systematic in his handling of lumber situations.

Hoping that you may have more of these articles, we are,

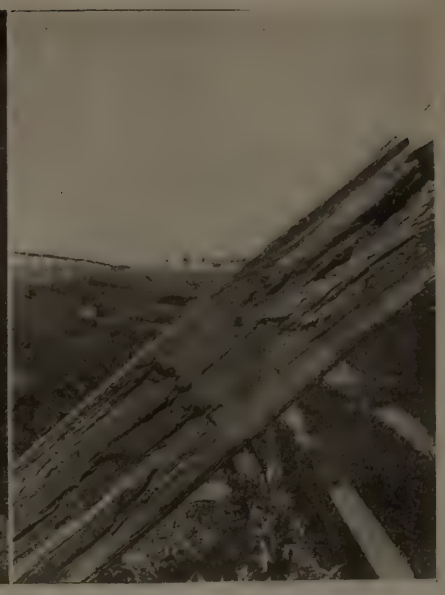
Yours truly,

Edward Clark & Sons,

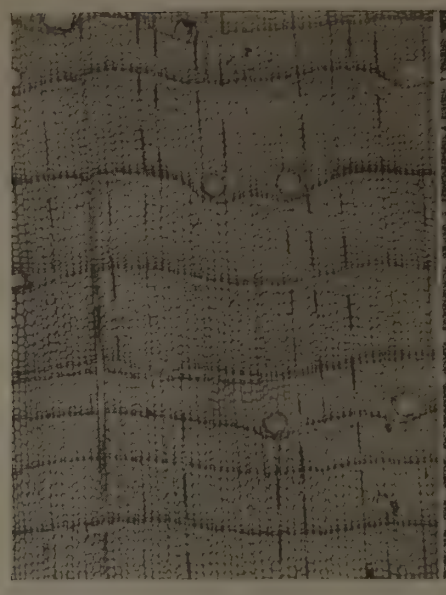
Per A. E. Clark.



Mine timber in early stage of decay, showing growth of fungus.



Decayed Spruce tie (untreated) removed during fifth year of service.



Microphotograph of transverse section of White Pine. Note numerous large resin canals.

Microphograph of transverse section of White Birch, a diffuse porous wood, i.e., pores uniform in spring and summer wood.

The Preservative Treatment of Timber

By W. G. Mitchell*

A large proportion of timber used for industrial purposes is required for service under conditions which are favorable for deterioration from decay and insect attack. These conditions vary widely, and similarly, the means which may be adopted for the reduction of losses from such causes are determined largely by the nature of the service for which timber is used. The artificial preservation of timber is not a new practice, but recent years have developed many improvements in methods and accumulated a varied and extensive experience which has yielded much definite knowledge regarding its possibilities. It is impossible to estimate even approximately the actual value of timber annually destroyed in Canada by the agencies above noted, but the situation is certainly serious enough to warrant very careful consideration of any means for preventing or reducing such losses.

The Natural Durability of Wood

Woods of various species differ greatly in their natural resistance to decay. The cedars, oaks and Douglas fir are among the most durable of Canadian commercial woods, while ranging below these in an estimated classification on a basis of natural durability are the tamaracks, the hemlocks, the pines, the spruces and such hardwoods as beech, birch and maple. Variations in this respect apply to the separate species of above woods. Thus, white oak is by far the most durable of all the oaks, and black spruce is regarded as more durable than the other Eastern spruces,—red and white. The striking difference in resistance to decay between heartwood and sapwood of practically all species is, of course, a matter of common knowledge among timber users.

* Chief of Division of Wood Preservation, Forest Products Laboratories of Canada.

Insect Destruction of Timber

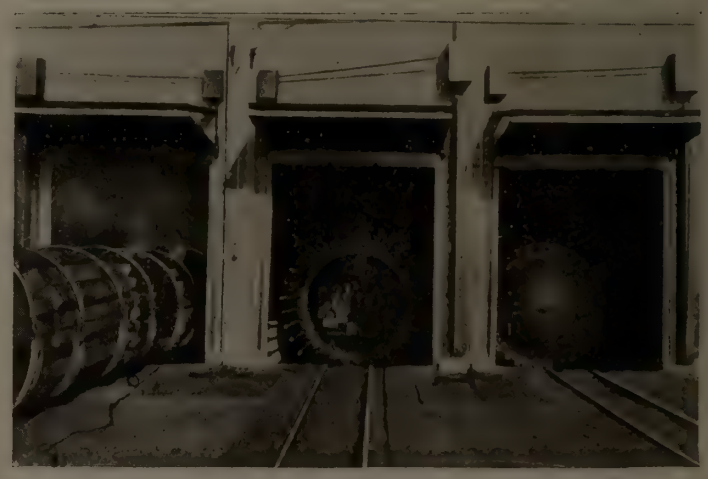
The destruction of structural timber by insects is not so serious in Canada as in Southern climates, but the damage from this cause is very considerable. This statement applies to insect destruction of rough or finished timber and does not refer to damage caused to living trees by forest insect pests.

Among the insects which attack structural timber those which are most destructive in Canada are the borers (round-headed and flat-headed), powder-post beetles and ambrosia beetles. In general, unbarked timber is more liable to insect attack because of the fact that the eggs are deposited within the bark during the early summer months and rapidly develop into mature insects. Winter cutting, peeling and effective methods of seasoning will do much towards the reduction of damage from insects. A feature of the action of wood boring insects which ordinarily receives little consideration is the fact that the burrows of such insects offer favorable points for the development of fungus plants. The usual methods of preservative treatment adopted for protection against decay are also very effective in preventing insect destruction.

The marine boring insects which infest ocean waters and cause enormous destruction of piling, dock and bridge timbers, more particularly in Southern climates, appear both in the Atlantic and Pacific

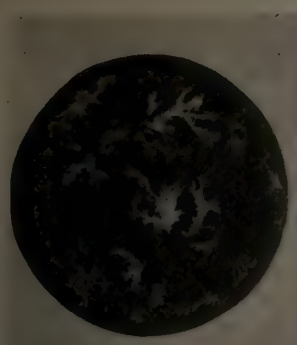
Treating roofing planks for paper mill by immersion in mercuric chloride in open tanks.

Photo by F. J. Hoxie.

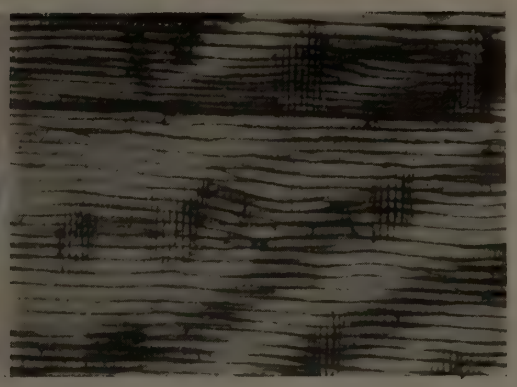


End view of pressure cylinders, timber treating plant of C. B. & Q Railway, Galesburg, Ill.

Photo by J. H. Waterman, Superintendent



Laboratory culture of fungus in sawdust showing hyphae or mycelial filaments.



Microphotograph of longitudinal section of pine showing fungus mycelia penetrating wood structure—the fine irregular threads within wood cells

Canadian coast waters, although they are rather less destructive in northern latitudes.

Principles of Wood Preservation

The decay of wood is possible only under certain conditions of temperature, moisture and air supply. If these requisite conditions are lacking, seasoned wood requires no further protection against decay. Thus, wood for interior finishing and structural timber in dry buildings, furniture and the innumerable wooden articles in common use do not deteriorate from this cause. In general, timber which is exposed to the weather, particularly if in contact with the ground, and that used in mining operations and in damp buildings is subject to decay to a greater or less extent. In such cases the service life may be very materially increased by artificial protective treatment.

The basis of those methods of wood preservation which are most effective and in most general use is the treatment with a substance which has a positive toxic action toward fungi. Other methods which have been proposed and adopted to some extent depend on the partial waterproofing of timber either by superficial application of paints, pitch or similar materials, or by impregnation with such relatively non-toxic oils as crude petroleum. These latter methods have serious limitations for many practical requirements and are not in general use. Painting of sound seasoned lumber or heavier timber exposed to the weather affords considerable protection against decay under certain conditions. However, superficial application of, or partial or complete impregnation with an antiseptic material is the only effective method for the preservative treatment of that large proportion of timber used under service conditions in which painting could give no lasting protection.

The development of wood preservation in Canada has been comparatively recent and is not yet very extensive. There are now five plants in Canada equipped for pressure treatment of timber, all established within the past decade. A sixth plant of this class is now in course of construction on the Pacific coast. There are a few smaller installations adapted to non-pressure treatment of small material.

Preservatives

Among the preservative materials which now have considerable application in timber treatment, tar products of various grades,—commercial creosotes, mixed paving oils and special high grade distillates,

Longitudinal section of creosoted birch railway tie, showing penetration of preservative with complete impregnation of outer wood.

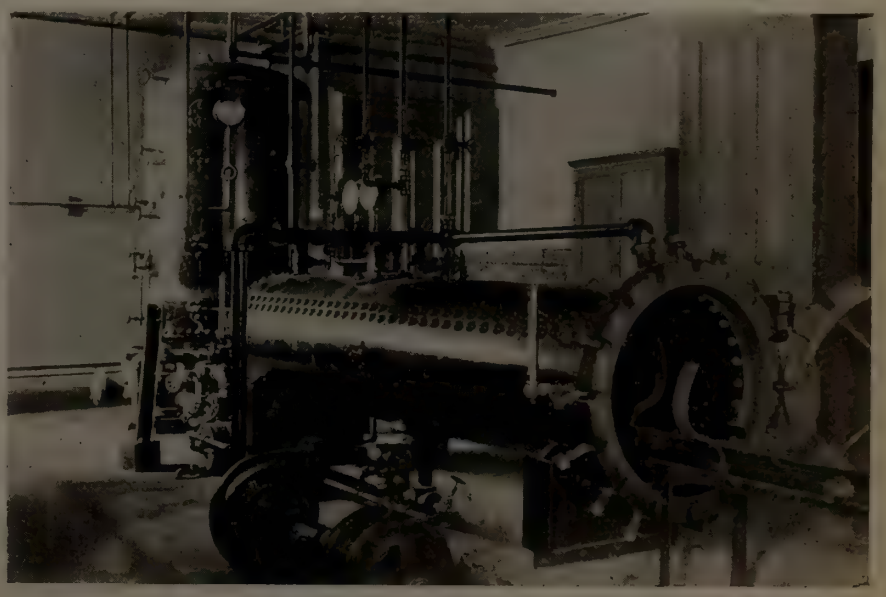
are most extensively used. Such oils have a relatively high toxicity to fungi and wood destroying insects, have a considerable waterproofing value which is an important factor in certain cases, and are comparatively permanent as regards protective action. Of the metallic salts used as wood preservatives, that which is most widely in use at present is zinc chloride. Other preservatives of this class, which have a limited use in America and a more general application in European wood preservation practice, are mercuric chloride, sodium flouride and copper sulphate. A few additional inorganic salts are used for wood preservation but are of minor importance.

In general, creosote is adapted to any method of application, from brushing to full pressure treatment. It is used practically exclusively for treatment of piling and paving blocks and very largely for treatment of ties, poles, posts and other timber placed in damp places or in contact with the ground. In the United States in 1914 the consumption of commercial creosotes for wood preservation, including mixed paving oils, was approximately 90,000,000 U. S. gallons, a figure which, because of reduction of European exports, was less than that of 1912 by 18,000,000 U. S. gallons. Canadian consumption during 1914 was approximately 3,500,000 Imperial gallons.

Zinc chloride has had a long and successful application as a wood preservative. It is used largely for treatment of cross ties and miscellaneous construction timber. As in the case of all metallic salt preservatives, it is applied in water solution, and is used in pressure methods of treatment most widely. Because of the solubility of this salt, the protective value may be reduced by leaching where timber treated by this method is exposed to excessive moisture. This is a limitation which prevents its use for certain conditions, although it is probable that this is less serious than is generally supposed. In 1914 the consumption of zinc chloride for preservative purposes in the United States was over 27,000,000 pounds. It has had only a very limited use in Canada but will no doubt be more widely adopted in this country as wood preservation practice develops.

Mercuric chloride has had a fairly wide application as a wood preservative in Europe and is still in general use on the Continent. It is one of the most toxic materials which have been used for timber treatment, but it has one limitation which has prevented its very extensive adoption in American practice. It is exceedingly corrosive and therefore cannot be used for pressure methods of treatment in steel retorts. The use of this material as a wood preservative in America is rather limited and is confined to open tank treatment of lumber and other forms of building timber. Where used in this way, timber is soaked for some days in hot or cold solutions of the salt, varying in concentration from ¾ per cent. to 1 per cent. Mercuric

Section of pile from Pacific Coast, destroyed by Teredo within one year



One of the pressure retorts in experimental wood preservation laboratory, Forest Products Laboratories of Canada.

chloride is exceedingly poisonous, but is not objectionable in handling if proper precautions are taken.

Sodium fluoride is one of the more recently developed preservatives, which has given good results. It has a longer record of use in Europe than in America, although it has been adopted in the United States during the past four years, and the results have been sufficiently encouraging to warrant a considerable increase in its use. It is highly toxic, is quite suitable for use in steel retorts and has other derisable characteristics as a wood preservative.

Methods of Applying Preservatives

Methods of applying preservatives may be classified as non-pressure and pressure methods. The former include brushing and dipping or prolonged immersion in the preservative. In brush application creosote is used most largely. This method is adapted for the superficial treatment of poles, posts and miscellaneous lumber. One or more coats are applied as may be required. Timber must be dry, peeled and clean for successful results from this method. Preservatives should preferably be applied hot where possible. Application can be only superficial at best and protective value of such treatment is limited accordingly, but the method has certain fields of use where more expensive treatment would not be justified.

Dipping, as distinguished from long immersion, when adopted, is generally used with creosote, although water soluble salts may be applied by this method. Dipping of freshly sawn lumber to prevent sap staining in hot damp weather is a case of this latter practice, where a solution of sodium bicarbonate, sodium fluoride or more rarely mercuric chloride is the preservative used. Preservative may be hot or cold, preferably hot in case of creosote oil. Dipping affords rather more effective protection than brush treatment with similar preservative. Fence posts, tank and silo staves and other light structural material may be treated by dipping method.

Prolonged immersion in preservative is exemplified by the mercuric chloride treatment of structural material. In this case it is customary to soak the timber in open tanks containing a solution of the preservative for a period of from two to eight days, according to size of material. The preservative may be heated by direct steam if desired and a 1 per cent. concentration is the usual strength of solution. Timber for such treatment must be well seasoned and should be allowed to dry after immersion.

Open tank treatment is the name applied to a method in quite general use for treating poles, posts, cross arms and miscellaneous lumber. The principle of the method is a first heating of timber in hot preservative followed by cold immersion or slow cooling in first preservative. The air contained within the wood structure is partially expelled on first heating and contracts on later cooling and the consequent reduced pressure within the wood results in considerable absorption of preservative. This method gives much greater penetration than mere dipping treatments, requires only simple and inexpensive open tank equipment and is well adapted for use on a comparatively small scale. Creosote is generally used with this method although it is equally well suited for treatment with water soluble preservatives.

Pressure methods are extensively used in large scale timber treating operations. Pressure impregnation is applicable to all oil preservatives and to those salt solutions which have not a serious corrosive action on steel retorts. A large horizontal steel cylinder or retort is used almost exclusively for pressure treatment. In present commercial practice such cylinders range in length from 50 ft. to 130 ft., while diameters vary from 6 ft. to 8 ft. In most modern plants of large capacity, cylinders of the maximum sizes above noted are used. The equipment of a modern plant of this type is quite extensive and will include one or more treating cylinders, storage tanks, measuring tanks, high pressure hydraulic pumps, vacuum pumps and steam power installation. Pressure cylinders are designed for pressures up to 250 pounds per square inch, although working pressures during operation usually range from 125-175 pounds per square inch. Quite recently a type of vertical retort has been developed in the United States for the treatment of paving blocks. Such retorts are of various sizes ranging in diameter from 11-20 feet and in height from 14-30 feet. In one type, blocks are discharged through bottom hoppers, while a feature of another type is a movable ram which forces blocks out at the top of retort.

There are a number of modifications of pressure methods of timber treating in use in present practice. The name of the original pressure treatment—"Bethellizing,"—is still current, and as now understood refers to straight pressure treatment with creosote oil. Injection of creosote may be preceded by artificial seasoning by steaming and exhaustion of retort, where green or partially seasoned timber is being treated. This method is in general use for treatment of piling, ties, and pacing blocks. Burnettizing is the name now applied to the corresponding method of treatment with zinc chloride solution.

The other more important modifications of pressure methods are the Lowry process, Rueping process, combination treatment known as Rutgers process in Europe or Card process in America, and boiling methods known under several names.

Preparation for Preservative Treatment

Wet or green timber cannot be satisfactorily impregnated with preservative, and seasoning or drying is an essential prerequisite for successful treatment. Ordinarily this is accomplished by natural air seasoning, for periods varying with size of material, season of cutting and climatic conditions. The greater proportion of timber intended for preservative treatment is more or less completely air dried. Air seasoned timber will contain from 12 to 18 per cent. of moisture, based on dry weight. Kiln drying of lumber is common practice, but structural timber for preservative treatment is rarely, if ever, dried by such a comparatively expensive method. However, artificial seasoning of green or partially seasoned material is practiced extensively in modern timber treating practice. In many cases such material is subected to a preliminary direct low pressure steaming in retort for varying periods, followed by a vacuum for the purpose of increasing evaporation of water. Such preparatory treatment is followed by application of preservative under pressure. This method is widely used in the pressure treatment of ties, paving blocks, piling and heavy structural timber. Another method of artificial seasoning which has been developed for the treatment of timbers which are resistant to impregnation, particularly when air seasoned, is long continued heating of timber in creosote oil raised to temperatures above the boiling point of water. This method, which is a feature of several processes, is employed quite extensively for the treatment of Douglas fir.

Barking or peeling of timber is another essential preparation for preservative treatment. This applies, of course, to timber in the round form as in the case of piling, poles, and mine timbers. Bark adhering to timber may entirely prevent local penetration or preservative. Another consideration, as previously noted, is that peeled timber is much less susceptible to the attacks of boring insects during the period of seasoning. Peeling timber greatly hastens drying and thus reduces the seasoning period before treatment. In some cases peeling may be delayed until immediately before treatment. This practice has been adopted with seasoned pole ties of certain species, in which it has been found that more thorough penetration with preservative is thus possible.

Commercial Forms of Timber Adaptable to Preservative Treatment

A partial classification of those commercial forms of timber which are ordinarily subject to deterioration from these causes includes railway cross-ties; pilings; dock, trestle and bridge timber; mine timber; telegraph, telephone and transmission line poles; fence posts; wood paving blocks; structural timber, flooring and roof planks in certain classes of industrial buildings; shingles; silo and tank staves; lumber for similar miscellaneous uses; cross arms; insulator pins and tie plugs.

Railway Cross Ties

The preservative treatment of railway ties in Canada is only of recent development. In 1910 the number of treated ties used by Canadian railroads was negligible. In 1913, of a total of approximately 20,000,000 ties used, 10 per cent. were reported as having received preservative treatment, while in 1914 this proportion decreased to less than 7½ per cent.

A considerable proportion of treated ties used in Canada in these years were imported from the United States. The more important treatable tie woods of Canada are Jack pine, Eastern and Western hemlock, Douglas fir, Western larch, tamarack, beech, birch and maple.

The cost of tie treatment varies widely according to preservative used, absorption specified and operating conditions. In present American practice cost of creosote treatment ranges from 25c to 40c per tie. A typical cost for treatment involving a fairly heavy absorption (20 pounds per tie) in 35c. Burnettizing ranges from 10c to 15c per tie for absorption equivalent to injection of from 1/3 to 1/2 pound dry zinc chloride per cubic foot of timber. Treatment by the Card combination costs from 15c to 20c per tie.

Piling

Thorough creosote treatment of piling exposed to action of marine borers is the best method of protecting such timber. Pressure treatment of the entire pile is practised almost exclusively in America. In general, those woods which are easily impregnated are most suitable, assuming requisite strength characteristics. Absorption of preservative up to 22 pounds per cubic foot are specified for piling treatment. Practical results and experimental research have indicated the necessity for careful specifications of the composition of creosote oil for this purpose, to insure a permanent and sufficiently toxic preservative. Douglas fir is the Canadian species used most extensively as creosoted piling. Piling used in fresh waters and subject to decay only may be protected by lighter treatments than above described. In some such cases partial pressure treatment of that part of the

timber most subject to decay is adopted. This is accomplished in vertical retorts large enough to receive the entire timber in which preservative to required depth is admitted and forced into wood under pneumatic pressure.

Lumber and Structural Timber for Industrial Buildings

There are many classes of industrial buildings in which slow burning timber construction is economical practice. In many such buildings, as in paper mills, textile mills and tanneries, the nature of the operation is such that conditions are very favorable for wood decay. In such cases preservative treatment offers a means of using this economical type of construction with greatly reduced danger of deterioration from this cause. Such heavy structural members as floor beams and columns may be subject to serious decay if unprotected by such treatment. The planking of laminated floors, a widely adopted type of floor construction, is particularly susceptible to decay under certain conditions and roofing planks also suffer heavily in this respect. In many cases decay of such building timber is a result of former infection during storage or handling prior to use. Precautions in these matters are first requisites for satisfactory results. The creosote treatment of such timber is subject to some objection because of odor or increased fire hazard, although these considerations are really not as serious as is generally supposed. However, metallic salt preservatives are preferred in current practice and very satisfactory results are obtained from such treatment. Mercuric chloride has been used most widely in America for such purposes. Open tank immersion of timber in cold solution is the usual method. Sodium fluoride seems to offer good possibilities for use in this field of preservation, although it has apparently not yet been adopted to any extent for this particular purpose. It is of great importance to use only timber which is perfectly sound and well seasoned in such building construction. Cases have been noted where timber has been quite seriously decayed before being used and results cannot be satisfactory under such conditions. Costs of mercuric chloride treatment normally range from $2 to $5 per thousand board feet, according to size of material.

Paving Blocks

Wood block paving has had a most rapid and successful development both in Europe and America, since pressure methods of creosoting wood have been extensively adopted. Untreated wood paving, known quite widely in America a generation ago, was non-durable and unsatisfactory in other respects. Modern creosoted wood block paving has been proved to be a type of street surface well adapted to requirements of city traffic.

Creosote is the preservative used almost exclusively for paving block treatment and pressure impregnation has entirely superseded former dipping methods. Paving blocks require fairly heavy absorption of creosote oil for successful results. The waterproofing value of the treatment is of considerable importance as well as the preservative effect. Creosote oils used commercially for paving block treatment are frequently of lower grade than those required for other purposes in preservation. Careful attention to methods of treatment is necessary for satisfactory results. Modern paving blocks for treatment are rectangular in section, varying in depth from 3 ins. to 5 ins., parallel to grain, from 3 to 4 inches wide and 5 to 10 inches long. Treatment specifications require absorption ranging from 14 to 20 pounds per cubic foot. Costs of creosoted blocks vary from $1.25 to $1.90 per square yard, according to depth of block and absorption of oil. Costs of completed wood block pavements range from $2.50 to $3.80 per square yard, including foundation, excavation and laying.

The foregoing cases are typical of a few of the more important possible applications of wood preservation, but do not include all of the various commercial forms of timber to which preservative treatment may be applied with advantage.

The Forest Products Laboratories of Canada, Montreal, include in their organization for experimental investigation of problems relating to the industrial utilization of wood, a Division of Wood Preservation, which is devoted largely to experimental work in that particular field. Complete small scale equipment has been installed in the experimental wood preserving plant of that department. This equipment has a wide range of operation and is adapted for the treatment of timber up to standard railway cross tie size. The larger of two pressure retorts is a horizontal cylinder, 2 feet in diameter and 10 feet long, designed for pressures up to 250 pounds per square inch. A laboratory equipped for the analysis of preservative materials and a pathological laboratory are features of this department. Pathological work includes the study of growth conditions and destructive action of wood destroying fungi, determination of protective value of preservative materials, and investigations of natural durability of various commercial wood species as indicated by results of accelerated tests.

Opportunities for Wood Preservation in Canada

Although there has been some growth of the wood preserving industry in Canada during the past five years, its present development is far from corresponding with Canadian timber production and domestic consumption.

One of the largest fields for wood preservation in this country is in railway cross ties. Our domestic supply of the more durable hardwoods for this service is limited. With a few exceptions the softwoods available are relatively non-durable in tie service conditions and offer attractive opportunities for economy by preservative treatment. The railway mileage of Canada is relatively great and total annual timber consumption for tie requirements is large. Wood preservation offers one means of reducing these annual requirements.

Poles for transmission, telephone and telegraph lines are required in annually increasing numbers. Already cedar poles of required sizes are difficult to obtain in many localities. Not only may preservative treatment be applied with advantage to cedar poles, but such treatment makes possible the economical use of less durable timbers for this purpose.

Wood block paving for city streets, bridges and industrial building floors is growing in favor. Some Canadian softwoods are well adapted for this use and an immediate development of this field of wood preservation may be expected. Structural timber for industrial buildings should, as far as possible, be insured against decay by careful selection and handling and, where necessary, by suitable preservative treatment. Consumption of timber in the mining industry is very considerable and rate of consumption is increasing in some districts. Although a part of this timber is of comparatively low grade, there is little doubt but that wood preservation affords a means of obtaining longer life and ultimately cheaper service from a substantial proportion of timber used in mining operations. Marine piling and dock timber may almost invariably be treated with advantage. Trestle and bridge timber forms another large commercial class of material to which preservative treatment may be applied with economy. Wherever decay may seriously limit the service life of timber the possibilities of wood preservation should be considered.

From the viewpoint of the timber consumer, the immediate or ultimate economies which may be realized from the practice of wood preservation are the most material considerations. From the viewpoint of the timber producer, the possibilities of preservation are of even wider interest. Preservative treatment permits the more efficient use of this product for many purposes, and is thus one of the most important factors which will enable structural timber to hold its present fields of industrial application and to extend its commercial uses, in the face of increasingly keen competition from other structural materials. The producer has a direct and material interest in the promotion of intelligent and economical practice in the use of timber for all purposes for which it is fairly adapted. From the viewpoint of conservation of forest resources, which in its true sense implies economical utilization, wood preservation is of special significance. Not only does it offer large possibilities of direct economy in timber consumption, but it makes possible the use of many relatively inferior or non-durable wood species for purposes for which they could not otherwise be available. Canadian timber resources are reasonably large but it must be realized that there are some limits in a variety of the more durable commercial species, which limitations may be supplied in part at least, by the practice of wood preservation.

Urging Better Ontario Forest Fire Protection

Twenty-two of the leading Boards of Trade of Ontario, made representations recently to the Ontario Government, urging a reorganization of its forest protection system. Two reforms are specially asked for in the present system:—first, the reorganization of the rangers so as to provide supervision and inspection, both in the head office and in the field; second, that the Government should make some effort to keep down the loss of timber resulting from settlers' clearing fires.

For the latter purpose it is urged that a system of "permits" should be issued by fire rangers to settlers who wish to burn slash in the neighborhood of forests. A similar system has been operated successfully in Quebec and British Columbia for several years, without antagonizing the settler.

The widespread demand for a general reorganization of Ontario's forest protection work is being considered sympathetically by the Minister of Lands and Forests. The present system has been retained for many years with very little alteration. One of the objections taken to it is that the rangers, while sufficient in numbers, are left greatly to their own devices and do not secure good results. Forest ranging, according to modern practice, requires skilled men and skilled overseers. The proposal now is that the forest fighting service should be placed under the supervision of a specially qualified officer of the Department, having authority to develop the present service until it becomes more in keeping with the requirements of the situation.

How I Have Kept Ahead of Rising Costs

Effective Advertising, Valuable Service to Customers and Careful Credit and Collection Work the Keys to Success

By H. R. Isherwood

How to fight rising costs is a problem that has been under much discussion in many of the trade journals and popular magazines of the present day. I have read a great many of these articles, but have been surprised to find that most of them are written by jewellery merchants, hardware men, department store owners, grocers, etc., and very few of them by men in my own line of business. Yet in many of these articles I have found practical suggestions which I can apply directly to my own business needs—and I am engaged in selling lumber and building material at retail.

During each of the fourteen years since I have been in the retail lumber business, the cost of doing business has been steadily rising. When things have looked pretty dark, I have sometimes wondered whether the game was worth the candle. There is nothing original in that. We have all wondered that. Many of us are still wondering.

What I am going to give in this article is just a plain statement of facts containing a few "hows" which have helped me fight rising costs. If they contain helpful suggestions for some of my fellow merchants—suggestions such as I have received from previous articles—I shall be happy. The three principles on which I have built my success are: (1) more effective advertising; (2) better service to customers; (3) an unusually profitable handling of credits and collections. The third heading referred to above is one which I dealt with at considerable length in the Canada Lumberman of January 15, 1915.

Eight years ago I came to Sawyer, Door County, Wis., to take over a retail lumber yard. I was told that it was a small yard. It was. There was just about enough lumber and building material in stock to have built a good-sized chicken coop. I found that two competitors were all stocked, besides. I liked the country, thought I could see possibilities for the building up of a good business, and decided to stay.

Here I wish to explain the unique position of the town in which I have built up my business. Sawyer has a population of about fourteen hundred, and is the fourth ward of Sturgeon Bay, the county seat—which has a population of about thirty-six hundred. The Sturgeon Bay ship canal, a half mile wide, divides the ward from its adopted parent city.

Sawyer, therefore, suffers the handicap of competing in a measure with itself, for while it is under the same city government with the other three wards of the city across the canal, it has its own individual business institutions, post-office, banks, and the like. It has been said that the only real connection between the two towns is the drawbridge, and that it costs real money to cross it. This, however, is an exaggeration, for a large part of my trade comes across that bridge.

The first step I took was to canvass the county, studying its needs from a builder's viewpoint. Next, I stocked the yard to meet what I thought were the requirements of the community; installed a simple cost system, and got a line on my competitors' methods of doing business and general policies.

I was now ready to start advertising—this brings me to the first of the three methods I have listed. I discovered that beyond the sending out of the proverbial calendar, my competitors did not believe in advertising, although there are two good newspapers in our town. I made up my mind that every time I used an advertisement I would dominate a page of space. To do this at a small expenditure was a problem. Finally, I hit upon a plan that worked.

How I Got Attention at Small Expense

Instead of using a half-page spread or more, I designed my advertisements to be seven columns wide, and from three to six inches deep. I used a strong, distinctive border, a light faced type, easy to read, and always left plenty of white space. I made my copy educational, terse and snappy. In a town of five thousand, with two small papers not overcrowded with advertisements, a seven column advertisement stands out like a sore thumb, while the cost is not prohibitive.

When I was seventeen and fresh from the farm, my first boss impressed upon me a sound principle of salesmanship that applies to good advertising copy. He said: "Son, your job is to sell lumber, the kind the buyer ought to have. You can't sell a man lumber by talking about crops or the spavins on his horse. Stick to the subject. When you're through—quit."

My copy stuck to the subject. The appeal was concentrated on one or two lines. Every time I advertised a certain material, I told exactly why that material was best and cheapest when used for certain purposes. Again, every advertisement carried a personal appeal.

I urged consumers to come to us for an accurate estimate on the amount of material required for any specific buildings or repair jobs, regardless of whether or not they were regular customers. This service brought us into personal touch with the people in our community, though it took some time for them to realize that we meant business, and would give a detailed estimate on quantity and quality of material required for any work, with a total cost, without attaching a string to it. Later, I will tell you what advertising this service developed.

Our newspaper advertising was backed up by circular letters, sent out at regular intervals, pamphlets (furnished free by manufacturers of building materials), monthly statement inserts, and signs on fences, barns, and billboards throughout the county. My billboards are located on all roads leading into our town, along the railroad tracks, and on the lake front.

The name of every farmer, "renter," and property owner in the county was put on our mailing list, compiled alphabetically on filing cards. We keep after these names constantly, first on one thing, then another; at first, many of them came in out of curiosity—to look us over. They were all new people to us and it was up to myself and the sales force (local people) to demonstrate our business policies, find out their needs, show our stocks, and explain why this or that material was best and most economical when used for a certain purpose, and finally sell the goods or make a favorable impression for future business.

The first two years our advertising cost just five per cent. of our gross sales. After getting our business firmly established in the minds of the people, making them realize we were looking after their interests as well as our own, I was able to gradually decrease the advertising expenditure until it amounted to one per cent. of the gross sales. There it has remained for the past three years, while the sales volume of the Sawyer Lumber Company has increased five hundred per cent. in eight years.

Again. advertising has enlarged our field for usefulness in our community. It is eliminating competition. It allows us to operate on less capital and thereby saves on interest charges, because it creates business conditions for us, instead of our being compelled to adapt our affairs entirely to existing conditions. More than all that, it has educated the people in our community to the extent that they now believe that when they need lumber, they need us.

Now for "Sawyer Service"—my second method. That's what we call it—"Sawyer Service." Every merchant has his own ideas of giving quality, or service, or satisfaction—or whatever name he likes to use when describing it to his customers. Our strongest sales policy is a service policy.

The predominant idea which we instil into the mind of the purchaser is the fitness of the stock under discussion for filling the particular requirements for which it is to be used. It may be the entire bill of lumber for a dairy barn, hardwood flooring for one room in the home, or rough lumber for a pig-pen. The point which we wish to, and do, impress on the purchaser is to buy the best material for the specific purpose that he can afford. Every class of material has its grades; many have substitutes. After explaining the advantage of one grade over another, we leave the decision with the customer and his pocketbook.

These Service Plans Increased My Business Twenty Per Cent.

Now for the service the personal appeal in our advertising developed. I said that we offered to give anyone a detailed estimate of material for any specific building, with a total cost. Few people know much about lumber or manufactured building materials, or the correct uses for them. I am not speaking of carpenters, contractors, or jacks-of-all trades. I am talking about farmers—my customers.

Here is what happened one bright morning, after we had advertised this service for about a month. A farmer came into my office and asked me to give him a figure on the material required for the construction of a large dairy barn. I knew him as a customer of one of my competitors.

Placed an Order Amounting to Fifteen Hundred Dollars

"All right," I answered, "we will be very glad to give you a detailed estimate, and a total cost. Have you a plan with you?"

"Why, yes; here it is."

Sure enough, there it was—his own rough sketch of the first floor plan of the barn, on the back of an envelope. The length and the width of the building were marked, and the number of stalls required.

There was nothing to indicate the height, the plan of second-floor arrangements, the capacity of the hay mows, the grain bins, and so on.

I studied the plan a few minutes and did some tall thinking. Finally, I asked, "Now, Mr. Caldron, how do you want your second-floor plan arranged; how large a hay mow, and what capacity should your grain bins have to make them exactly fit your needs?"

"Why," answered Caldron, "I don't know. Bill Hawkins's barn just suits me, except that I don't like the way his grain bins are fixed. If you could take Jenkins's grain bins and Hawkins's hay mow an' combine them into a second-floor plan for me, it would suit me fine."

That seemed simple.

"All right, we can do that. How soon do you expect to build?"

"In about three weeks."

"When will you be in town again?"

"Oh, 'bout a week."

That afternoon I took a local architect out in my machine and we visited Bill Hawkins' farm, ten miles out. Then we drove on to Jenkins' place. When we got back we had driven thirty miles.

The architect had the idea of the two barns. I gave him model barn plans published in book form by one of the best modern barn equipment manufacturers, with orders to draw up a detailed first and second floor plan, side and front elevation, all on the same scale. This was done and a detailed estimate of all the building materials required attached to it, with a total cost. I figured the material and wrote the specifications.

Within a week Caldron came in. I took him into my private office, got him talking about his farm, cows, crops, and the like, finally getting around to the barn. Then I flashed the plans on him, all scaled correctly and marked in every detail. His eyes popped out and he exclaimed, "For goodness sake, how did you do it?"

"That," I replied, "is part of our service for our customers. These plans are accurate, ready for blue printing for your contractor. They are your property and will not cost you a cent, providing you buy the material for your barn from us. Here are the specifications in detail and the total cost. Now, frankly, Mr. Caldron, I have specified the very best material on the market, for portions of that barn, if it is to be built right, require the best.

By Explaining Just What I was Selling, I Won This Man's Trade

"In other places, not so important, I have specified just common cheap-grade lumber, where it will do just as good work as a higher grade. We will make any changes in the plans which you may desire. Before you decide on this bill, however, I want you to take these plans and specifications and have some other lumber dealer figure the material required. Get his figures on the same materials specified here. Then we will be in a position to talk business. I won't lower my price one cent, nor will I charge you for my plans. We will be glad to have your business if we can serve you satisfactorily."

He said never a word, but got up and walked out. Remember, he was my competitor's customer. Later on I found that he had been sent to me to find out how my system of giving advance estimates worked.

More Ways than One to Meet Competition

Two weeks later Caldron came back. He said, "Mr. Isherwood, I have got a lower figure than yours on my barn."

"Well, Mr. Caldron, are the figures given on the same grade of material as I specified, all the way through?"

"I think so, but I am not sure; here is the estimate. I wanted you to go over it with me and see. I don't know much about lumber, and I like the square way in which you have treated me."

We went over my competitor's estimate. Remember, I had given Caldron my estimate to take to my competitor. I soon discovered that my competitor had quoted prices on the same material, but on lower grades on nearly everything, with the result that his bid was considerably lower than mine.

I proved this to Caldron by showing him the latest market quotations listed on all materials specified. I also showed him that by using the lower grades of some materials he cheapened his building far and away above any comparison with the saving in price. After I had finished and had suggested that he think it over for a few days, he said:

"Well, I have traded with those people for a long time. I like them, and I am anxious to save what money I can. You have been a big help to me, and I like your plans. I will see."

I had not tried to close the deal with him in any way. I suggested that he refrain from closing it that day. What really happened was this. Caldron told my competitor that if they would furnish him with detailed plans as good as mine, he would close the deal. They replied that there were good architects in town and that they were not doing an architect's business.

About a week later I was out near Caldron's and dropped in on him.

"Mr. Caldron, I have come for my plans," I said. "If you are ready to go ahead I will have three sets of blue prints made; one for you, one for your contractor, and one for my office, so if you need any material while building, you can 'phone me, I can check it on the plans, and send it right out."

He looked at me a minute and said:

"All right, Mr. Isherwood, you're on. You have done me a big service. I will write you a check for five hundred dollars now. Ship the material right away."

The bill was for eleven hundred dollars, and extras ordered later by Caldron ran four hundred more. The plans cost me thirty dollars and a little head work.

Right there an idea took hold of me. "Why," I asked myself, "not make a business of furnishing accurate working plans and specifications for any building free of charge to customers buying materials for the building from us? I can take their rough sketches or ideas, have them worked out in detail by the architect, write the specifications myself, which will give me the opportunity to specify (as I did in the barn), the best material for the right place. It will help other people just as it did Caldron. I told Caldron it was a part of our service, and by jinks, from today on, it is."

How I Got Useful Data Free of Charge

I visited the architect and laid my plans before him. He was interested, and agreed to take charge of the work for a stated fee. He gave me innumerable files of house plans, ranging from a few hundred dollars up to twenty-five hundred dollars. Next, I wrote the manufacturers of the many different building materials I handled, outlined my general plan of operation and its purpose, and suggested that they send me samples of their materials, so that I might have everything pertaining to a building complete in a tangible form to present to the prospective builder.

I Had Little Trouble in Getting Valuable Samples for Nothing

The response from the manufacturers was immediate. Every mail and express for weeks brought bricks, samples of stained varnish, painted wood for exterior and interior work, linoleums, wall boards, miniature barn equipment samples, cements; in short, samples of every practical material used in the construction of farm buildings. The manufacturers flooded me with their finest samples and literature. To display this material required a large room. To make the material valuable it had to be displayed attractively.

We were just building a new office. Our architect designed one room for our "service department," for the display of sample materials, and a drafting room. This room was turned over to contractors and prospective builders. A door, which visitors may close, opens into my private office. There is an outside entrance opening on the street for those not wishing to pass through our general offices.

I make it a point with every prospective customer or builder to assist with the plans and specifications. I endeavor to keep economy in sight all the time; in fact, I make the specifications for the builder. This is a great satisfaction to my customers. Not only has it brought me results that I could not have obtained in any other way, but it has also made my clients "satisfied customers." This service has increased my sales volume twenty per cent. annually for the past three years. Fifty per cent. of the expense of this department is charged to advertising; fifty per cent. to the general operating expense, or "office overhead."

Just one thing more: I anticipate that merchants in larger towns may say "That idea may be practical in a farming community, but I don't believe it would work in a city."

Door county has some of the most attractive summer resorts on Lake Michigan and Green Bay. Every year from twenty to twenty-five thousand tourists come to the county. A number of southerners have built beautiful summer residences along the shores, and many of them have taken advantage of our service department from time to time with apparent satisfaction.

Last fall a wealthy business man from Kentucky came to me with plans for a shore home. He wanted the building done during the winter. We had built for several of his friends.

He had his own plans; we wrote the specifications. He stated the spot where he wanted his home to stand.

This spring he moved into his new home. It was complete in every detail. He had not seen it during any stage of the construction, though he seemed delighted with the finished product. I could cite dozens of similar cases.

Of Greatest Possible Interest

Editor, Canada Lumberman: Ottawa, Ont., May 29, 1916.

I congratulate you most heartily upon the uniform excellence of your Annual Number, both as to form and substance. It contains a very large amount of material of the greatest possible interest to everyone connected with, or interested in, the exploitation of the forest resources of the country.

Yours very truly,
Clyde Leavitt, Forester.

Lumbermen Join to Stop Forest Fires

Forest Protection Principles Practiced by Timber Owners in St. Maurice Valley Produce Good Results at Low Cost

By Henry Sorgius

THE question of forest protection as we see it in the province of Quebec seems to evolve itself in the saying, "In matters where rival concerns cannot outdo each other by competition they will all derive benefits by getting together."

Co-operative forest protection is no longer in the experimental stage. We are now able to look at records of the past four years and draw definite conclusions. Comparing these records with those of many years ago and analyzing the former systems of forest protection, the cause of success of the present system becomes obvious. Countless miles of blackened hills and barren rock are mute witnesses to the fact that lumber companies, although desirous at heart of keeping their timber lands intact, considered it an economy to make the smallest outlay possible in making some kind of a poor show at forest protection.

The men employed as fire rangers were seldom employed for that alone, nor were they held to answer to anyone regularly for their work. Dam keepers were expected continually to "keep the dam" and also "keep the fires" for an indefinite number of miles around; similarly with cache keepers who are not supposed to ever leave a cache; some logging foremen were often expected to attend to their work and at the same time scare away the fires a bit by being appointed nominal fire ranger. The drive clerks could also be requisitioned to make this "paper" fire protection look like something real. No explanation is needed here. Men who had some main object to attend to did not usually exert themselves in work which did not interest them very much and which, at certain times, might prove most annoying.

When fires chanced to occur near at hand, by the time the supposed ranger had finished thinking about it, it was usually of such size that he decided it was too big to be extinguished and probably felt some relief in studying the clouds to see if it would rain soon, in which case it would not be necessary to hire him anyway.

Some regular rangers also existed, of course. It must be remembered, however, that most lumber companies have their timber lands in patches in different localities, so that to protect all a very unequal division was necessary. Some men had to be placed in small isolated sections of good timber here and there, who, although not having enough to do, still were necessary. Under such circumstances the cost of ranging really became heavy. Again, as would naturally be the case under such circumstances, some companies were not concerned deeply enough to do any protection at all, and in pure self-defence for their own limits the companies who did protect had to look after the adjacent land of the lax concerns as well as their own, and bear the extra cost.

The Working Out of Co-operation

By a co-operative system as used by the St. Maurice Forest Protective Association, Limited, we have first a multitude of small areas and parcels of timber lands joined together to form one territory, and the most efficient ways of protecting the whole are considered.

The countless division lines which twist and turn to divide the timber land of each company are no longer existent for the organization of the association within its own boundaries. The whole question of efficient service is well planned out. All water courses and other features of the topography are taken advantage of in order to obtain one harmonious patrolling system. Certain tracts of land may belong to two or three different companies and yet be patrolled by the same men. In this way the cost has been reduced. Again, the men are employed to do nothing but look after the interest of forest protection. Every phase of the work is discussed and explained to them and the fire ranger becomes a sort of specialist in his particular work, incidentally learning to consider the one great factor—human nature.

The general organization of the St. Maurice Forest Protective Association, Limited, may be summed up briefly so as to get an idea of the method by which it has been found possible to give an efficient service at the low cost of one-quarter of a cent per acre, which is the assessment made upon all members of the association. The money obtained from this is used to cover the salaries of the rangers, equipment and other general expenses.

The cost of extra labor employed in fighting fires is partly paid by the Quebec Government and partly by a special assessment on all the members.

The whole territory under the association is divided up into divisions, each in charge of one inspector and the divisions in turn are cut up into districts for each ranger or two rangers. The inspector's duty is to oversee generally the work of all the rangers in his division. The interest of the association in the territory in his charge is entrusted to his care. He is expected to keep close watch on the way everything is going on so as to avoid all confusion among the men and to arrange their beats so as to give the most attention to localities which require it most. By continually travelling throughout his district he sees the condition in every part. It is his duty to keep in touch with all people in his district; to visit these people and get all the useful information possible. His diplomacy is often called upon, as he must keep everyone well disposed, if possible, and at the same time stick to certain fixed principles.

Duties of the Fire Rangers

The districts of the rangers vary in size according to the fire hazard in the various localities, and the industrial operations, which may change from one region to another. Briefly, the ranger's duty is first to prevent fires and secondly to put them out if they occur.

The rangers are made to realize that success may be hoped for only by educating the people. Friends are more useful than enemies. By taking men in the proper way it is often possible to make them understand the good cause for which all should work.

In settled districts the fire rangers are entrusted with the delicate task of supervising the burning of slash. The laws of the province heretofore were so lax and so seldom enforced that the making of new land was the greatest menace to the forest. The Quebec Government has, however, brought about several amendments to its laws, and thanks to this step, we can now hope that the vexatious problem of slash burning is about solved. The permit system of slash burning is now used. All settlers must first obtain a permit, then burn their slash at their own risk, under the supervision of the ranger. It has been most difficult to get the public to conform to this law, as it went "against the grain." People were sorry to see the old system stopped where they burned at any old time and in any way convenient to them. It mattered little if millions of dollars went up in smoke to prepare a small piece of ground for the planting of a few cents' worth of potatoes or other crop. The present change for the better has been brought about, thanks to the great help afforded by men of intelligence and foresight. The parish priests have done a great deal in this respect.

Many means were employed to advertise. Church criers were made to read the laws and inform the people as to slash burning; circular letters were sent around and interesting pamphlets were distributed, earnestly putting forth the cause and demanding the help of the people. Settlers' fires have been reduced in a most surprising manner by this method; i.e., 151 settlers' fires in 1913 reduced to 41 in 1915. The patrolling in settled districts is done with a horse and rig. The ranger becomes familiar with all his people and keeps well informed as to when and where there will be slash to burn. Having probably burnt very many slashes he becomes more or less expert at it and can help the farmers materially by having them piled and fired with maximum results and minimum danger and trouble. Patrolling with an automobile was tried last year and proved a huge success. The machine was far cheaper than horses and the rapidity with which the inspector using this could travel was most gratifying.

The rangers in the bush travel by canoe or on horse back. Their chief duty outside of the general principles of creating human interest, consists in keeping an eye on fishermen, drivers, jobbers and wood travellers. In damp weather they cut and clear portages to facilitate communcation, and make the transportation of men and supplies quicker when fires might occur at other times. They also locate high points suitable for look-outs or mere observation points and locate prospective telephone lines. The look-outs are placed, as far as possible, so that while the ranger travels around to see people he may also obtain a frequent view of all his territory. There are at present twenty-three permanent look-out stations, beside many other observation points. At different places in each district certain tools have been stored so as to be readily available in case of fire. These consist of about thirty-six implements per cache, consisting of shovels, axes, buckets, mattocks, etc.

Patrolling the Railway

There is also the patrolling along the railway right-of-way which is done by means of motor speeders. These machines cover 40 to 50 miles twice a day keeping track of all trains, inspecting smoke stacks and other parts of the locomotive on their beat. This part of patrolling is very efficiently carried on by four cars, with a spare car for the inspector or to replace any one which may be out of order. New shops have been erected so that most of the repairs on these

machines are now done by the association itself. Among the innovations of the year might be mentioned the trying out of a new pump, with 1,500 feet of hose, weighing only 130 pounds. A very substantial addition is expected to our telephone system, to cost $1,500, which has been set aside specially for this purpose.

In conclusion it might be remarked that the greatest economic problem before the lumber companies today is the saving of their source of income from fires. The very fact that it has taken so long for the companies to get together and form a strong protective organization shows that the education is just as badly needed by the lumberman himself. Co-operation between the companies has done, and will do, wonders yet. There must be co-operation between every different section of each company and the association, by raising a public sentiment and teaching the right and wrong of the matter to people, more by gentle persuasion than by force. We may hope that the day will yet come when, instead of looking the other way and walking faster when they see a fire, men will rather turn out of their way to try and put it out.

Retail Buying—Quality the Great Thing

Too Much Importance Attached to Selling as Compared With Purchasing Stocks—Quality the Greatest Selling Point

By the Man in the Yard

Which is the more important end of a retail lumber business, the buying or the selling of the stock? I would like to hear from readers of the Canada Lumberman about this. I do not expect any of them can settle the question definitely and for all time, but I would like to see their views in print, because they would be valuable to me and other retailers.

The reason I bring this matter up just now is that I have read articles about salesmanship in a great many trade journals. If I could remember them all I would know enough about selling lumber to be the best retailer in the business, but I have seen so little about buying retail stocks that probably if I depended upon what I have read on this line, I would make a failure of it in no time.

I don't mean to say that a great deal of importance should not be attached to the matter of selling, but I think it is given too much consideration as compared with the buying end; in fact the buying end has been neglected. If you get down to the bottom of the matter and hunt up statistics you will find that more failures in business are due to poor buying than to poor salesmanship. In fact a prominent authority, whose reports I read not long ago, stated that a great majority of business failures can be traced directly to unwise buying.

If we were all fully efficient as salesmen, perhaps we could carry much of it and I think we ought to give the subject a good deal more study than we do. I believe I can speak for a majority of retailers in this connection and say that this feature of their business is not as well looked after as it should be.

Talking of the good salesman being able to carry a certain amount of handicap in the way of poor buying, let us look at the other side of the picture and figure out what kind of profits he could make if, instead of a handicap, he had behind him at all times a stock of good lumber which had been well bought. We are accustomed to hearing people say, "well bought is half sold," and there is no doubt about this, but poorly bought stock, on the same line of reasoning, must be—in proportion to the bad judgment exercised in its purchase—unsaleable at a profit. In other words, it costs so much to sell poorly bought stock, that even if it seems to be something of a bargain in price, its quality, or the fact that the market does not call for it, may render it a liability rather than an asset.

Not a Really Difficult Matter

There really ought not to be much trouble about successful buying of retail lumber stocks. They are to a great extent staple lines. It should be possible for a retailer of fair experience to form a pretty clear idea how much of each important line of stock he can move in a year and to add to or subtract from it according to his information about general trade conditions in his district. The quantity problem is really not the hard one to handle. He may make a mistake here and there and lay in too much or too little of one kind of stock or another, but in the long run his experience should prevent him from making enough mistakes of this kind to have any appreciable effect upon his profits.

Where the retailer is most likely to make his mistake is in giving too much attention to prices and not enough to quality. The tendency of the present age, from a business point of view, is to everlastingly be on the look out for bargains. A retailer looking at different quotations on stock which he needs, is apt naturally to give his order to the firm whose quotations are lowest and to do so in many cases without satisfying himself properly about the relative qualities of the stocks. I have come to the conclusion myself that by giving orders always to the men who quote the lowest prices I would quickly put myself out of business. It is only once in a while that the lower price goes along with equal quality. Values are what should count. When I am buying stock the idea I have in mind is not whether the price is the lowest I can get, but whether there is a fair profit for me in handling the best quality of stock I can get at the price that the wholesaler asks for it. Quality is the real thing to consider, and every retailer, once he has satisfied himself about the quality of any particular line of stock that he is thinking of buying, should be able to tell, almost off hand whether he can dispose of it at a profit.

Quality a Better Selling Point than Price

The point I am trying to make is that the first thing to do is to be sure about the quality, then the prices may be compared. Do not compare the price first, or you may forget about the quality, and that would be fatal. Lower quotations almost always carry with them lower values and are really not so profitable a buy as better values at higher prices. Moreover, there is one's reputation always to be considered. If you are always watching for a chance to buy bargain stock you will make a reputation for yourself among your customers as a man who keeps only a medium, or even a comparatively low grade of stock. It is worth while, even from an advertising point of view, to make sure that the stock you buy is good, that is to say, that it will fill the requirements of your customers satisfactorily.

Every customer, as he walks into a retail lumber yard, has two ideas sticking out in his mind. One is the use to which he is going to put the lumber he buys, the other is the price he will have to pay. If you think the matter over closely you will find that your best customers have not much confidence in their ability to beat you down in price, but every one of them has a clear idea that he will insist upon getting the best quality of stock he possibly can. Quality is the retailer's best talking point and he should never forget it, particularly when he is buying his stocks. The dealer who has only price to use as a selling point is at a great disadvantage compared with the dealer who can talk proudly about the quality of his goods.

Especially when competition is keen, will quality talk carry much weight. If your competitor is giving you a bad time of it, getting many of your best customers, do not worry so much about the price of the stock you sell; do not try to cut prices, but try to give better value than he does. Make sure that your stocks are the kind your customers want and they will not be so ready to tell you that they can get them cheaper at the other yard. The only way to do this is to post yourself as fully as possible about the buying end of your business, and then make a practice of giving it equal if not more attention than the selling end.

The Cameron & Genoa Mills Shipbuilders, Limited, which was recently organized, has leased two acres of tidewater land on the inner harbor near Point Ellice Bridge, Victoria, B. C., on which they will locate a yard for the construction of wooden lumber vessels. At the back of the organization are Messrs. J. O. and D. O. Cameron, of the Cameron Lumber Company, and the Genoa Bay Lumber Company. The property leased has a water frontage of 350 feet and the lease is for two years, at a rental of $100 per month. Shipbuilding operations are to be commenced at once and to be carried on continuously. Provision is also made for extension of the lease for a year. The company anticipate that 15 wooden vessels will each have a carrying capacity of 1,500,000 feet of lumber and will cost $120,000, exclusive of machinery. The machinery equipment will bring the total cost up to $170,000 each. It is planned to lay down two ships at once and to employ 300 men when the work starts.

Editor, Canada Lumberman:— Sawyer, Wis.

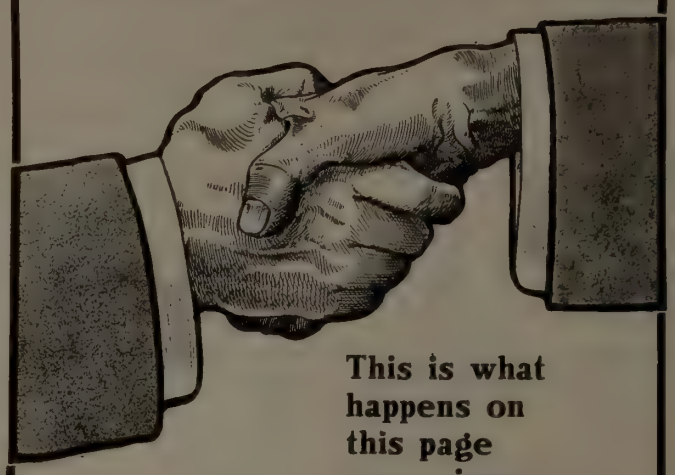
Your Annual Number is most interesting and it is certainly one that will attract a great deal of attention. You deserve much credit for the advertising in your journal, and the way you have made the display in general. The various articles are of great interest to me. I note that the ideas, not only from the retailers, but from the wholesalers of Canada, are leading those of the States.

Yours very truly,
H. R. Isherwood.

Mr. Buyer

Are you in the market for a special bill of lumber? Would you like to pick up a real good second-hand planer or perhaps some logging equipment? Have you a vacancy in your plant for a filer or other employee? If you answer "Yes" to any of these, advertise on this page. It is the "Master of Ceremonies" and will introduce you to the man you want.

The Master of Ceremonies



This is what happens on this page every issue

Mr. Seller

You are looking for the man who is looking for you—you have for sale what he wants. All that is needed is an "Ad" on this page to bring you together. Appeal to this "Master of Ceremonies" and send us a small ad. today. What can we sell for you—or perhaps we can find you a job.

Send along your ad.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Maple, Birch and Beech

Wanted to buy: 2½ in. and 3 in. Maple, Birch and Beech, No. 2 or No. 3 Common. Apply M. Brennen & Sons, Hamilton, Ont. 12-12

Wanted to Buy

750,000 ft. 2 in., 2½ in., 3 in. and 4 in. log run Birch. Terms 75 per cent. cash on shipment, balance on arrival. Apply P. O. Box 643, Montreal, Que. 9-12

Wanted—Lath

Please quote us your best cash price on the following, either delivered Cleveland, Ohio, or F.O.B. Mill, giving rate to Cleveland:

⅜ x 1½ — 4 ft. No. 3 White Pine Lath.
Same—Red Pine.
Same—Spruce.
⅜ x 1½ — 4 ft. No. 2 White Pine Lath.
Same—Mill Run White Pine Lath.
Same—Spruce.

THE AMERICAN LUMBER CO.,
1502 New England Building,
12-15 Cleveland, Ohio.

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

For Sale–Lumber

For Sale

One hundred thousand feet of 4/4 Basswood, Ash and Elm crating lumber. S. L. Purdy, Coe Hill, Ont. 11-12

For Sale

500,000 Western Ontario White Pine Logs. Can be sawn to your order. Those interested please write Hall Brothers, 174 Mutual St., Toronto, Ont. 9-12

For Sale

2,000 Cedar Poles 25 to 45 ft. long; 4,000 Cedar Fence Posts 4 in. and up, 8 ft. long; 2,000 No. 2 Cedar Ties, 3 in. face and up. Lynch & Ryan Lumber Co., Marmora, Ont. 12-15

Slabs and Edgings

Wanted a buyer for the slabs and edgings from our saw mill cutting 25 M. feet B. M. per day, Maple and Birch, also Ashes from our boilers. Additional supplies of hardwood can be purchased in the vicinity. Reply to Box 410, Canada Lumberman, Toronto, Ont. 11-12

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que.

For Sale–Machinery

Timber Limits and Mills

Timber limits for sale in the District of Algoma, also a Band and Gang Saw Mill. For particulars apply to Geo. Niebergall & Son, Parry Sound, Ont. 11-13

FOR SALE

Woodworking Machinery

The following second-hand machines have been placed with us for sale:
1 Woods No. 32 Matcher; 1 Goldie 10-in. Moulder; 1 Goldie 24-in. Matcher; 1 Cowan 42-in. Sander; 1 Jackson Cochrane 36-in. Sander; 1 Egan 36-in. Single Surfacer; 1 McGregor Gourlay 2-drum 30-in. Boss Sander; 1 Egan 30-in. 2-drum Sander; 1 CMC 8-in. 4-side Sticker.

P. B. Yates Machine Company, Limited,
10-t.f. Hamilton, Ont.

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

Wagons and Machinery

Two Heavy Lumber Wagons, Sweet Roll Off Type, one Greenlee Power Feed Rip Saw, one C. B. Rogers Planer and Matcher, with four pair Shimer Heads, one St. Louis Bench Grinder.

The Bertrand, Lockhart Lumber Co., Ltd.,
12-12 Port Arthur, Ont.

Machinery for Sale

Cowan No. 204 Planer and Matcher, 15 x 6 in.
Cowan No. 152 12-in. four side Moulder.
Ballantyne 8-in. three side Moulder.
Ballantyne Door Cramp, 4 ft. by 8 ft.; foot power.
McEachren Dry Kiln Heater, 1,000 ft. coil, 36 in. Fan.

Will consider 8-in. four side Moulder in an exchange. All machines are good, in first-class condition, recently new, and some have extra attachments. These machines are in our way and no reasonable offer will be refused.

GALBRAITH & COMPANY, LTD.,
12-12 Owen Sound, Ont.

Machinery For Sale

Woodworking Machinery for sale, consisting of Planers, Band Saws, Hardwood Flooring Machines, Mortisers, Buzz Planers, Shapers, Mitre and Tennoning Machines, etc., also Steam Boilers and 300 H.P. Steam Engine, Shafting, Pulleys, and large quantity of leather belting. Also a complete Sawmill outfit, a large stock of Rough and Dressed Lumber, Sashes, Doors, etc., manufactured and in process of manufacture. Reply to the Tobin Manufacturing Company in Liquidation, Bromptonville, P.Q. 12-15

Machinery For Sale

Refuse Burner, 24 ft. diam. 100 ft. to spark arrester; all grate bars, 4 base doors, lined with fire brick; in good condition.

Smoke stack 7 ft. x 130 ft. to spark arrester, a1 condition.

Three Boilers, 6 ft. x 16 ft.; 70 4-in. tubes, 2 fire doors, 2 draft doors, fronts in a1 condition.

One No. 8 Buffalo Forge Co. Blower.

One Dean Duplex Steam Pump; 2—14 x 14 steam end; 2—12 x 28 water end, valves and piping.

All angle iron frames and galvanized roofing for large fire room.

All or any part at bargain prices.

Box 390, Canada Lumberman, Toronto, Ont.
10-12

Wanted–Machinery

Lorries Wanted

Fifteen second-hand lumber lorries, must be in good condition. Campbell MacLaurin Lumber Company, Limited, Drummondville, Que. 11-14

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

LUMBER SALESMAN WANTED. One with experience in hardwood and veneers. Apply by letter stating qualification and salary. Robert Bury & Co., 455 King Street West, Toronto, Ont. 12-12

INSPECTOR WANTED—A man capable of inspecting both hardwood and softwood, and shipping same. State references, experience and salary expected. Box 394, Canada Lumberman, Toronto, Ont. 9-12

BOOK-KEEPER WANTED to act as Secretary-Treasurer of a Lumber Company with $100,000 invested; in first-class condition and operating. Applicant must be willing to invest $5,000 or $10,000 in the capital stock of the Company. A young man preferred, who is not eligible for active service, and one who has some knowledge of the lumber business. Must have good record. Apply to Box 406, Canada Lumberman, Toronto, Ont. 11-12

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

WANTED—Position by a first-class Accountant and office manager. Lumber business preferred. Acquainted with all departments of office work in connection with the lumber manufacturing business or lumber yard. Am capable of taking charge of any set of books. Fifteen years' experience. Married, 38 years of age. Strictly temperate and reliable. Best of references. Am employed now on monthly engagement. Apply stating salary and particulars to Box 419, Canada Lumberman, Toronto, Ont. 12-13

BAND OR CIRCULAR FILER or Mill Foreman wants position. Twenty-seven (27) years' sawmill experience. Gilt edge references. Box 405, Canada Lumberman, Toronto, Ont. 11-1

POSITION WANTED—By man thoroughly experienced in lumber, either in the woods, around the saw mill or in lumber yard. Ready to go either east or west, but Ontario preferred. Address Box 415, Canada Lumberman, Toronto, Ont. 12-12

Accountant, with 13 years' experience in the lumber business, wishes to make permanent connection with good concern. Modern methods, and capable of taking complete charge of office and financial end of business. Has also good knowledge of white pine grades and values. Clean record, and recommended by prominent business men. Apply to Box 417, Canada Lumberman, Toronto, Ont. 12-12

Business Chances

For Sale

Brick and frame factory and site on Railroad in Toronto, now occupied as woodworking factory. Dry Kiln and Sprinkler System in connection. Apply Box 412, Canada Lumberman, Toronto, Ont. 12-12

Saw Mill

For sale on Muskoka Lakes, saw mill complete; daily capacity 20,000 feet. Good trade connection; plenty of timber available. Rare opportunity. Must be sold. Owner deceased. Terms reasonable. Box 418, Canada Lumberman, Toronto, Ont. 12-15

For Sale

To close an Estate, the valuable Lumber Mill known as the Picnic Island Mill at Little Current, Ont., Georgian Bay, is offered for sale. Capacity about twenty million feet of lumber per season. Extensive docks with sixteen feet of water and booming capacity for about fifteen million feet of logs.

Picnic Island, which is freehold property, consists of thirty-seven acres, containing the mill and twenty dwelling houses for employees. Superior drying grounds. Can ship by rail or water. For further particulars write,

James Battle, Thorold, Ont.
Administrator Estate of Late John Conlon,
or
Thomas Conlon, 44 Church St.,
St. Catharines, Ont.
10-13

Knots in Wood Defined

Definitions of knots in wood as adopted by the American Society for Testing Materials are as follows:

Knots in timber are classified as round and spike in form, and as sound, encased, loose and unsound in quality.

A round knot is either oval or circular.

A spike knot is one sawn in a lengthwise direction; the mean or average width being considered in measuring these knots.

A sound knot is solid across its face, and as hard as the wood surrounding it; it may be either red or black, and is so fixed by growth or position that it will retain its place in the piece of timber.

An encased knot is one whose growth rings are not inter-woven and homogeneous with the growth rings of the peace it is in. The encasement may be partial or complete; if inter-grown partially or fixed by growth or position that it will retain its place in the piece, it is considered a sound knot; if completely intergrown on one face, it is a watertight knot.

A loose knot is one not firmly held in place by growth or position.

An unsound knot is one not as hard as the wood surrounding it, or having a hole in it.

Union Lumber Co.
Limited

White Pine Cuts

MILNET (Sellwood Jct.)—1915 cut

100,000—2 x 4 and up 10/16—No. 3 cuts and better
50,000—6/4 x 4 " " " "
50,000—1 x 7 " " " "

SPANISH—Bone Dry

18,000—2 x 4 and up 10/16—No. 2 cuts and better
(80 per cent. No. 1 cuts and better)
17,000—5/4 x 4 and up 10/16—No. 2 cuts and better
(66⅔ per cent. No. 1 cuts and better)

Union Lumber Co., Limited

701 Dominion Bank Building
TORONTO, CANADA

SPRUCE LUMBER

About Two Million Feet Inch Stuff.

Early Shipments
From Monteith, Ontario

The Monteith Pulp & Timber Company, Limited

123 Bay St. - Toronto
PHONE ADELAIDE 1999

Douglas Egyptian Liniment is the one reliable remedy that lumbermen can always count on. It is the best liniment in the world

For The Horses

We want you to try the Liniment just to prove to you how invaluable it is in all cases of thrush, cuts, callouses, spavin, etc. It will stop bleeding immediately. Better have some handy. In case of emergency it will be worth many times its small cost.

TRY IT AT OUR EXPENSE

Fill in the attached coupon and we will send you a liberal sample, free of all cost. A trial will demonstrate its worth better than any recommendation.

Send the Coupon

Douglas & Co.,
Napanee, Ont.

Please send me sample of Douglas Egyptian Liniment as advertised.

Name _____

Address _____

Review of Current Trade Conditions

Ontario

It would be a difficult matter to give anything like an adequate or a useful idea of current lumber trade conditions in Ontario. Conditions seem to vary so much from day to day and from place to place. That they cannot be summed up in a description, unless one is content with saying that the trade is spasmodic. On the whole, however, when one considers the numerous adverse factors that exist, the average volume of trade is satisfactory, and so are the prices. Wholesalers report conditions as above, and tell also of more than the usual amount of trouble in making collections. As to prices, all lines of stock are fairly firm. Dry hemlock is off the market. Shingles are firm and so are all lines of B. C. stock. There are no important tendencies to note which would lead to a drop in prices. Manufacturers in northern Ontario report a fairly active demand. A week or two ago United States buyers visiting north shore firms were paying what was considered to be rather fancy prices, namely, about one dollar per thousand feet higher than the prices of a year ago. In connection with such sales, moreover, the buyers, in some cases, have agreed to pay each month 95 per cent. of the price of the stock cut.

The shell box trade continues on an active basis. Extensive tenders were called for by the Imperial Munitions Board, closing on June 6th. When these are awarded they will create a good demand for shell box stock. The tenders referred to are for 750,000 eighteen-pounder shrapnel boxes and they will require between five and seven million feet of hardwoods. and from ten to fifteen million feet of softwoods. The contracts are to be allotted between Ontario and Quebec firms.

Eastern Canada

Continued improvement is reported in the trade situation at Montreal and throughout Quebec Province. Building operations are increasing in many parts of the province. The new contracts for shell boxes will cause much activity in box plants. Exports to the United Kingdom have been increasing, as more space has been available on vessels and the freight rates have been showing a tendency to drop. Space has recently been secured at 375 shillings, whereas, a short time ago it was hard to find even at 400 shillings. This is one of the most encouraging trade developments that have occurred in many months.

The retail situation in connection with eastern spruce at Boston continues rather uncertain. Yard owners are still cautions about increasing their stocks of spruce frames and are not making any extensive purchases for future requirements. A considerable consumption, however, is in progress for building operations, and the winter's cut of logs will not last out the present year at the present rate of sawing. The current quotations on spruce frames is about $27, and some business is reported at $26.50. There is a better demand for random than for frames, and current quotations are:—2 x 3, 2 x 5 and 2 x 6, $21 to $22; 2 x 4, $22 to $22.50; 2 x 8, $25 to $25.50; 2 x 10, $26.50 to $27; 2 x 12, $27.50 to $28. Enquiry for spruce boards is good and prices are steady. Covering boards, 5 inches and up wide, 8 feet and up long, bring $21 to $22; matched boards, 10, 12, 14, 16 feet, are selling at $25 to $26.

A satisfactory demand for hardwoods is reported at Boston and prices are firm. Current quotations on first and seconds, one in., are: basswood, $44 to $46; maple, $43 to $45; red birch, $57 to $59; sap birch, $47 to $49; white ash, $56 to $60. A considerable volume of business is being transacted in hemlock at Boston and quotations are about steady at $1 or more above the prices of last winter.

There is a fair business in white cedar shingles at Boston. White cedar extras are selling at $3.50 and some good brands are bringing $3.60. Clears are quoted at $3.20 to $3.30. Red cedar shingles are rather scarce. Very good lines are bringing $4.

Great Britain

The volume of import of stocks of lumber to London is comparatively light. Considerable quantities of wood goods are still leaving the docks, but otherwise there is not much movement. Values remain about the same as at our last report and are not showing much tendency to advance, as the amount of ordinary business is remarkably small. In fact the trade is practically marking time. The restrictions upon the imports of floorings and ply wood have been removed. Deliveries at London docks for the week ending May 13th amounted to 4,155 standards as compared with 5,280 standards during the corresponding week of last year. At Foy, Morgan & Company's recent auction sale, 3 x 4 in., 8 to 17 ft., 1st, 2nd and 3rd red pine from St. John brought £26 10s per standard. Hemlock, 2 x 4/14, 10/22, from St. John brought £20 5s. Hemlock 3 x 9, 7/18 from St. John brought £22 5s. Spruce, 4 x 6/11, 9/18, unsorted sold at £25 5s, while 2 in. and 2½ in. x 7 in. and 8 in., x 9/20 unsorted from Halifax brought £25 15s per standard.

The c.i.f. market for spruce deals at Liverpool continues rather quiet. Values are firm as a result of the continued shortage of supply. Still better prices are expected because of the increasing rate of freight, which now stands at 400s per standard. It is quite possible that this may bring about some easing off on the part of shippers in their chartering. There is little change to report in the situation at Manchester. A steady run of business continues and is expected to do so during the progress of the war. Prices are steadily advancing. Spruce deals are selling at about the following figures:—3 x 11 at £36 per standard ex quay; 3 x 9/10 at £34; 3 x 7/8 at £32 10s; 3 x 6 and under at £31 10s. Floorings are selling at various prices up to £35. High prices are quoted for birch, elm, oak and other hardwoods.

At Glasgow, the market continues quiet and it is not probable that there will be much improvement for some time to come. A good demand is expected from shipbuilding sources sooner or later, but other ordinary trade channels are quiet. Special requirements are still fairly good, and there is quite an active demand for such material as they need, especially for white pine, prices for which are still on the upward grade. The present value of 9 in. x 3 in., ordinary lengths, is about 4s per cubic foot, and other sizes are correspondingly high.

United States

In spite of the fact that everyone in the United States has been taking intense interest in political developments connected with the nomination of candidates for president, the business situation is apparently unaffected. In normal years the opposite would be the case. Commerce and industry, however, are this year enjoying abnormal activity which has not been reduced by the political situation. A recent report by Bradstreets says:—"Trade in furniture at the principal producing centres for the elapsed portion of the year has been sixty per cent. heavier than that done in the corresponding time last year. Railway cars are in better supply; traffic is the heaviest ever known at this season, and western roads are said to be preparing to spend large sums the next twelve months." At present, however, the railroad car building trade is marking time to a considerable extent. Car foundries have bought extensive stocks which are sufficient to take care of their operations for the time being. Railroads are showing a growing tendency to return to the more general use of wooden cars. An important announcement from New York states that, as a result of the clearing up of the congestion in eastern terminals, the embargoes that have been in effect on railroads are likely to be lifted within the next few days. This will make it possible to forward shipments of lumber that have been held up for a long time.

The building situation continues quite favorable, particularly in New England. With the removal of the railroad embargoes it is expected that building activity will show quite an increase. In the middle west also there is a large volume of building under way.

Further improvement is reported in the statistical position of the southern yellow pine industry. For the week ending May 26th a further curtailment of production was reported and shipments from 152 mills showed an increase of 3.11 per cent. A continuation of such improvement will put the yellow pine market in better shape. At present, however, the yellow pine trade is far from satisfactory and will stand a lot of improvement.

Reports in regard to the hardwood situation show a perceptible decrease in stocks on hand at manufacturing points, and a very satisfactory situation in regard to orders on hand. Northern producing points report that the hardwood market is especially strong, stocks in shipping condition showing a continually increasing shortage. A good demand for hemlock continues and prices hold firm.

R. M. Connely, widely known among lumbermen in New Brunswick, died at his home, Great Salmon River, recently. Mr. Connely was for many years manager for the C. M. Bostwick Mills at Point Wolfe. When the property was sold to the Pejepscot Lumber Company, Mr. Connely was retained as manager and had fulfilled his duties in this position for the past seven years.

View of Mills in Sarnia.

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Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Trade Suffering from High Ocean Freights

St. John, N.B., June 8.—(Special to The Canada Lumberman).—The market at the port of St. John stands in a very strange condition. Shipments of lumber both to Great Britain and the United States are far from satisfactory. There is the same old story to tell in so far as shipments to Great Britain are concerned, viz., no tonnage. What the future will bring forth is hard to tell; freights have been climbing month by month, and the end does not seem to be in sight, 380 shillings being recently paid from St. John to British ports. The market for British goods seems to be as good as it has been, even though freights are rising. After the freight, insurance and risk have been added, the purchaser of deals has to pay a price heretofore unprecedented. As an example, £8 to £9 was formerly a fair price for spruce deals at Liverpool, while to-day, £28 to £30 is an average price. The seller on this side of the water is not reaping the harvest, but the steamships. To-day, deals cannot be disposed of at St. John, as the English buyers refuse to contract ahead for any further supplies, claiming that they prefer to wait until they are in great need rather than buy and ship on the high rates of freight, for if they were left with stock on hand at the end of the war, paying, as they have. the very high rate of freight, they would not be able to get a price which would mean anything but a loss. No Government orders are being placed at the present time. This time last year a great many orders were on hand and being filled for the allies. If the war keeps up, no doubt more supplies will be needed. It is hard to-day to make prices for deals, but they would no doubt be as good as a month ago, viz., $17.50 to $18 per M. for ordinary specification,viz., 50 per cent. 9in. x 3in. and up, balance 7in. and 8 in. x 3 in., with $2 less for 6 in. x 2 in. and $2.50 less for 3 in. x 4 in. to 5 in., and 4th quality, deal ends 2/3 regular. There is really no stir in the market and few vessels are loading.

The American market is not in nearly as good shape as it was two weeks ago. The base price of schedules at Boston has dropped to $26 per M. ft., with, it is understood, further concessions being offered. No enquiries from that market are now coming to St. John.

Laths are also weakening, but not to the same extent as long lumber. It is impossible to quote f.o.b. prices for American stock at this port, but we do not believe they would average much over $17 per M. for good specification.

The pine market at St. John is pretty well depleted, so far as stock is concerned. The West India trade has been good, as well as the American call for box pine, and therefore the market is well cared for, especially low grade boards.

Shingles remain steady, but no great stocks of logs are held here, and outside shingles control the market. The drives in the main river are coming along well since the last rise of water a few days ago. Rafting operations are being carried along by the St. John River Log Driving Co., having started some ten days ago.

Improvement Continues at Montreal

Montreal, June 9.—(Special to The Canada Lumberman).—The better conditions in local trade noted in our last issue have continued. The building reports from all over the province indicate more activity, and, for the first time this year, the permits for Montreal show an increase, taking them month by month. Those for the month of May totalled $767,069, a gain of $237,902. For the year, the value was $1,686,294, or a decrease of $708,700. During the last fortnight some large building plans have been announced, including two important theatres and an extensive industrial plant. The immediate outlook is therefore brighter.

Box makers anticipate more business. The Purchasing Commission asked for tenders for 800,000 shell boxes, principally of the 4-round 18-pounder class, and tenders were sent in on the 6th inst. There are again complaints at the low prices tendered by some firms, who apparently omit to figure overhead and other charges in their bids. This tends to reduce prices to such a level as to preclude a living profit to any box maker.

Only a small business is passing in dimension timber.

A considerable amount of lumber is being shipped to the United Kingdom. The space available continues to be fairly satisfactory, considering the shipping situation, and exporters are sending all the lumber possible. Freights, too, have a tendency to drop, 375 s. per standard having been paid as against 400s., at which space was recently taken. The arrival of the boats is rather irregular, thus inconveniencing shippers, but this is only a minor consideration when set against the improvement in the amount of tonnage and the reduced freights.

The market for sulphite continues strong. European supplies for the United States are still small, and a general strike in Norway threatens to curtail the imports further. The demand for Canadian pulp is excellent, and considerable quantities are being shipped to England and France. Ground wood is in moderate request, and prices are about maintained.

Saw Mills Likely to Curtail Output

The West Coast Lumbermen's Association, in a report from Seattle, Wash., under date of June 3, says:—Apparently influenced by surplus stocks and price concessions of competing woods in important selling territory, West Coast lumber is showing its first sign of market instability in many months.

Changed conditions were quickly reflected in this week's trade barometer of the West Coast Lumbermen's Association, which indicated new business nearly eighteen per cent. under production; and shipments nearly seven per cent. under production.

Notwithstanding this showing in the percentage column, the actual volume of business is considered fair in view of the fact that railroads generally are out of the market until after the June meetings, that country trade is always light during crop work; and that the well-organized larger buyers in the principal lumber markets, in the pursuit of their own particular problems, are exchanging stocks, rather than making new purchases.

Word has reached the coast that fully half of the enormous yellow pine capacity of the south is decreasing cut and surplus stocks by shutting down the mills one day a week.

There seems to be a growing but unorganized sentiment in Oregon and Washington that a similar curtailment is likely to work itself up in the fir district, during the months of June and July, not including the customary week or ten days' shutdown early in July for mid-season overhauling of plants and equipment.

One or two larger operators have even suggested the possibility that rather than attempt to cut lumber at less than cost of manufacture, they will close their mills until market conditions are more satisfactory.

In addition to the general feeling favorable to decreased production during the off season, the waterfront strikes are having a tendency to restrict mill operations.

Charter Rates Likely to Continue High

V. S. Hodges, manager of the lumber department of Hind, Rolph & Company, San Francisco, in a recent interview expressed the opinion that the present high charter rates for the shipment of lumber from Pacific Coast ports are bound to keep up for some time after the war. In fact they might be expected to continue for a year after the close of the war. Only a few sailing vessels were now open for charter next year, Mr. Hodges said. At present it looked as though freights would go still higher. The Hind, Rolph fleet numbers 23 sailing vessels and all are fixed with cargo for the next year, or the next year and a half. During the past year the ownership of the lumber sailing vessels of the Pacific Coast has greatly changed. Formerly the ownership was scattered among a large number of shipping men. Now, 75 per cent. of the fleet is owned by eight firms.

Logging Industry More Active in B. C.

Activity in the logging industry on Vancouver Island is becoming general. Many new camps are being started up, including one for the Island Lumber Company, of Duncan, B. C., and two for the Mainland Lumber & Shingle Company. Many small operators are engaged in taking out ties, shingle bolts, cordwood, mining props and tiles. In the Cowichan District the Tyee and Westholme sawmills, which have lately resumed operations, are running full time on orders for the east. The Island Lumber sawmill at Duncan is expected to operate shortly. At Port Alberni, the Alberni Pacific Lumber Company is despatching an average of 14 cars daily, in addition to three shipments of lumber for the Alaska trade, since the mill was reopened. The Alberni sawmill will probably resume cutting at an early date.

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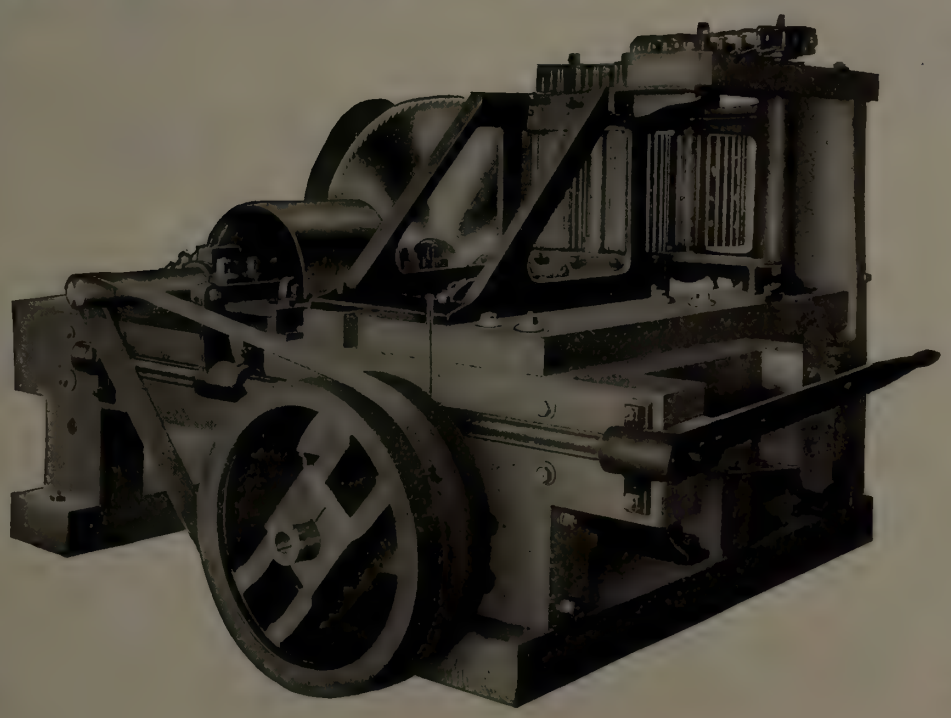

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Why Architects and Engineers Want Branded Timber

By Frank D. Chase*

There are two words in the modern English vocabulary which one feels are somewhat overworked. One is "efficiency" and the other is "standardization." The fundamental in this question of branding lumber becomes a question of standardization. I wish first to mention one or two other industries briefly and then let us see where lumber stands in comparison.

Steel: It is only a few years ago since structural steel came to be used to any extent. The first steel structures were built less than fifty years ago. In this short span of years the steel industry has become one of the great industries of this country, and structural steel is a standardized product, so much so that to write a specification covering structural steel it is only necessary to say that it shall be in accordance with Manufacturers' Standard Specifications, as per last revision, and give the grade or kind of steel desired. Of course, the architect sometimes writes ten or fifteen pages of specifications in order properly to impress his client, but it is all covered in those six or seven words.

The manufacturer sees to it that the steel manufactured is up to this specification, and does this by means of extensive chemical and physical tests obtained in his laboratories. And when we buy steel from the jobber or manufacturer we can get a record of every piece of that steel, together with its physical and chemical properties. It is frequently desirable to have steel tested and inspected in addition to manufacturers' tests, but it is becoming less and less necessary to do so. The chemical and physical tests of steel are not simple nor inexpensive, but it was essential that some protection be afforded the purchaser.

Cement is now being manufactured at the rate of approximately one million barrels a day in this country and the manufacturers of cement have standardized their product so that we can buy cement without the necessity of having it tested in the laboratory. This is done by the manufacturers, who comply with the rigid specifications of the American Society for Testing Materials and the Railway Maintenance of Way Association. It is not considered necessary to-day to test cement which comes from a reputable manufacturer. He knows that his cement may go into a reinforced concrete building which will be tested after construction and he can not afford to risk his good name on a product that is not up to the standard set by himself as well as his competitors.

Creating a Standard Reputation

Take a building material which one might imagine above all others would be subject to the uncertainties of scores of manufacturers —roofing felt: The Barrett Manufacturing Company has, through standardization and publicity, created a national reputation, as well as market, for its brands of felt and pitch. It rarely happens that I design a building of large roof area that the owner does not ask me regarding the merits of the Barrett specifications.

Brick and other clay products have been tested by college and other laboratories until their capabilities are clearly defined, and all building codes are very definite in the way in which brick, tile and other clay products may be used.

You have heard, perhaps, the little story of the old Scotch woman who was going to have a home built for her, and her architect showed her the sketches and described to her the beautiful stained glass windows which were to be provided. She remonstrated and said that she did not want any stained glasses; she wanted just the plain, clear glass, just the way the Lord made it. This is what is said of lumber. We want lumber just the way the Lord made it, and He made lots of good lumber, too. There are no more physical difficulties in the way of grading and classifying lumber than there are in classifying and grading cotton, wool, tea, coffee or any other products of the soil. Wheat has forty-four grades and kinds on the Chicago market, and every natural product has a classification which requires an expert to identify it.

I could continue this list indefinitely; it is not necessary. I am simply trying to prove that all products, manufactured or otherwise, are made by and sold on clearly defined and easily recognized standards. The standardizing is, I believe, the foundation which must be laid for the creation of a market for lumber or for other products, and no national market for lumber or any other product will be developed until this foundation is made. As applied to lumber, I believe the corner stone of its foundation, to carry my architectural simile a little further, is the branding of lumber.

Why the Architect Wants Branded Lumber

You wonder why the architect is interested in a market for lumber or in standardizing to the extent that you have a national market, a market where a man can go and buy a stick of lumber, or a carload, or a trainload, as easily as he can buy a carload of steel or of cement.

The architect is interested in this, and this is the first big reason why we want branded lumber. He wants to be able to go into the market and buy exactly what the specifications call for and know that he is going to get it. If we want a cake of soap we do not go into a store and ask for a cake of soap. We say we want a cake of Ivory soap or Pear's soap, or some other soap. That soap is branded and we get exactly what we want. If we want a hat we do not specify a hat, we specify a Knox or a Stetson or somebody's hat, depending on what we want to pay, but we look into the crown to see if the label is there. The same is true of gloves, suits, furniture. If you send your little boy to the store for the soap, he gets what he asks for. It is branded. We do not have to write a letter describing it. All he does is mention the name.

When the architect can get the lumber that he specifies in any and every yard of any and every manufacturer we know that we have a national market for a standardized product.

Does this seem unnecessary to you? Do you realize that there are two or three factors that make this very desirable, that make this very necessary? In the first place, buildings are designed not merely to house machinery; they are made for people to live in and work in. They are subjected to all kinds of abusive loadings. They must be safe for human habitation. They must do the work they are designed to do. The architect is paid to see that they do. He can not to-day be certain that the lumber that goes into his buildings will meet the requirements. The recognition by municipal ordinances of the qualities of lumber is instructive on this point.

The man who uses structural longleaf in a building in the city of Chicago uses about forty per cent. more than should be used. This at first glance looks as if it might be a very nice proposition, and I have an idea that some few people in the city look at it in that light. Look at it in another light, however, which has gone from a candle to an arc light in the last few years—the amount of competition with reinforced concrete. Instead of using timber for many buildings that forty per cent. penalty puts them out of the running, and the result is the use of reinforced concrete. I take the position that forty per cent. penalty means not a profit on forty per cent. additional lumber, but a reduction of a good deal more than forty per cent. in the amount of lumber that would be used if we could figure lumber at its proper values.

To be specific, the fiber stress of longleaf pine as allowed by the ordinance of the city of Chicago is 1,300 pounds per square inch. This is forty per cent. less than it should be; 1,800 pounds is recognized good practice. Other cities discriminate in the same way, some to greater and some to less extent.

I am just completing a building in which there is approximately 4,000,000 feet of lumber. This building is outside of the city of Chicago. It is designed for very heavy floor loads, and there are excellent reasons for making this building of timber construction, and because of those reasons I wished to use it. Had this building been built in Chicago it would never have been built of lumber; it would have been a reinforced concrete building without the slightest question, because with the loadings which were figured concrete as against longleaf pine at 1,300 pounds fiber stress would have been very much cheaper.

The city building department stands ready to endorse an ordinance giving to longleaf and fir an adequate fiber stress just as soon as it can have definite assurance that the timber going into the building is what is specified. And there is only one way in which it can have that assurance, and that is for the inspector of the building department to go to a job and see with his own eyes the brand of your association, stating exactly the grade of the timber. That puts the timber in the class with structural steel or any other building material, and he would have no more necessity for questioning that timber than he would for questioning the structural steel which goes into a building.

Another Angle to the Branding Question

There is another angle to this question of branding, which I believe comes in here, and that is the question of giving the producer's name on every piece along with the brand indicating the grade. I do not know whether it should be considered in the same way and at the same time, but I personally cannot see how one can be done without the other. There is hardly a product on the market that does not bear the manufacturer's label, and we know that trade names are worth millions and millions of dollars.

Most of you saw the play last winter called "It Pays to Advertise." That comedy preached a better sermon than I have ever heard on the subject of what a trade name is worth, and I recall that play to you for your consideration in connection with the marketing of your product.

It is absolutely idle to deny that a man would not purchase lumber of a brand that he knew was widely advertised and that he naturally assumed, by virtue of the education he has received in advertising, was a good product. If it was not a good product it would not be advertised; it could not be advertised. In fact, we have almost reached

* Address delivered before the National Lumber Manufacturers Association.

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a point today where we will not buy anything unless it is advertised. See if that is not true in your own experience.

If this branding and labeling of producer were done, and it is being done, you know, by some, the architect and engineer is not going to take any chance on something he does not know anything about when he can get for the same price a material that he has every reason to believe is what is claimed for it. It is simply working along the lines of least resistance. Usually we pay more for these things, and the customer is perfectly willing to pay the extra price because he thinks he is getting more for his money.

When my client asks me about the Barrett specification roof it is the easiest thing in the world for me to say that that roof is laid literally on square miles of roof service. It is a national product, the result of years of experience of an enormous corporation that had developed this to the highest degree of efficiency. Barrett is a good roof, but I do not always use it.

There will be lots of good brands of lumber on the market, and if it costs more we will use it when its use is justified, and it is going to be a very happy day for the architect and engineer when he knows that branded lumber which he specifies will be used. And more than that: When he can say to his contractor that he believes that such and such a brand is perhaps a little better than somebody's else, and everything being equal, he would like to have him use it. That day is rapidly coming, I am very glad to believe, and when it does we will not have any more buildings with dry rotted timbers taken out at the end of three or four years, buildings that cost too much, buildings that are inadequate for their service. We will design timber buildings as we do steel, know what we want and know what we get, and will get it, and the producers and manufacturers will have the pride of manufacturing. I should dislike to be in a business where I had to turn out a finished product that could not bear my name.

There are a great many lines of manufacturers which produce their standard goods. These goods are sold on their merit and on the strength of the name behind them. Lots of these manufacturers, too, produce large quantities of unnamed materials and products that they never make any mention of. I do not believe they derive any great pride or pleasure from the production of such goods and I believe there is not a manufacturer here today who would not be proud to put his name on every single stick of timber that goes out of his mill. It makes no difference whether a man produces a stick of timber or a beautiful painting; the product is the result of his labor and deserves recognition.

Service and the Part it Plays

By W. J. Kessler

Service is unquestionably a factor of vital importance in securing and retaining trade. The touchstone is used to ascertain the purity of gold and silver. The touchstone to business success is "service." Service today forms the "big idea" that predominates throughout the most progressive institutions. Great public service corporations, of whatsoever calling, have been built up on "service."

A certain western retail lumber dealers' association maintains a department of "community development." It teaches the farmers in its territory how to live better and how to improve the surroundings of their homes and towns. It is not a wildly altruistic scheme, but is based upon sound knowledge that improvement in living conditions means improvement in trade. The lumber dealer is one of the first to benefit in the general improvement. We have here a concrete example of "service" rendered in a most scintific manner.

People pay for service and they always will. The world's greatest rewards are for those who serve, and the degree of their reward is in direct proportion to their service-rendering power.

In order to put ourselves in position to render the greatest service possible, we must select and instruct our sales force intelligently and carefully. We must select men who possess and know how to use grey matter. Let them know your plans and aims and keep before them everlastingly the important matter of "service." Give them all the information, assistance and encouragement within your power, and then back up their efforts with some good, live, up-to-the-minute selling help for the retail dealers. The manufacturer who will organize his business on this basis is taking another step in the way of healthy development and progress.

While the sales force whose efforts I have had the honor to direct is not large, we have aimed to make it efficient and "service" is our first consideration. If I had the selection and direction of a large force of salesmen, I would certainly insist first upon a personal interview. I would diagnose their references carefully; their personal habits and selling experience would be thoroughly investigated. I would insist upon their working in the office and yard a sufficient length of time to familiarize themselves thoroughly with every department of our work, so that they would learn just what we are able to do for our trade in the way of "service." I would see that they were put into intimate touch with the manufacturing, yarding, grading, shipping and office systems. All this time they would be absorbing quality points and selling talk. I would make them see and feel and finally experience themselves the earnestness and enthusiasm of everyone about the place. I would fill them up with everything in the way of information and instructions that experience has taught, and will be of value.

Study All Order Details

"Get the business" seems to be the wolf cry of the office and it is the wolf cry usually of the representative on the road. No string is left unpulled, no stone unturned to get the business. Now let us see what we do with the order when we have it. Following the successful efforts of the office or our salesmen in getting the customer interested, there is nothing more between us apparently for the time being than a simple little sheet of paper about 4 x 8 inches, and I sometimes fear that some of us consider it little more than that. I think that one of our great weaknesses is to treat these orders with too little consideration. Did you ever stop to realize that this order really constitutes a coupon bartered for by the prospective customer, and that this coupon is of vital importance, not only to the dealer who has favored you with this order, but to the prospective customer as well?

Alas, there are too many order takers who clip these coupons, send them in for attention; and what happens to them when received by the office? They are often hurriedly scanned over by the sales manager, who marks them O. K., turns them over to his assistant, who will acknowledge them with the coldest formality possible by simply filling in a few figures and attaching a few initials to a postal card acknowledgement. I think that in the everyday execution of our business, we are too prone to treat lightly the orders that we receive. The fact remains that this order constitutes a contract as between buyer and seller, and that the exact fulfillment of every stipulation at once becomes a matter of utmost importance, touching directly on the honesty and integrity of the seller.

I think that an order form should be drawn up in such a way that it conforms to our ideas as nearly as possible in the way we wish to conduct our business. These order forms should show every essential detail, such as date, order number, consignor, consignee, destination, routing, delivery line, basis of freight rate on which the stock is sold, when price covers delivery, or sold f.o.b. mill, if necessary to invoice in duplicate or triplicate, where invoice is to be mailed, and last but not least, the terms of payment. Here it is where we are all weak. There is unquestionably less thought given to any perequisite on the order. The entire sales organization mechanically reasons that a given order comes from 60-2-15 territory; and so it is written, if at all.

It is unnecessary for me to go into any lengthy discourse of the grief resulting from careless attention to this detail. I would say that the customer has just as much right to change the price of lumber, remitting less per M than we agreed on, as he would to deduct discount after the discount period has expired; and I want to say that right here is room for concentrated action in establishing uniform terms covering all sales, regardless of the distance from point of shipment to point of consumption.

Proper Attention to All Data

When an order is received and it complies with our ideas with reference to the foregoing data, no less important is proper attention to the details that follow.

First, we should read carefully all the items, and satisfy ourselves that we have the stock that the customer wants.

Second, are we in position to fill the order exactly as specified? If not, stop; do not take a chance by pitting your judgment against that of your customer, but get into communication with him immediately and explain just what you can or cannot do. An honest appeal to your customer will, nine times out of ten, bring his consent to such amendments or substitutions as may be safely recommended. If you cannot adjust such matters with your customer before shipping, it is a moral certainty that you cannot mutually adjust the situation after shipment has been made. Every order is worthy of a personal acknowledgment, and I have long ago dropped the printed postal acknowledgement idea.

Note Every Requirement

Great care must be exercised in the making out of your shipping ticket from the order. You must be very careful to see that these orders are made out plainly and legibly so that there may be no misunderstanding with your yard foreman and shipping clerk. Note carefully every requirement as to lengths and widths and show just the percentages that you want loaded on all items calling for mixed widths and lengths. This will enable you not only to keep your stock well balanced but at the same time follow out the wishes of the customer in this respect. I think in times of car shortages it is well to have a definite understanding all along the line as to just what items may be reduced in the filling of stock orders. We oftentimes order in a 40-foot car for a certain order only to be informed the next day that the railroad company has no 40-foot empties, necessitating the loading of a considerably smaller car, which oftentimes makes it

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FOR EVERY CLASS OF TIMBER

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You have the Goods. Place your Lists with full particulars in our hands. We are in daily touch with all the Buyers in the United Kingdom.

PLEASE NOTE.—We pay cash against all documents, and take the whole of the Delcredere risk on Buyers.

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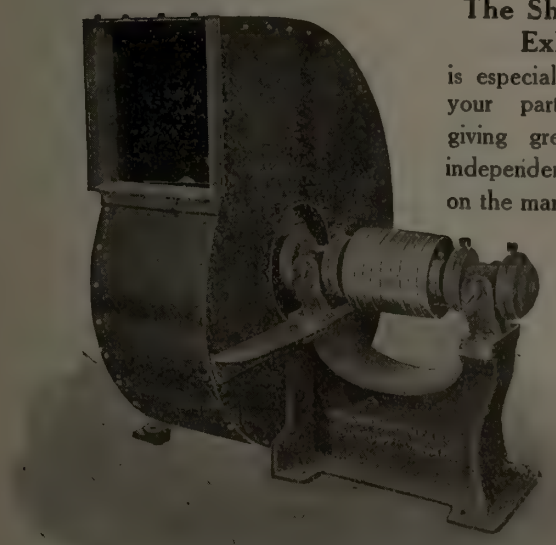
Every Manufacturer in the Lumber Industry realizes that to be "up-to-date" their Factory should be installed with **Shaving Exhaust Fans.**



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is especially designed to suit your particular requirements giving greater efficiency and independence than any other on the market.

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WHO HAVE IMPORTED NINETY PER CENT. OF THE CANADIAN PULP SUPPLIED TO EUROPE SINCE 1899.

impossible to handle the entire order as outlined. These matters are all very easily explained to your customer, and I think that attention to details of this kind leaves a good impression.

When the shipping ticket comes back to the office for invoicing, see that every detail on it has been complied with before pricing and invoicing.

Prompt Shipment a Desirable Factor

Prompt shipment undoubtedly constitutes one of the very highest forms of "service" that you can render your customer. I realize that we are not all in position to guarantee twenty-four to forty-eight hours' service, and I do not think it would be practical. Every concern knows its capacity and should be able to determine from day to day just where they stand in the matter of shipments. Under no condition make promise of shipment for a certain time unless you positively know that the car can be reached by that time. It is better to allow yourself from two to three days' grace in this matter, as you know that every once in a while a phone order or a telegraphic order must be injected into your line ahead of other orders, and will, of course, have a retarding effect on the balance of your orders.

We are all out after the business, but I think that this shooting ahead of orders should be studiously avoided as far as possible.

I think it is of the utmost importance to explain to your trade the exact condition that your stock is in with reference to dryness. Most of us are no doubt in a most deplorable situation at present in this respect. It may be all right for you to crowd out your dimension half dry, but I do not think that you should crowd out such items as ceiling, flooring, drop siding, shiplap, etc., in this condition, without a thorough understanding with your customer. A customer receiving stock of this kind is sure to be disappointed. No dealer likes to stick stock up outside of his sheds and rehandle it again after it has dried out sufficiently to pack away in his usually ill-ventilated sheds.

We are spending a lot of money in promoting the sale of "Old Faithful," so let us see that we ship our lumber in the very best manner and condition possible.

So here we have the touchstone that we are seeking—"service." It predominates throughout the entire fabric of merchandising. We have a commodity whose use will make our neighbor a better man. Then we have the foundation of a legitimate business. How can you sell it to him? Why, by "service," of course. Develop its primary "service" rendering power, show its immediate value. Train your salesmen to serve your trade not only the immediate sale of your lumber, but in every other way. Compel your merchandising to serve both in its immediate sale by developing a deeper secondary power.

The spirit of "service" is bound to bring success, whether you spell success with a dollar mark or not. It is simple and easy, and there are a thousand and one ideas all developed that await only the application of this wonderful touchstone of success to their marketing to make profits. To those who have this vision, there is more than profit, there is an opportunity to contribute to the progress of their generation.

Employer and Employee

By H. G. Kistner, Logging Engineer, Portland, Ore.

To say that closer relations between the employer and employee are eminently desirable, is to repeat a platitude, and that it is the desire of every operator goes without saying. And yet, notwithstanding all the discussions we have had on the bonus system, efficiency in operation, etc., and in spite of the examples of fine camp equipment that the more progressive operators are installing, the personal factor of the logging employee is given too little consideration.

It is generally conceded that man for man the average woods worker is of a higher type than any other out-door worker and yet, with all the resources in brain power that this body of men represent, all that the logging industry is receiving from them is their day's work performed in the same way their predecessors did it. Certainly they give value received for their wages and usually good value at that, but that is where the average man stops. And that is where the employer ought to begin to utilize the reserves of his men.

For instance, when a new logging device is wanted—a special rig for overhead logging or some difficult problem is to be met— too often the problem is put up to your machinery house, and their engineer, being told in a very general way what you want to do, is expected to turn out a solution off-hand. No matter how well the engineer is versed in mechanics, or how good a designer he may be, he is not a practical logger, and to secure the best results it is up to you first to give him a good working plan. It is the purpose of this article to try to show how you can get the most out of the material with which you have to work—in this case the genus "logger"— and how you can attempt to solve some of your own problems before you turn to the mechanical engineer.

The mental capacity of the logger is tested every day in meeting new problems, and he does meet them ingeniously, but why not go further than this and utilize their ingenuity in a co-operative way? We all know about the great strokes of logging that are done evenings in the bunk houses, and any man in camp can tell you how he would run the thing if he were boss. We put this down as mostly "'hot air," but how about it, can't we sift out the wheat from the chaff and occasionally get a valuable idea from a new source? If you operators can show the men that you have a real interest in them and give them a reason for having a personal interest in you, and in your operations, you will go a long way towards solving efficiency problems.

Experiment number one: announce that a series of small prizes will be given each month for the best suggestions offered pertaining to greater efficiency in logging camp work—these suggestions might cover a wide range; from fire prevention to cook house improvement and camp sanitation. An "efficiency box," for receiving these suggestions, should be placed in every camp. It would be well to provide that at least five suggestions in all must be received in a calendar month, or they would be carried into the next month. It would also be advisable, in order to insure fairness and freedom in discussion, to use a system of numbering the suggestions, having the name of the author in a corresponding envelope bearing the same number. About the fifth of each month, have the men gather in the cook house, or the Y. M. C. A. building, if there is one, present the suggestions, have a general discussion and let the men decide by vote whether the ideas presented are of enough practical value to merit prizes, and which ones are the best.

The superintendent can afterward adopt these suggestions as he may see fit, but the popular decision will do much to stimulate the men's interest and avoid charges of its being "another company scheme." It should be needless to say that to expect the men to turn out and take an interest in the discussion, the gathering must be entirely informal, and, if possible, have the men run it. If, in every camp, one really valuable idea can be put into effect, the experiment should be well worth trying, and will undoubtedly result in the men taking a greater interest in their work and in getting a better idea of the operator's viewpoint.

The National Cash Register Company—one of the most efficiently managed establishments in the country—years ago adopted this plan and a large part of the improvements in their wonderful machines are directly due to suggestions of their employees, and no suggestions made are passed over without being given a thorough test.

The greatest handicap of the average woods-worker is his lack of sufficient educational advantages—then supplying this lack, in even the smallest degree, would be the biggest boost you could give him. Give the men a chance to learn the things they need—many a man of real ability will be found ready and anxious to take advantage of the long evenings that are ordinarily wasted. Start at the very bottom of the educational ladder and offer them first a class in the "Three Rs"—from the young men who are interested in this and others who are further advanced, an elementary school could be formed to give them the rudiments of practical logging engineering. There is no question about finding men of ability, it is just a matter of bringing out the latent resources—organize the work along practical lines and when the men find out what you are doing, there will be no lack of interest.

The old-time woodsman was much more familiar with land subdivision than the present-day logger—let them have all the knowledge possible along that line; a great many don't even know how to run a compass line—that is a practical and valuable accomplishment for any man in the woods; the question of railroad grades may be taken up and the best methods of clearing right-of-way; economical use of stumping powder; weights of steel best adapted for main line and spurs, and comparative costs; the question of a supply of ties—best and cheapest; costs of wire rope; maintenance costs and depreciation of donkey engines—and a multitude of other questions which will inevitably present themselves. The leaders of the class—superintendent, foremen, logging engineer, etc.—would be benefitted as much as the men, and from this should come a regular discussion meeting where each department can bring its problems.

There is no reason to doubt that from all this will come a better understanding between the employer and employee, greater interest and, consequently, greater efficiency, valuable ideas for improving logging methods, and a new corps of logging engineers from the young men who have developed a desire for more knowledge from the new outlook you have given them.

Special Heavy Sawmill Blowers

The Toronto Blower Company, 156 Duke Street, Toronto, mechanical engineers and manufacturers of blowers and blower systems, have made several successful installations recently of their special heavy sawmill blower, which is specially suitable for the Canadian sawmill trade. The firm manufacture everything required in the installation of a modern exhaust system, including improved automatic furnace feeders, special hoods for woodworking machines, and slow speed, low power exhaust systems for removing shavings, sawdust, emery dust, lint, smoke and odors. The company will send their engineer anywhere in Canada to estimate on any proposed installation.

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Why An Aloxite Saw Gumming Wheel Cuts Cool

ALOXITE is tough—it has just the proper temper to keep the wheel with a free cutting face.—The wheels are of an open or porous nature, thus allowing the free action of the grain. —A close bonded wheel drags—creates friction—friction means heat. Aloxite wheels cut cool, free, fast—they don't fill—they produce no unnecessary friction—they work without rasp or screech—hold their shape—show long life.

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WHOLESALE LUMBER
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MONTREAL - Canada
Head Office at Montreal.

SPRUCE rough or dressed

1" No. 2 and Better Birch, 1914 cut
also Basswood, Hemlock and Pine

Saw Mills at MONT LAURIER.
Dressing Mills at ST. JEROME.

Herman H. Hettler Lumber Co.
Midland, Ont.

DRY STOCK. 1915 SAWING

1 car 4/4	White Pine Good Shorts.
3 cars 1 x 7 in.	Mill Run White Pine.
5 cars 1 x 7, 9, 11 in./up	Mill Run White Pine.
5 cars 1 x 12 in.	Mill Run White Pine
2 cars 2 x 10 in.	Mill Run White Pine.
5 cars 2 x 12 in.	Mill Run White Pine.
5 cars 1 x 4 in. and up	No. 1 White Pine Culls.

Also complete assortment of White Pine, 1916 Sawing

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Offices—500 McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

The Western Canada Stave Mill has started cutting at Rainy River, Ont., and will put out over 3,000 barrels per day. This means turning out over 60,000 staves daily. W. H. Green, the manager, says they will also have an up-to-date sawmill erected at once.

The National Wood Manufacturing Company, Limited, has been incorporated with head office at South River, Ont., and capital stock of $125,000, to carry on business as manufacturers of lumber, timber, pulpwood, etc. Those interested are W. J. Ard, C. A. Jackman, A. Howard, W. A. Connolly, and others.

The Elmira Planing Mill Company, Limited, have been incorporated with head office at Elmira, Ont., and capital stock of $40,000, to carry on business as lumber dealers, planing mill operators, sash and door manufacturers, and manufacturers of lumber products. Those interested are W. J. Letson, J. Bauman, E. G. Martin, A. Eby, J. McMillan and N. M. Bearinger, all of Elmira, Ont.

The Cleveland Sarnia Sawmill Company has a gang of men at work in the bay building a large number of log booms for containing the new rafts of logs that are already on the way down the lakes in tow of the Reid tugs. Last summer the booms of the rafts in the bay broke under the heavy strain of a rush of water, and about 70,000 logs went down the river. The company is adding the new booms as an assurance that the boom will not be found wanting in the future.

Eastern Canada

Josephat Lemoureux, Massueville, P.Q., sawmill operator, has been registered.

Fire recently destroyed a considerable quantity of stock belonging to Robert Neville, Outremont, P.Q.

The Pejepscot Lumber Company, Great Salmon River, N. B., are commencing to rebuild their mill which was destroyed by fire last November.

Price Bros. & Company, Limited, Kenogami, P. Q., have commenced work on an extension to their paper mills. The new building will contain two paper machines and will be about 75 x 200 feet. The architect is A. Whipple, Quebec, P. Q.

The Ha Ha Baie Sulphite Co. of Chicoutimi, has awarded a contract for the construction of a paper pulp plant at Bagotville, to the J. G. White Engineering Company, of New York. Work on the site, which is on Ha Ha Bay, on the Saguenay river, and which will occupy about five acres, has been begun, and it is expected that the plant will be producing pulp early in 1917. J. E. A. Dubuc, president of the North American Pulp & Paper Co., and general manager of the Chicoutimi Pulp & Paper Co., will be head of the new company.

J. McD. Grosart, who for the past 17 years has been a member of the staff of Price Bros. & Co., Ltd., Quebec, P. Q., has joined with Ernest Tremblay and Henri Gauthier in forming a company under the name of Grosart Limited, who will carry on business as contractors, merchants and agents with headquarters at Chicoutimi, P. Q. The company have secured a five years' contract with the Mattagami Pulp & Paper Company of Toronto and Smooth Rock Falls, Ont., and will take out all the pulpwood logs used by the Mattagami Company for the operation of their plant.

Western Canada

The Alberta Lumber Company, Calgary, has increased its capital stock to $250,000.

The Beaver Lumber Company, Limited, Winnipeg, has bought out the International Mercantile Company, Limited, of Wymark, Sask.

The old Symons sawmill near Nakusp, B. C., is being remodelled and will soon be in operation as a shingle mill, with an equipment of three machines.

The Morehart-Broderick Lumber Company, of Saskatoon, has sold its yards at Empress and Estuary, Sask., to the Imperial Elevator & Lumber Company, Winnipeg.

Edward Norton Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $10,000, to carry on business as manufacturers of and dealers in lumber, timber and shingles, etc.

A new shingle mill will be built shortly at Queensborough, B.C., by Mr. Warren Blyth, of Vancouver. The mill will be a small, but well equipped one and may be enlarged subsequently when trade increases.

The Sylvania Logging Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $30,000, to carry on

business as timber merchants, sawmill proprietors, wood pulp manufacturers and to deal in timber and wood of all kinds.

The equipment of the Port Moody Shingle Company's mill on the Pitt River, B.C., has been improved by the installation of a large engine with a capacity for operating eight machines. Several new machines have also been installed. The plant is being run day and night.

Walter Whiteside, of Duluth, Minn., has purchased the shingle mill operated by Kinney & Woods at New Westminster, B. C. The equipment of the plant will be increased and brought up to date. It is possible that Mr. Whiteside will also build a sawmill adjoining the shingle mill.

The Brunette Saw Mills Company, Limited, New Westminster, B. C., are putting in a new dry kiln for their shingle mill, to replace one that was recently destroyed by fire. They are also making extension to their sorting tables. Another new dry kiln, for the sawmill section of their plant is now nearing completion.

The McNair Timber Company, Limited, has been incorporated with head office at Victoria, B. C., and capital stock of $45,000, to carry on business as timber and lumber merchants, sawmill owners, etc., and as manufacturers and dealers in pulp, paper, lumber, timber, shingles, lath, sash and doors, portable houses, boxes, etc.

Sealed tenders are being received by the Minister of Lands for British Columbia, until June 21, 1916, for the purchase of License X25, to cut 1,920,000 feet of fir and cedar, on an area adjoining S. T. L. 38431, Johnston Bluff, Calm Channel, Coast District, Range 1. Two years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for B. C., until June 21, 1916, for the purchase of License X616, to cut 1,040,000 feet of fir, cedar and hemlock and 9,000 lineal feet of cedar poles on an area situated on the west shore of Hotham Sound, New Westminster District. Two years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia until July 26, 1916, for the purchase of License X90, to cut 7,130,000 feet of Douglas fir, hemlock, cedar, white pine, and balsam fir, and 535 cords of shingle bolts on an area adjoining Lot 115, Sydney Bay, Coast District, Range 1. Three years will be allowed for the removal of the timber.

The Straits Lumber Company, Limited, has been registered as an extra-provincial company with head office at Janesville, Wis., and provincial office at 519 Metropolitan Building, Vancouver, B. C. The capital stock of the company is $1,100,000. Rufus H. Roys, Vancouver, is attorney for the company. The objects of the company are to buy, sell, deal in and manufacture timber, lumber, logs, etc.

New Woods Making Good Paper

That satisfactory wood pulp can be made from a number of heretofore little known woods is evidenced by a United States Government publication just issued, which contains seventy samples of paper manufactured by different processes, chiefly from woods heretofore practically unused for this purpose. It is pointed out that the spruce forests of the country are threatened with exhaustion and that the cost of spruce pulpwood has steadily increased. If the price of newsprint paper is to be kept at a reasonable figure, more efficient methods of converting spruce into pulp must be developed or cheaper woods substituted for it, the report says.

The bulletin states that the method of manufacturing groundwood pulp has changed very little since its introduction into the United States in 1867. It was with the idea of developing new methods and improving the old, that tests were undertaken at the Forest Service laboratories at Wausau and Madison, Wisconsin. As a result, the relation of the different steps in the manufacturing process to each other has been definitely established and the merits of each treatment determined. The paper made from new woods was given a practical trial by two large newspapers with satisfactory results.

The tests showed that eleven new woods give promise of being suitable for the production of news print paper, while a number of others will produce manila paper and boxboards. Most of these woods are confined to the west, while the groudwood industry now obtains the bulk of its raw material from the east. It is thought that pulp-making plants must eventually move to points where they can obtain a plentiful supply of wood and an abundance of cheap water-power, two prime requisites in the business.

The report says that because the National Forests of the United States contain immense quantities of the suitable woods and abundant opportunities for power development, they will undoubtedly play an important part in the future of the wood pulp industry.

Moved to New Quarters

The Ontario Lumber and Supply Company, lumber manufacturers, and wholesalers, have moved from the Lombard Building, 70 Lombard Street, to larger offices in the Tyrrell Building, 97 King Street East, Toronto.

Blair & Rolland, Limited

Lumber & Pulpwood

20 St. Nicholas Street, Montreal, Que.

Spruce and Pine, 1916 Cut

Mill Run, First and Clear left in

All Widths and Lengths Separate

1 in. x 4 in., 5 in., 6 in., 7 in., 8 in., 9 in., 10 in. up x 6/9 ft.
1 " " " " " " x 10 ft.
1 " " " " " " x 11 ft.
1 " " " " " " x 12 ft.
1 " " " " " " x 13 ft.

Same specifications in 2 in. and 3 in. thick.

Box

1 in. x 4 in., 5 in., 6 in., 7 in., 8 in., 9 in., 10 in. up x 6/9 ft.
1 " " " " " " x 10 ft.
1 " " " " " " x 11 ft.
1 " " " " " " x 12 ft.
1 " " " " " " x 13 ft.

Same specifications in 2 and 3 in. thick.

Mill Cull Spruce 1 in. x 4 in. up x 8/13 ft.
" Red Pine 1 in. "
M. Cull Spruce 2 in. x 4 in. up x 8/13 ft.
" " 3 " " "
" Red Pine 2 " " "
" " 3 " " "
4,000,000 Pcs. Mill Run Spruce Lath 1½ in. x ⅜ in. x 4 ft.
1,000,000 Pcs. No. 3 " " "
2,000,000 Pcs. Mill Run White Pine " "
500,000 Pcs. No. 3 " " "
2,000,000 Pcs. Mill Run Red Pine " "
500,000 Pcs. No. 3 " " "

Write us for our Stock List balance of 1914 and 1915 Cuts

We are booking orders Now for our 1916 cut.

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Dominion Express Bldg., 145 St. James St., Montreal

Wholesale Lumber and Timber

SHELL BOX STOCK

White and Red Pine, Spruce

Hemlock, Birch, Maple

Railway Ties, Fence Posts, Etc.

Prompt shipment. Satisfactory stock. Good service Write for Prices.

A. F. B. AUSTIN, Manager

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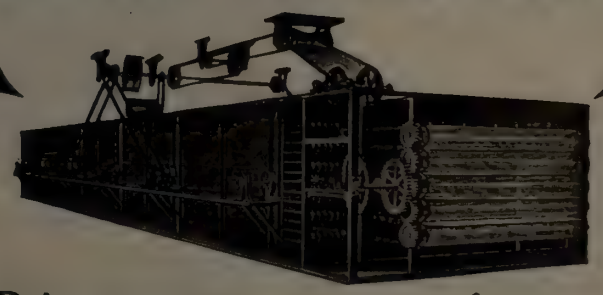

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LINK-BELT CRANES

are the Lumberman's Best Utility Machines.

Handle timber, lumber, etc. Can be used to switch cars about the plant. Built for hard service.

DISTINCTIVE QUALITIES

Steel Gears Throughout; Bronze Bushings Throughout; One-point Adjustment on Clutches; Few Parts—Every one accessible; Exceptionally large factor of safety used; Large, roomy platform for operator—everything handy.

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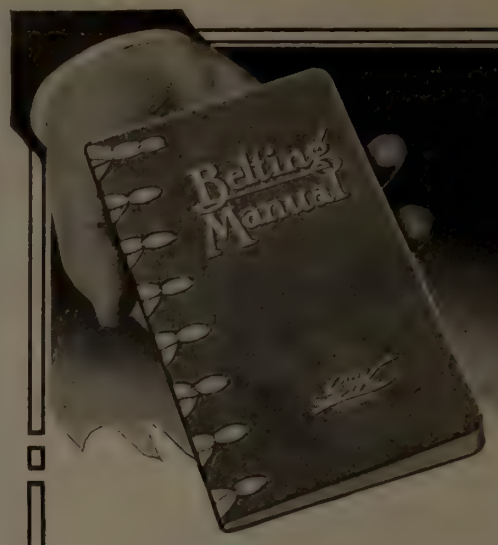
A. R. Williams Machinery Company, Limited, Vancouver, B. C.



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THE BELTING MANUAL, a hand book of 96 pages, substantially bound is the most complete and concise book published on belt transmission. It tells

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- how to make belting endless on the pulleys.
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We want to send a copy of this book to every Mill Manager, Superintendent, Purchasing Agent, Foreman, Master Mechanic, Engineer or others who are actually responsible for the selection, installation and up-keep of belting equipment.

If you haven't a Belting Manual write us on your business stationery and a copy will be sent by return mail.

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Canadian Made Locomotives

There is no need to go outside of the Canadian market in order to obtain the best logging locomotives. We have been specializing in this line for fifty years. You will find the design of our locomotives complete and the sturdy construction equal to every test of the severe service of logging operations.

Repair parts can always be had on the shortest notice.

This engine is 13½ ins. x 18 ins. and weighs 35 tons.

Grey Iron Castings—any size or shape—ordinary or intricate—made promptly. New foundry, splendidly equipped We would be pleased to quote on castings—singly or by contract. We also make drop forgings of all descriptions.

MAY WE SEND YOU SPECIFICATIONS?

Canadian Locomotive Company, Limited, Kingston, Ont.

Taylor and Arnold Ltd., Sales Agent, Montreal and Winnipeg

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa,
December 20th, 1912.

Deputy Minister.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	31 00	32 00
1 x 12 common and dressing	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft.		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft.		16 00
2 x 4 to 12, 10 and 16 ft.		20 00
2 x 4 to 12-in., 12 and 14 ft.		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain		31 50
Fir flooring, 1 x 4, edge grain		35 00
Fir flooring, 1 x 4, flat grain		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 25
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	40 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1st and 2nds, 4/4	42 00
Birch, No. 1 com, and bet., 4/4	35 00
Birch, 1st and 2nds, 6/4 and 8/4	45 00
Birch, 1st and 2nds, 10/4 and 12/4.	52 00
Birch, 1st and 2nds, 16/4	55 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4.	34 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet.	28 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	32 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4.	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1st and 2nds, 4/4	40 00
Hard Maple, common and better, 4/4	30 00
Hard maple, 12/4 & 16/4, 1sts and 2nds.	46 00
Red oak, plain 1st and 2nds, 4/4.	66 00
Red oak, plain, No. 1 com., 4/4.	40 00
Red oak, plain No. 2 com. 4/4.	32 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain 1sts and 2nds, 4/4.	68 00
White oak, plain, No. 1 com., 4/4.	40 00
White oak, plain, No. 2 com., 4/4.	32 00
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	66 00
Red and White oak, plain, No. 1 com. 5/4 and 6/4	43 00
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00
Red and White oak, plain, 1sts and 2nds, 8/4	72 00
Red and White oak, plain, No. 1 com. 8/4	48 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00
White oak, ¼ cut No. 1 common	57 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$52 00	54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips	22 00	23 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	23 00	24 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	25 00	26 00
Pine, 1-in. x 10-in. M.R.	27 00	28 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	17 50	18 00
1"x 3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16'	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles:		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	75	80
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Quebec Spruce Deals		
12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00
Cuts and Better	
4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00
No. 1 Cuts	
1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00
No. 2 Cuts	
1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00
No. 3 Cuts	
1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00
Common and Dressing Mill Run	
1-in. x 4-in.	25 00
1-in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00
No. 1 Barn	
1 inch	31 00 45 00
1¼, 1½ and 2-in.	36 00 45 00
2½ and 3-in.	45 00
4 inch	50 00
No. 2 Barn	
1 inch	28 00 36 00
1¼, 1½ and 2-in.	30 00 36 00
2½ and 3-in.	38 00
No. 3 Barn	
1 inch	21 00 28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00 25 00
Box	
No. 1, 1, 1¼, 1½, 2-in.	22 00 25 00
No. 2, 1¼, 1½, 2-in.	19 00 23 00
Mill Culls	
Mill run culls, 1-in.	19 00
1, 1¼, 1½ and 2-in.	20 00
No. 2	17 00 18 00
Lath	
No. 1, 32-in. pine	1 80
No. 2, 48-in. pine	4 35
No. 1, 48-in. pine	4 85
No. 3, 48-in. pine	3 85
Hemlock Lath 48 in.	3 80

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension S. 1 S. and 1. E.	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8	14 00	17 00	20 50	21 50
2 x 10	18 00	18 50	21 50	22 50
2 x 12	18 00	19 00	23 50	23 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	21 50
2 x 4, 10, 18, 20	23 50
2 x 6, 8 to 16	21 50
2 x 8, 8 to 16	21 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	29 50
2 x 10 and 2 x 12; 8-16 ft.	26 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	28 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	30 50
No. 1 Common Boards	
4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50
Flooring	
4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00
Shiplap—Finished	
6 inch	22 50
8, 10 and 12 inch	23 50
Siding	
6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00
Lath	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed)	4 50
PINE—ROUGH TIMBER	
3 x 6 in.; 8 to 16 ft.	27 10
3 x 8 in.; 8 to 16 ft.	24 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	27 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	29 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	20 50
2 x 4 in.; 12 and 14 ft.	21 50
2 x 4 in.; 10 and 16 ft.	22 50
2 x 4 in.; 18 and 24 ft.	23 50
2 x 4 in.; 22 and 24 ft.	24 50
2 x 4 in.; 26 to 32 ft.	26 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	23 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	25 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	26 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	28 00
2 x 14 in.; 10 to 16 ft.	28 00
2 x 14 in.; 18 and 20 ft.	30 00
2 x 14 in.; 22 and 24 ft.	31 00
2 x 14 in.; 26 to 32 ft.	33 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	24 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	25 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	26 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	27 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	27 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	27 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	28 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	28 50
FLOORING	
Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	
SHIPLAP	
B. C. Fir, 6 in.	22 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft.	23 00
No. 2 Shiplap, 6 in.	22 00
No. 2 Shiplap, 8, 10 and 12 in.	23 00
FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.	
Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00
SHINGLES	
XXX B. C. Cedar	2 85
LATH	
Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ⅜ x 1⅜ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$94 00
Uppers 5/4 to 8/4	92 00
Uppers 10/4 to 12/4	97 00
Selects 4/4	84 00
Selects 5/4 to 8/4	82 00
Selects 10/4 to 12/4	92 00
Fine common 4/4	61 00
Fine common 5/4	65 00
Fine common 6/4	65 00
Fine common 8/4	67 00
No. 1 Cuts 4/4	51 00
No. 1 Cuts 5/4	57 00
No. 1 Cuts 6/4	59 00
No. 1 Cuts 8/4	61 00
No. 2 Cuts 4/4	32 00
No. 2 Cuts 5/4	43 00
No. 2 Cuts 6/4	45 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	33 00
No. 3 Cuts 6/4	34 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	46 00
Dressing 5/4 x 10	51 00
Dressing 5/4 x 12	52 00
No. 1 Moulding 5/4	58 00
No. 1 Moulding 6/4	58 00

(Continued on page 60)

NATIONAL

NATIONAL LOGGING CARS

We have analyzed every known condition of Logging and as a result have produced a full line of Cars that will eliminate almost every trouble encountered in the hard service and the safe, economical handling of Logs.

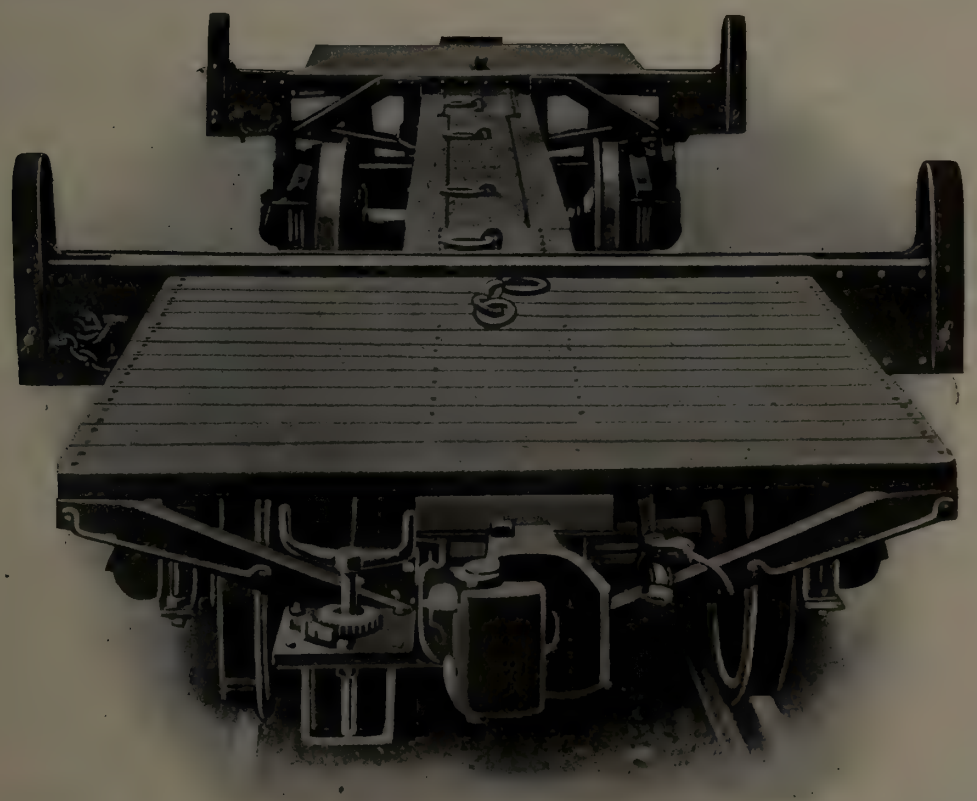
With our facilities for making cars in large numbers we are able to give exceptionally prompt attention to Logging Car orders.

Estimates and comblete information gladly given.

National Steel Car Co., Limited

Montreal Office:
SHAUGHNESSY BLDG.

Works and Operating Offices:
HAMILTON, CANADA



CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	58 00
No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	37 - 39	24 - 26	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in.		98 00
Selects, 1 to 2 in.		88 00
Fine common, 1 in.	68 00	70 00
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No. 1 Cuts 1 in.		55 00
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Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	38 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 50	34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 50	30 00
No. 3, 1 x 8		29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	28 00	29 00
Spruce, 12 in. dimension	29 00	30 00
Spruce, 9 in.		27 00
Spruce, 8 in. and under dimen.	27 50	28 00
10 and 12 in. random lengths, 10 ft. and up	27 50	28 50
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 50	23 00
All other random lengths, 7-in. and under, 10 ft. and up	21 50	23 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50	23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled		22 00
1⅝-in. spruce laths	4 15	4 25
1½-in. spruce laths		4 00

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Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear		3 65

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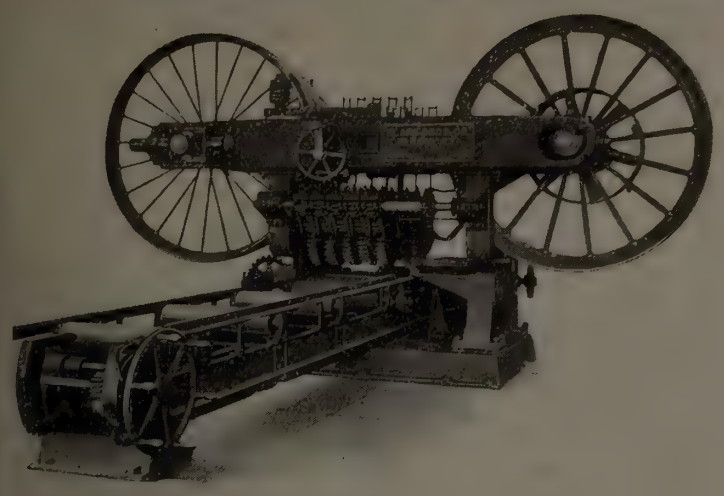

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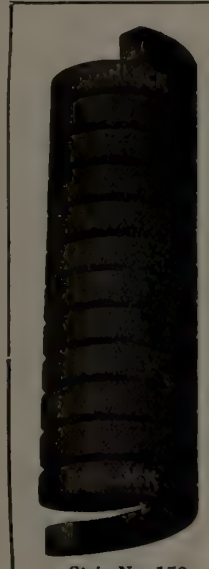

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Dunbar Engine & Foundry Co.
Hamilton Company, William
Huther Bros., Saw Mfg. Company
Jeffrey Manufacturing Company.
Long Manufacturing Company, E.
McLennan Foundry & Mach. Works
Parry Sound Lumber Company
Payette & Company, P.
Waterous Engine Works Company
Yates Machine Co., P. B.

(Continued on page 68)

The Babbitt Metal that's at the Front in Efficiency and Economy

HARRIS HEAVY PRESSURE

"The Babbitt Metal Without a Fault," is guaranteed to give EXCELLENT SERVICE. It will not crack or squeeze out. It will run cool at any speed. It is copper coated and copper hardened. It is best for all general machinery bearings. Order a box from our nearest factory.

It is Made in Canada. What We Make We Guarantee.

We Manufacture All Grades of Babbitt Metals.

WRITE FOR COMPLETE LIST

THE CANADA METAL COMPANY, Limited

Head Office and Factory TORONTO Fraser Avenue

Branch Factories:—HAMILTON, MONTREAL, WINNIPEG, VANCOUVER

The Time to Invest in Timber is NOW.

We can take advantage of market conditions for you as you cannot for yourself.

Either of two systems may be followed in buying timber. One contemplates buying properties at recognized market values to accord with individual ideas as to what a timber tract should be, and hold it in anticipation of steadily increasing value; the other, the Lacey Way, contemplates taking advantage of opportunities that come to an organization like ours, buying at prices much below recognized values and gaining profit, both from the purchase and from accretion.

Obviously the latter plan is most inviting from the standpoint of speculation, or for those who do not contemplate future manufacturing. It permits carrying charges to be reckoned merely as deferred payments on the purchase price, and of course means larger profits.

The present is a most opportune time for such investments. After a period of depression, in common with other industries, lumber is coming into its own again. There are, however, many timber owners, financially unable to carry non-productive investments, who must sell.

We can make a selection for you in the Douglas Fir forests of British Columbia, Washington or Oregon; the White Pine of Idaho; the Western Pine of Oregon or California; in the Redwoods of the latter state or elsewhere. Prices range well below the market values. Send for further information and booklet described as "Pointers."

James D. Lacey & Co.
INTERNATIONAL TIMBERLAND FACTORS
EST. IN 1880

CHICAGO
1750 McCormick Bldg.

SEATTLE
1009 White Bldg.

PORTLAND (ORE.)
1310 Northwestern Bank Bldg.

NEW ORLEANS
1213 Whitney-Central Bldg.

FIRE BRICK

Differs in Quality and Variety

For instance, a certain quality or kind of brick that gives satsatisfaction when used in a Refuse Burner, may show up poorly if used in a Dutch Oven.

It all depends on getting the right kind and the right quality for your particular needs.

Just tell us what you want it for, and we'll send a firebrick that was made for that very purpose.

We Manufacture the Following Well-Known Brands

"Elkco" "Elk Steel," "St Marys," "Keystone" and "Rotex"

Write for a copy of our Catalog.

"Refractory Efficiency Engineering"

Elk Fire Brick Co. of Canada, Limited

HIGH GRADE FIRE BRICK and CLAY

Sun Life Bldg., Hamilton, Canada

Books For Sale

SPECIAL PRICES

The Preservation of Structural Timber, by Howard F. Weiss. Published in 1915 by McGraw-Hill Book Company. 312 pages, illustrated. Price $3.00.

Scribner's Lumber & Log Book, 1915 Edition, Price 35c.

Baughman's Buyer & Seller, 75c.

Utilization of Wood-Waste (Second Revised Edition), by Ernst Hubbard. Published in 1915 by Scott, Greenwood & Sons. 192 pages, illustrated. Price $1.50.

Canada Lumberman

347 Adelaide Street West

TORONTO

SHINGLES
Bartram Brothers
Campbell-MacLaurin Lumber Co.
Canadian Western Lumber Company
Can. H. W. Johns-Manville Co., Ltd.
Christy-Moir Company
Fesserton Timber Company
Fraser Limited
Gillespie, James
Harris Tie & Timber Company
Long Lumber Company
Mainland Lumber & Shingle Co.
McGibbon Lumber Company
Miller Co. Ltd., W. H.
Muir, Kirkpatrick & Sharpe
Terry & Gordon.
Timms, Phillips & Company

SHINGLE & LATH MACHINERY
Dunbar Engine & Foundry Co.
Hamilton Company, William
Long Manufacturing Company, E.
Payette & Company, P.
Waterous Engine Works Company

SHOE PACKS
Gendron Shoepack Company, P. T.

SILENT CHAIN DRIVES
Canadian Link -BeltCompany

SNOW PLOWS
Pink Company. Thos.

SODA PULP PLANTS
Becker & Co.

SOUTHERN PINE
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Cameron & Company
Chicago Lumber & Coal Company
Cotton Belt Lumber Company
Muir, Kirkpatrick & Sharpe
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Hobart & Company
Long Lumber Company
Mason, Gordon & Company
Muir, Kirkpatrick & Sharpe
Southern Lumber Company
Stout Lumber Company
Valley Lumber Company
Wilson Lumber Company
Wisconsin & Arkansas Lumber Co.
Wuichet, Louis

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Canada Wire & Iron Goods Co.

SPRUCE
Auger & Son
Bartram Bros.
Blair & Rolland
Bourgouin, H.
Brown Corporation
Donogh & Company, John
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Fesserton Timber Company
Fraser Limited
Fraser-Bryson Lumber Company
Gillies Bros.
Grant & Compbell
Hart & McDonagh
Laferte, J. A.
Long Lumber Company
Mason, Gordon & Company
Muir, Kirkpatrick & Sharpe
Murray & Gregory
New Ontario Colonization Company
Partington Pulp & Paper Co., Ed.
Quebec & St. Maurice Industrial Co.
Spencer, C. A.
Terry & Gordon.

STEEL CHAIN
Canadian Link-Belt Company
Columbus Chain Company
Jeffrey Mfg. Company
McKinnon Chain Company
Waterous Engine Works Co.

STEAM PLANT ACCESSORIES
Waterous Engine Works Company

STEAM APPLIANCES
Darling Bros.

STEAM TRAPS
Cole Co., Geo. W.

STEEL BARRELS
Smart-Turner Machine Co.

STEEL DRUMS
Smart-Turner Machine Co.

STOKERS
Jones Underfeed Stoker Company

TAPS and DIES
Pratt & Whitney Company
Waterous Engine Works Company

TIES
Austin & Nicholson
Fesserton Timber Company
Harris Tie & Timber Company
Long Lumber Company
Muir, Kirkpatrick & Sharpe
Spears & Lauder
Terry & Gordon.
W. H. Miller Co., Ltd.

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Farnworth & Jardine
Hillas & Company, W. N.
Smith & Tyrer Limited

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Sewall, James W.
McInnis, A. D.

TIMBER CRUISERS
Campbell Lumber Company. L. E.

TIMBER LANDS
Lacey Co., Jas. D.

TRANSMISSION MACHINERY
Canadian Link-Belt Company
Jeffrey Manufacturing Company
Waterous Engine Works Company

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Smith Company, S. Morgan.

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Hoffman Brothers Company
Webster & Bro., James

VENEER MACHINERY
Perrin, William R.
Philadelphia Textile Machinery Co.

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Signal Systems Co.

WATER WHEELS
Boving Hydraulic & Engineering Co.
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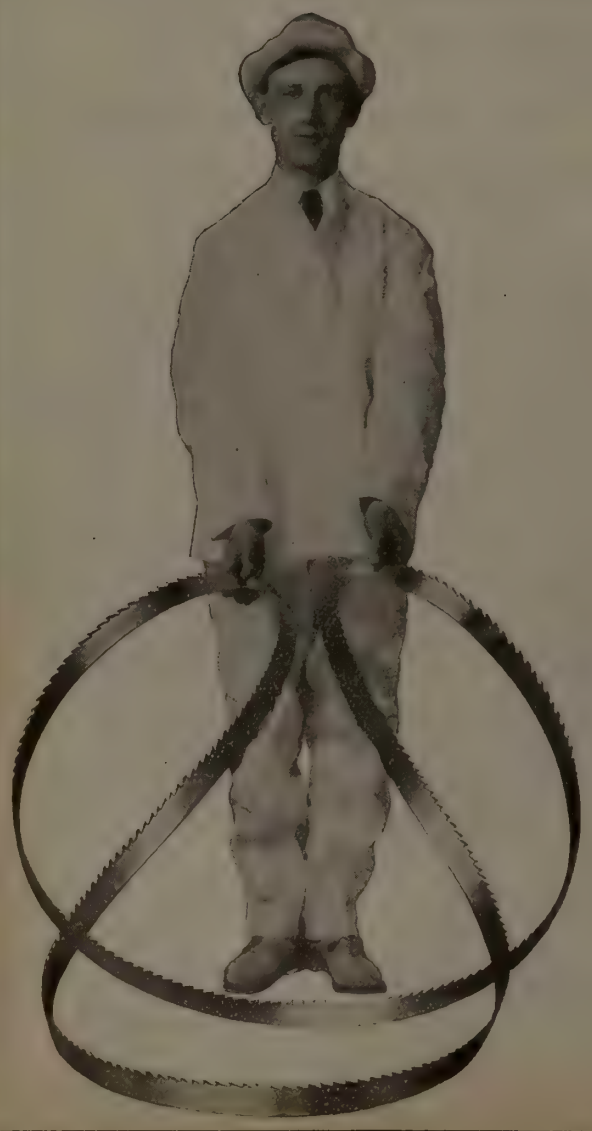
WIRE CLOTH
Canada Wire & Iron Goods Co.

WOODWORKING MACHINERY
Canadian Blower & Forge Company
Jeffrey Manufacturing Company.
Long Manufacturing Company, E.
National Machinery & Supply Co.
Waterous Engine Works Company
Yates Machine Co., P. B.

WOOD PULP
Austin & Nicholson
Becker & Co.
Miller Co., Ltd., W. H.
New Ontario Colonization Co.
River Ouelle Pulp & Lumber Co.



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BAND and RE-SAWS

We have achieved an enviable reputation for supplying SAWS which stand up to their work longer, with less re-fitting than any other SAWS in the world. If there is any doubt in your mind, we stand ready to prove it to you.

A Perfect Saw for Every Purpose

Send for our 248 page book on Saws. The most valuable and interesting Saw book ever published. Tells you just what you want to know about SAWS, MACHINE KNIVES and SAW FITTING TOOLS.

ASK FOR BOOKLET "C L"

E. C. ATKINS & COMPANY INC.

Makers of Sterling Saws

Factory—HAMILTON, ONT.

Vancouver Branch—109 Powell St.

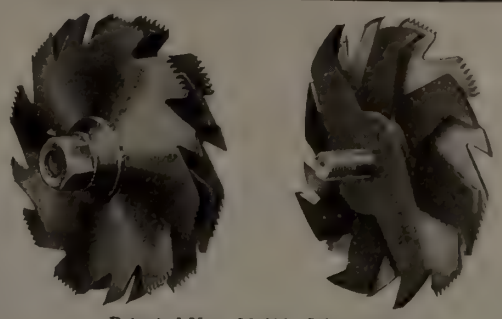
J. J. TURNER & SONS

PETERBOROUGH, ONT.

Government Contractors and the largest Manufacturers and Dealers in Canada of

Lumbermen's Tents, Bed Ticks, Grey Blankets, Nose Bags, Waterproof Goods, Steel Ranges and General Camp Outfits.

Write for Catalogue. **Prompt shipments.**



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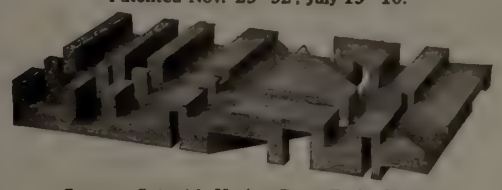


Grooves Cut with Huther Bros. Dado Heads

Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

Write for New Illustrated Catalog.

HUTHER BROS. SAW MFG. COMPANY, Inc.

1103 University Ave.
ROCHESTER, N. Y.

INDUSTRIAL LOCOMOTIVES

A locomotive to justify its cost must start the required load and keep it going.

The right amount of the right material must be provided in the right place.

Each and every part must be sure to fit not only the locomotive for which it was made, but every other locomotive of the same size and design. Spare parts must be instantly available, made so well as to go into place without a machine shop.

We have a number of standard sizes of locomotives in stock and can make immediate delivery.

MONTREAL LOCOMOTIVE WORKS, LIMITED,

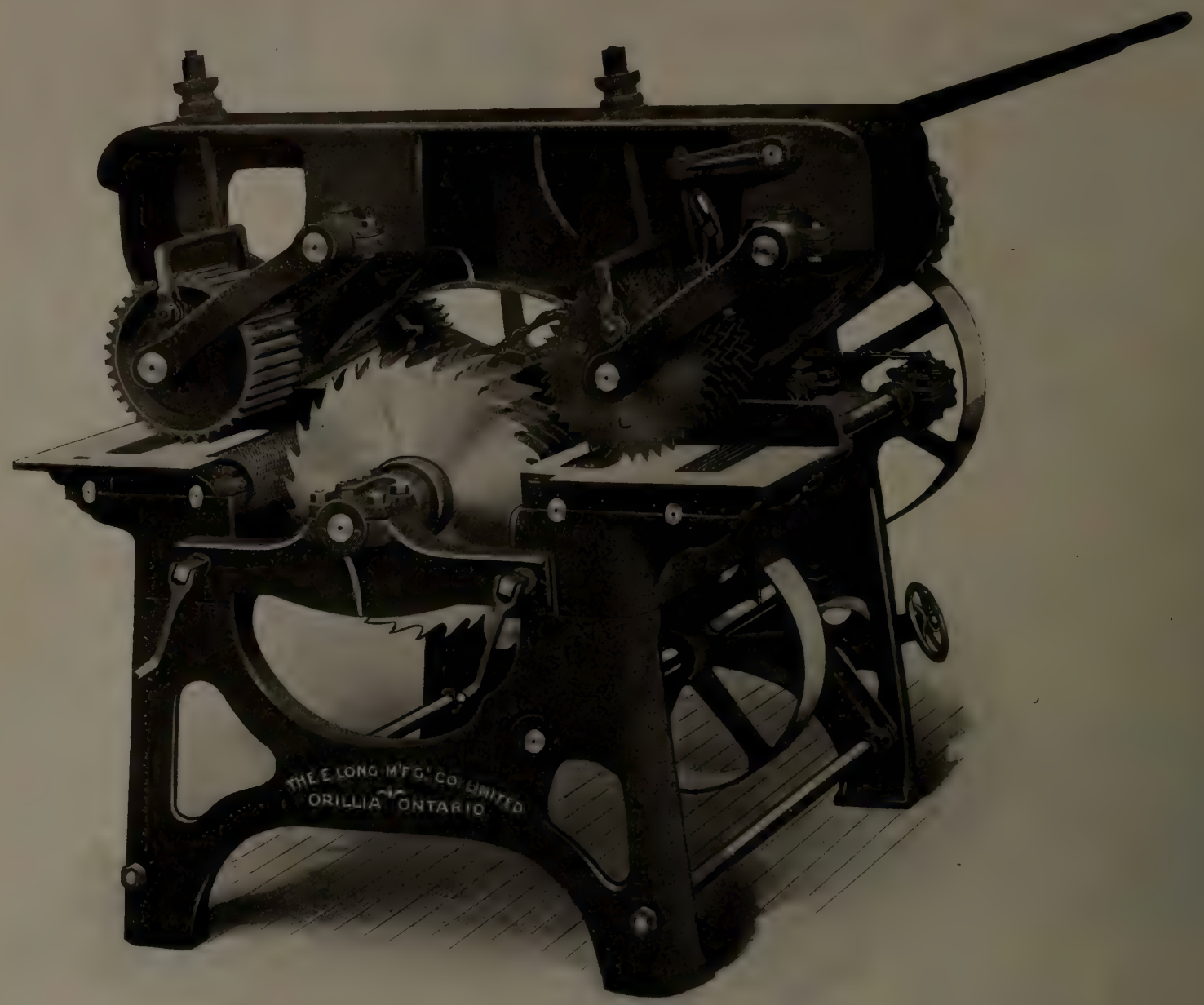
DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.



No. 3 Bolter

One of the main reasons for the great popularity of our No. 3 Bolter is its capacity for continuous work.

The machine is so substantial in all the essential parts—frame, bearings, etc.—that you seldom see the slightest trouble develop.

Another reason is the uniform, accurate work turned out under all conditions. In large mills where they produce large quantities of lath, etc., our No. 3 Bolter is almost universally used.

The machine has our usual one-piece frame construction, with all bearing and working parts easily accessible for adjustment, etc. Carries four 20-inch saws, spaced ordinarily for lath bolts, but can be arranged for any spacing of saws for cutting slats, pickets, etc. Floor space, 5 feet x 4 feet 6 inches; weight, 2,800 pounds.

Send for detailed description and dimensions.

Catalogue No. 102

THE E. LONG MANUFACTURING CO. SAW-MILL MACHINERY ORILLIA, CANADA

This mark on your saw mill machinery is an indication that your lumber manufacturing equipment is the best and most economical money can buy.

The E. Long Manufacturing Company

Orillia **Limited** **Ontario**

Throw Out Those Old Valves!!

Don't tolerate kicking or leaking valves on your Steam Feed. Just as sure as your valves kick, your cutting capacity is going to take a drop. The Sawyer "feels" his work through his lever. A kicking valve scares him off his work; a leaking valve won't let him do his best. Both kinds are money losers for you.

WATEROUS VERTICAL STEAM FEED VALVES

Will neither kick nor leak

In the first place, the vertical position of this new valve allows perfect drainage into the exhaust port at the bottom. Should the connection break the valve drops of its own weight and shuts off the steam. That's a ***safety*** feature.

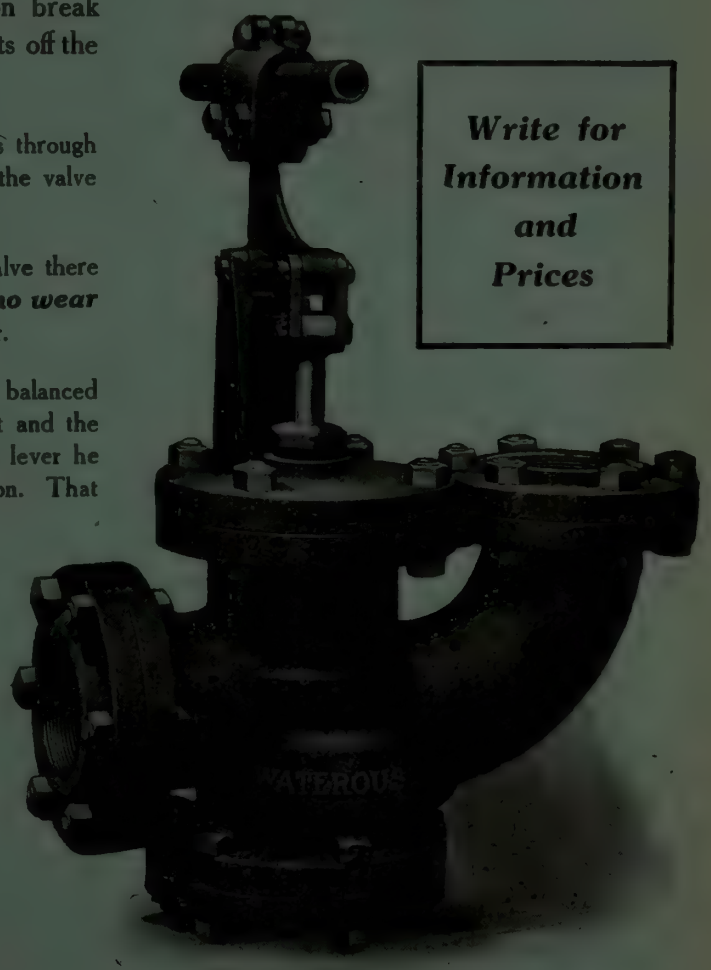
Then, the exhaust—mostly water—doesn't pass through the valve plug, but through the lower part of the valve chest. That's why the valve ***cannot kick.***

And—most important of all—with the vertical valve there is no weight on the valve seat and consequently ***no wear*** and ***no leakage.*** It's a ***real*** steam conserver.

Further, the **Waterous Vertical Valve** is balanced to work easy, there is no dead steam between it and the cylinder. Just as soon as the sawyer moves his lever he gets the full "punch" of the live steam on his piston. That makes a ***fast, quick-acting, satisfactory feed.***

If yours isn't that kind now, attach **Waterous Vertical Valves** and see what a difference they will make.

Write for Information and Prices



The Waterous Engine Works Co., Limited

BRANTFORD, CANADA

Agency—H. B. Gilmour, Vancouver, B. C. ***Branch***—Winnipeg, Man.

$5,000,000.00
worth of mixed metal sold annually.

"FROST KING" METAL

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. **Price 30c per lb.**, Fort William and East; West of Fort William **35c per lb.**, delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

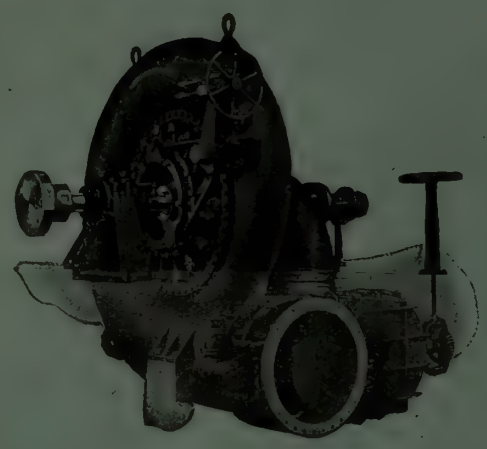
Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Smith Hydraulic Turbines

for driving the

Paper Mill and Pulp Grinder



This type of equipment specially designed for high head developments.

Our particular claim for these turbines is service, the kind of service that responds to the demand

Promptly and Efficiently

Write for Bulletin F

S. Morgan Smith Co., York, Pa.

H. B. VanEvery—CANADIAN REPRESENTATIVE
405 Power Bldg. - - - - Montreal, Can.

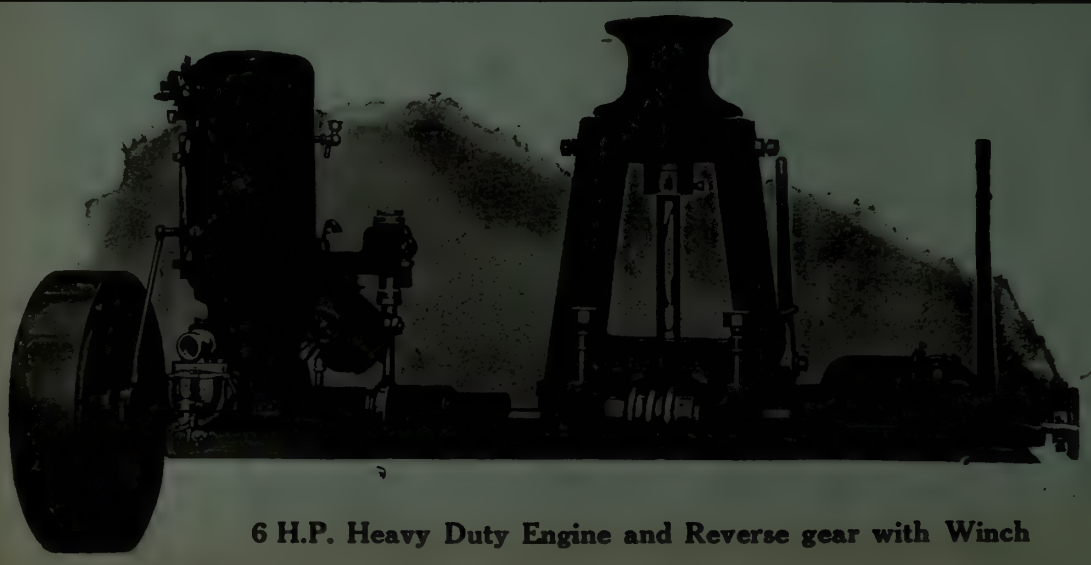
THE LEATHER BELT THAT'S KNOWN OUR EXTRA

Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.

Limited

General Mill Supplies MONTREAL



6 H.P. Heavy Duty Engine and Reverse gear with Winch

River Driving Costs

will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

Adams Launch & Engine Co.

Penetang, Ont.

Vol. 36 Toronto, July 1, 1916 No. 13

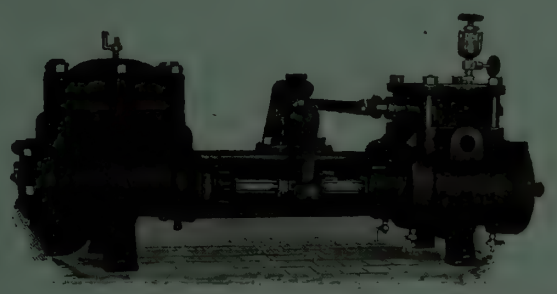
Canada Lumberman & Wood Worker

New **RAILS** Relaying
12 to 80 pounds per yard.
LOGGING CARS
Jno. J. Gartshore
58 Front St. West, Toronto

Made in all styles
Electric-Welded Boom Chain
We also specialize
Log Chains and "Dreadnaught" Loading Chain
Made in Canada Write to Fully Guaranteed
McKinnon Chain Co., St. Catharines, Ont.

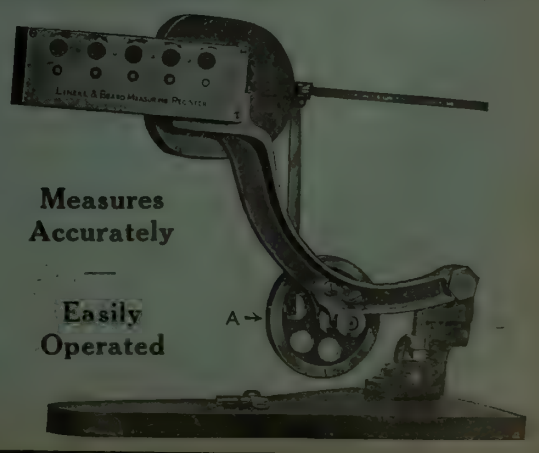
"BUFFALO" Forges and Blowers
Leaders for 37 Years.
We manufacture a complete line of forges and blowers both hand and power. There is no other maker who can offer you such a wide variety of different styles and sizes.
Write for Catalog 179-17
Canadian Blower and Forge Co., Limited
BERLIN, ONTARIO
St. John Montreal Toronto Winnipeg Vancouver

GENUINE "TURBROS"
Balata Belting
Waterproof and Stretchless.
The best belt for sawmills.
Manufactured and guaranteed by
Turner Bros. Canada Limited
Montreal



There's a
SMART-TURNER PUMP
to meet your every need.
Buy the best, and join the "Don't Worry" Club.
The Smart-Turner Machine Co., Limited
HAMILTON, - CANADA

The Morrison Lumber Measuring Register
May be bolted to your planer, molder, etc., easily and quickly. It will automatically and continuously measure your stock, giving the results in lineal or board measure as desired.
Solidly constructed; no parts to get out of order; fully guaranteed to give accurate results if operated according to instructions.
A labor saver that saves you money. Write for explanatory booklet.
The James Morrison Brass Mfg. Co., Limited
93-97 Adelaide St. W., TORONTO



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COSTS LESS PER DAY

AMPHIBIA BELTING

COSTS LESS PER DAY

Put Good Belting

on your

Good Machines

Your machines are expensive, and naturally you expect them to turn out the quality and quantity of work commensurate with their cost.

Then why harness them with belting which cannot begin to do them justice?

Use

"AMPHIBIA"

Planer Belting

and get the most work from your machines in the quickest time, at the lowest cost per day of service.

Try a sample run of "AMPHIBIA" Planer and prove its merits.

"Leather like gold has no substitute."

Sadler & Haworth

Established 1876

Tanners and Manufacturers

For 40 Years Tanners and Manufacturers of the Best Leather Belts

MONTREAL, 511 William Street

TORONTO	ST. JOHN	WINNIPEG	VANCOUVER
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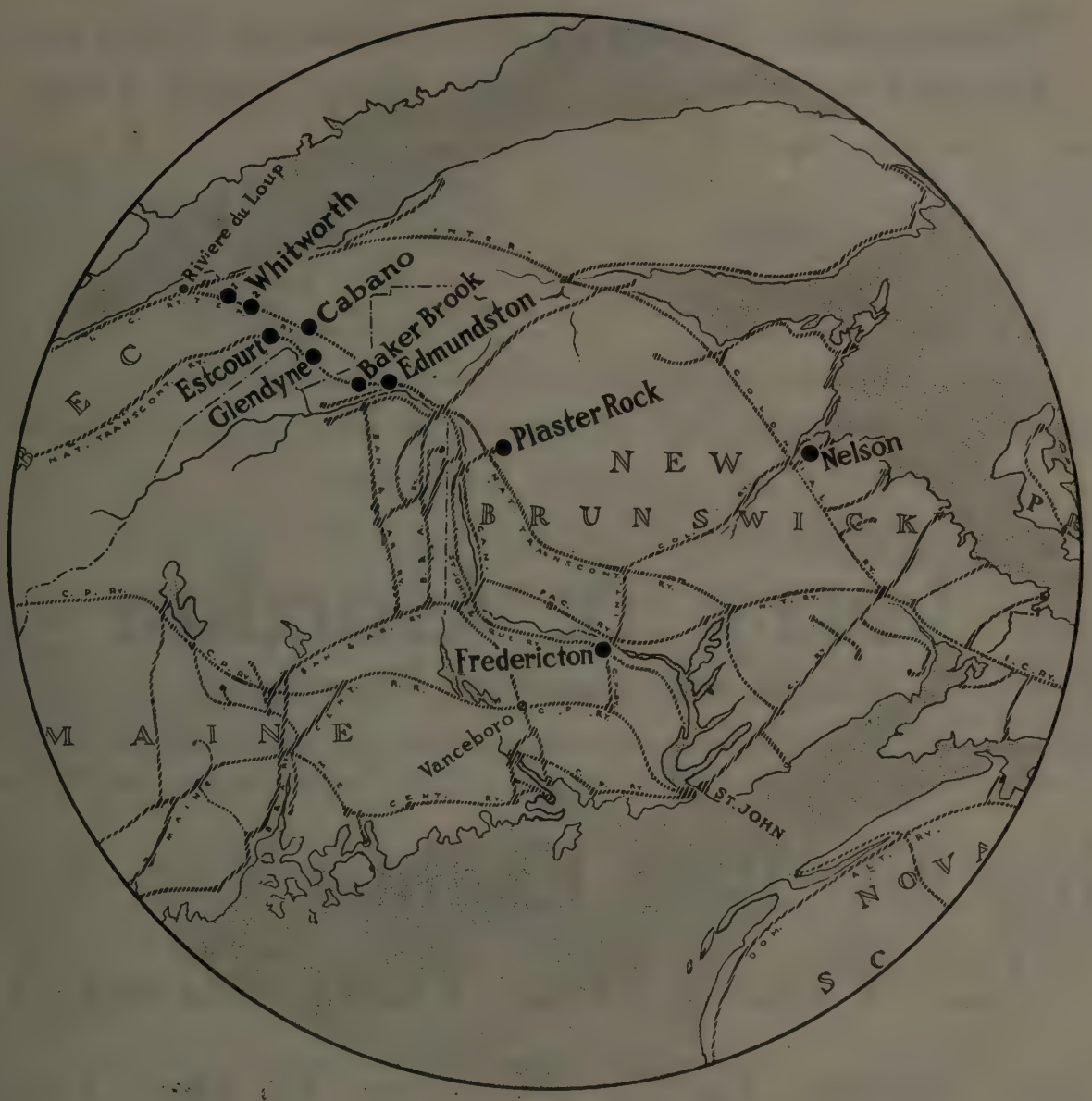
"AMPHIBIA"

The FLEXIBLE WATERPROOF BELT

"AMPHIBIA"

Ten Band Mills to Serve You



Mills and Railway Connections

Fredericton, N.B.	Railway connection		C. P. R.
Plaster Rock, N.B.	"	"	C. P. R.
Nelson, N.B.	"	"	I. C. R.
Edmundston, N.B.	"	"	C. P. R. or Temiscouata Ry.
Baker Brook, N.B.	"	"	Temiscouata Ry. and N.T.R.
Glendyne, Que.	"	"	N. T. R.
Escourt, Que.	"	"	N. T. R.
Cabano, Que.	"	"	Temiscouata Ry.
Whitworth, Que. (No. 1, No. 2)	"	"	Temiscouata Ry.

Fraser Limited, Fredericton, N. B.

ROUGH AND DRESSED SPRUCE, WHITE CEDAR SHINGLES, SPRUCE LATH, PIANO SOUNDING BOARD STOCK.

QUALITY LUMBER

If interested in any of the following items of Good Dry Stock — Let Us Hear from You.

400,000 ft. 1 x 5" 10/16' Mill Run Spruce.
46,000 ft. 5/4 x 5" 10/16' Mill Run Spruce.
170,000 ft. 4 x 5" 10/16' Mill Run Spruce.
300,000 ft. 2 x 4" and wider 8/16' Mill Cull Spruce.
100,000 ft. 1 x 4" and wider 6/16' Mill Cull Spruce.
75,000 ft. 5/8 x 3 and 4" 6/16' Mill Run Spruce.
100,000 ft. 1 x 4" and up 10/16' Mill Run Tamarac.
30,000 ft. 2 x 4" and up 10/16' Mill Run Tamarac.
20,000 ft. 3 x 5 and 6" 10/16' Mill Run Tamarac.
40,000 ft. 4 x 5" 10/16' Small Log Mill Run White Pine.
70,000 ft. 4 x 4" 10/16' Small Log Mill Run White Pine.
125,000 ft. 1 x 10" 10/16' Small Log Mill Run White Pine.
100,000 ft. 1 x 4" and up 10/16' No. 1 White Pine Mill Culls, 60 per cent. 10 and 12 in.. Choice stock.
60,000 ft. 2 x 4" and up 10/16' No. 1 White Pine Mill Culls; even widths, choice stock.

We want to move promptly 100,000 feet No. 1 Common sound knotted British Columbia Red Cedar Boards.

On these and many other items of stock we will quote special prices to clear.

WE CAN SAVE YOU MONEY

Branch Office
852 Cambie Street
Vancouver

Terry & Gordon

Wholesale Lumber Merchants

Head Office
704 Confederation Life Bldg.
Toronto

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

SNAPS

1 x 4 & up Mill Run Red Pine Culls 80,000. Contains 10% No. 2 Culls.

Hardwoods 1914 & 1915 Cut

46,000	1 x 4 & up Mill Run Maple
50,000	1 x 4 & up No. 3 Com. Birch
30,000	1 x 7 & up No. 3 Com. Birch
25,000	1 x 4 & up No. 2 Com. Birch
13,000	1 x 4 & up No. 2 & 3 Com. & Better Ash

Get our prices on Dry Hemlock at Longford.

We have 5 cars 3x B. C. Shingles in Transit.

The Long Lumber Company

HAMILTON, ONT.

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

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1 x 4/5 x 10/16	735,697
1 x 6 x 10/16	203,016
1 x 8 x 10/16	9,424
1¼ x 4 x 10/16	30,292
1¼ x 5 x 10/16	17,798
1¼ x 6 x 10/16	5,143
1¼ x 7 x 10/16	30,521
2 x 4 and up x 10/16	3,900
2 x 5/7 x 10/16	9,900
2 x 6 x 10/16	3,295
3 x 4/6 x 10/16	19,484
3 x 7 and up x 10/16	96,976
4 x 5 x 10/16	6,179

Norway Culls

1 x 4 and up x 6/16 No. 1 and 2	328,012
1 x 4 and up x 6/16 No. 1	391,618
1 x 4 and up x 6/16 No. 2	369,098
1¼ x 4 and up x 6/16 No. 1	31,359
2 x 4 x 6/16 No. 1	3,950
2 x 4 and up x 6/16 No. 1	3,308
2 x 4 and up x 6/16 M.R. Outs	26,656

White Pine, Good

1 x 4 and up x 6/9	1,512
1 x 4 and up x 10/16	5,825

White Pine Mill Run

1 x 4/5 x 10/16	109,256
1 x 7 and up x 10/16	88,550
1 x 10 x 10/16	2,098
1 x 12 x 10/16	9,442
1¼ x 4 x 10/16	4,651
1¼ x 5 x 10/16	2,165
1¼ x 6 x 10/16	3,371
1¼ x 7 x 10/16	7,771
2 x 4 and up x 10/16	4,311
3 x 4 and up x 10/16	117,841
4 x 5 x 10/16	1,562

White Pine Culls

1 x 4 and up x 6/16 No. 1	5,579
1 x 4 and up x 6/16 No. 2	107,913
2 x 4 and up x 6/16 No. 1	5,680
3 x 4 and up x 6/16 No. 1	69,397

Spruce Mill Run

1 x 3 x 8/16	85,000
1 x 4 x 8/16	199,197
1 x 5 x 8/16	254,226
1 x 6 x 8/16	387,930
2 x 4 x 10/16	139,142
2 x 5 x 10/16	222,175
2 x 6 x 10/16	186,544
2 x 7 x 10/16	94,415
2 x 8 x 10/16	29,253
2 x 9 x 10/16	12,570
2 x 10 x 10/16	40,693
3 x 6 x 10/16	200,823
3 x 7 x 10/16	80,887
3 x 8 x 10/16	53,192
3 x 9 x 10/16	55,842

Spruce Culls

1 x 4 and up x 6/16	143,921
2 x 4 and up x 6/16	175,103
3 x 3 and up x 6/16	200,000
3 in. 5th Quality	85,000

Lath Mill Run

1½—32 in. R. Pine	538,000
1½—32 in. W. Pine	187,000
1¼—48 in. Pine and Spruce	90,000

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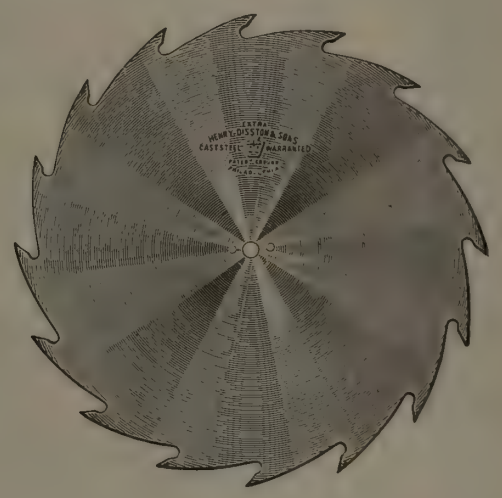

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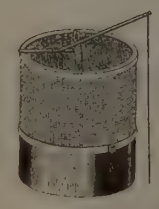

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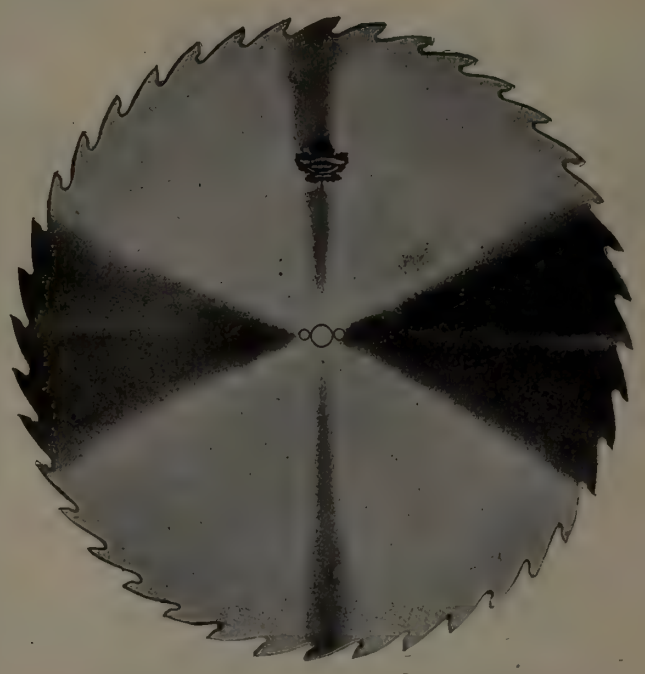

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The Heavier it is the Better we like it

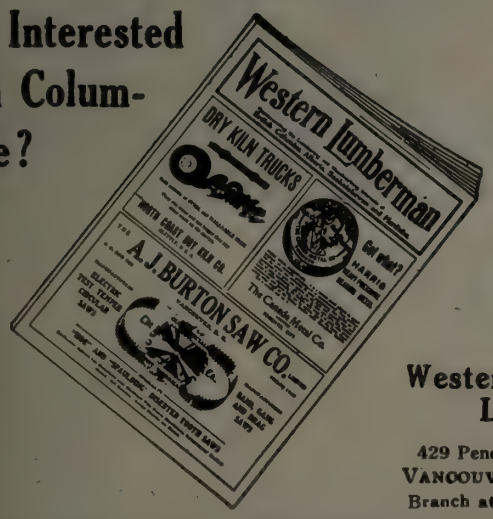
We Dress from 1 to 4 Sides up to 16-in. x 20-in., 60-ft.

Our grade is positively right, and prices will please

Timberland Lumber Co., Limited
Head Office, Westminster Trust Bldg., NEW WESTMINSTER, B.C.
Mills at Craigs on the B.C.E.R.
Shipments by C. P. R., C. N. R., G. N. R., and N. P. R.

Are You Interested in British Columbia Trade?

The immensity of the Lumber Industry will within a few years make this Province the most important in the whole Dominion.



There is undoubtedly a big market for Mill Equipment of all kinds. Let us Demonstrate our Advertising service. We please others, we can please you.

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429 Pender St. W
VANCOUVER, B. C.
Branch at Winnipeg

Thurston-Flavelle Lumber Company

MANUFACTURERS OF

British Columbia Red Cedar Exclusively

We beg to announce to the Trade that we are carrying in stock at Lindsay, Ontario, for less than carlot and sample shipments, the following stocks:

½ x 5 and ½ x 6 Cedar Bevel Siding.
½ x 8 to 12 Clear Cedar Finish, Rough or Dressed.
Wide Cedar Boards.
⅜ x 3 in. Clear Cedar V Joint.
Clear Cedar Lattice.
Quarter Round, Window Stop and Cove Mouldings.

Full particulars from our Eastern Agents.

Eastern Agents, Gull River Lumber Co., Ltd., Lindsay, Ont.

Head Office and Mills, Port Moody, B. C.

I HAVE IT

All Grades in White Pine Lath A Specialty

Milling in Connection

E. J. MOORES, Jr.

MIDLAND CANADA

LET'S GET TOGETHER

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Manufacturers

General Offices: EAST ST. LOUIS, ILLS.

—"If QUALITY and SERVICE are paramount considerations in purchasing your (Lumber) requirements it is wise to confine yourself to old established manufacturers of ample resources." BENJ. FRANKLIN.

Established 1866 **Capital $6,500,000**

Southern Yellow Pine
Louisiana Red Gulf Cypress

Are your horses of use to you?

This seems an absurd question—and the answer is always **"Of course they are"**—In which case provide your stables with:

Johnson's Reliable Veterinary Remedies

Johnson's Horse Liniment, No. 1 (Alcoholic)

1 gal. jugs (Imperial)	$4.50 gal.
1 lb. bottles	8.00 doz.
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A sure and speedy cure for all kinds of Colic

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2 lb. bottles 8 doses	15.00 doz,

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2 lb. tins	2.00 per tin
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Johnson's Condition Powders (Concentrated)

1 lb. Packages	3.60 per doz.

Johnson's Camp and Household Remedies, such as Cough Syrup, Healing Ointment, Headache Powders, Big 4 Liniment, Stomach Bitters, Cathartic Pills, etc., etc., have stood the test of twenty-five years and are in use all over Canada, from the Atlantic to the Pacific. Prices are lower than those of all other manufacturers. Letter orders receive prompt attention.

A. H. Johnson, Wholesale Druggist, **Collingwood, Ont.**

Use Horse Sense

Keep a good supply of Douglas Egyptian Liniment always on hand for the horses. A quick application may save you a valuable horse and much expense in an emergency. The only liniment made that

Stops Bleeding Immediately

Also for thrush, cuts, callouses, spavin, etc., it will be found invaluable.

DOUGLAS & COMPANY, NAPANEE, ONT. CAN.
SOLE PROPRIETORS MANUFACTURERS AND EXPORTERS.

FREE TRIAL

We will send you a sample absolutely free by filling in the attached coupon. This trial will prove the wonderful beneficient qualities of Douglas Egyptian Liniment.

Sample Coupon

Douglas & Co.,
Napanee, Ont.

Please send me sample of Douglas Egyptian Liniment as advertised.

Name _____

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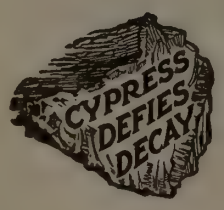
Our Mills Produce and We Market as Much

GENUINE LOUISIANA RED CYPRESS

As All Other Concerns Combined



250,000,000 feet constantly in stock insures filling any reasonable order promptly.

Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

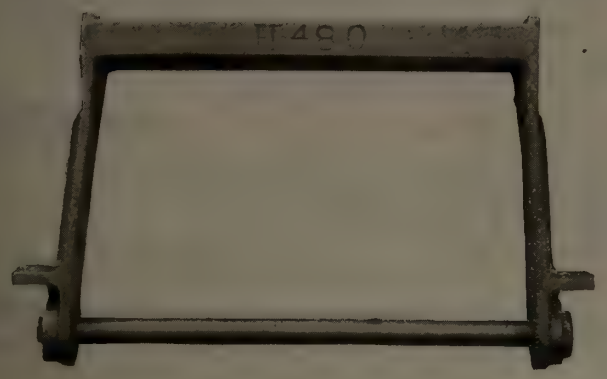
Our salaried salesmen receive credit for mail orders. Try us.

LOUISIANA RED CYPRESS COMPANY

Hibernia Building **New Orleans, La.**

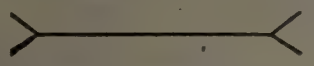
LINK-BELT

Can be depended upon for Reliable Performance in Saw Mill Service



Link-Belt is Demanded by Saw Mill Men

because it gives service. H-480 Chain has broad bearing surfaces on the bottom of the trough, to stand the wear of dragging. The end bar has a straight front to act as a pusher. This also prevents a tendency to ride up over the material.

This Trade Mark  on Every Link

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CANADIAN LINK-BELT CO., LTD.

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A. R. Williams Machinery Company, Limited, Vancouver, B. C.

Mill Yard.

Spruce, Tamarac, Whitewood and Poplar Lumber

SPRUCE AND WHITEWOOD LATH

Planing Mill in connection with Saw Mill

ROSSED SPRUCE PULPWOOD

Full supply of Seasoned Lumber always on hand.

RICH CLAY LOAM LANDS FOR SALE—Townships of Haggart and Kendry. District of Temiskaming. Excellent opportunities for the settler. Write for particulars.

New Ontario Colonization Company, Limited

Sales Office, BUFFALO, N.Y.

Mills:—Jacksonboro, Ont. Located on Transcontinental R.R., 32 miles west of Cochrane.

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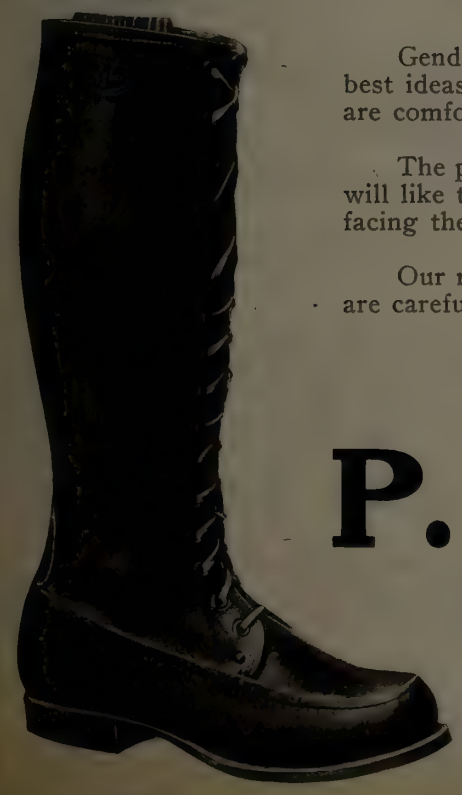
SHOE PACKS

Made in Canada

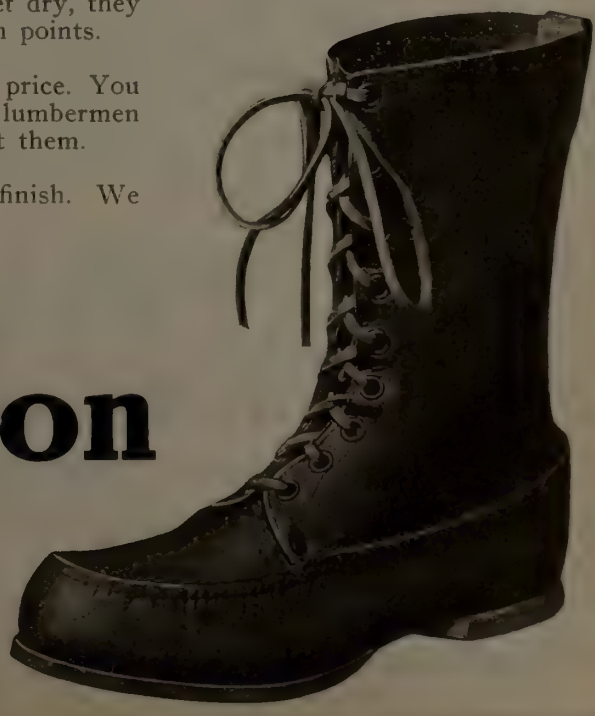


Gendron Genuine Draw String Shoe Packs embody the latest and best ideas of manufacture. They wear, they keep the feet dry, they are comfortable under all conditions. These are the main points.

The price is reasonable. The value is away above the price. You will like these shoe packs if you try them. Hundreds of lumbermen facing the same conditions as you, are enthusiastic about them.

Our manufacturing process is thorough from start to finish. We are careful with every pair.

Send for our catalogue and prices.



P. T. Gendron

Shoe Pack Co.

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MIDLAND, ONT.

Dressed and Rough Spruce, White Pine and Banksian Pine

ALL WELL MANUFACTURED AND AIR DRIED

Our mills at La Tuque, P.Q. have first-class equipment for all sorts of dressing, also for resawing.

Let us send you our stock list with prices

BROWN CORPORATION

Sales Office: PORTLAND, MAINE

Plant of The Stearns Salt and Lumber Co.

Stearns Quality

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Hardwood, Hemlock, White Pine

LUMBER and TIMBER

40 Million Feet Dry Stock in pile containing a complete assortment for rush shipment.

Grades— GUARANTEED —Quality

Hardwood Specialists

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Manufacturers of Hardwoods—Any Thickness From

1/30″ SLICE CUT VENEER

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Specialty:

QUARTERED WHITE OAK

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QUARTERED OAK PLAIN OAK

POPLAR ASH

Yards at—Nashville, Tenn. Basic, Va.

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We can ship you promptly any of the above Stock, Carefully Inspected

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Rough Timbers, Dimension, Flooring, Ceiling, Siding, Interior and Exterior Finish of all kinds including Mouldings. Fir, Spruce and Cedar Lath

Prompt shipment of Fir timbers in all sizes and up to 80 feet in length

AIR DRIED CEDAR SHINGLES We specialize in supplying air dried Cedar Shingles, these cost more than kiln dried Shingles but make a better roof and last much longer

We handle

Everything in Lumber

Write or wire for prices and stock lists.

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Pick Up These Extra Profits

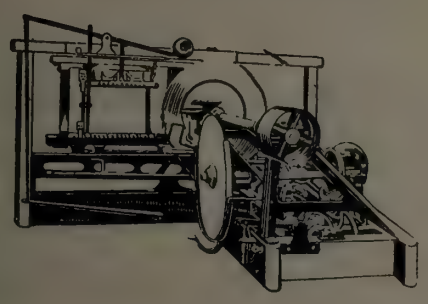
Sell Trimmings With Your Shingles

Every roof needs Ridge Cap or Valley When you sell the shingles, simply mention the trimmings and you'll sell them. There is good money in them and they are no trouble to handle.

Write for booklet C. L. and Price List.

The Metallic Roofing Co., Limited
Manufacturers of
Corrugated Iron, Metallic Shingles and Siding, Metallic Ceilings, Ventilators, etc.
Winnipeg and Toronto

"Dunbar" Shingle Machine

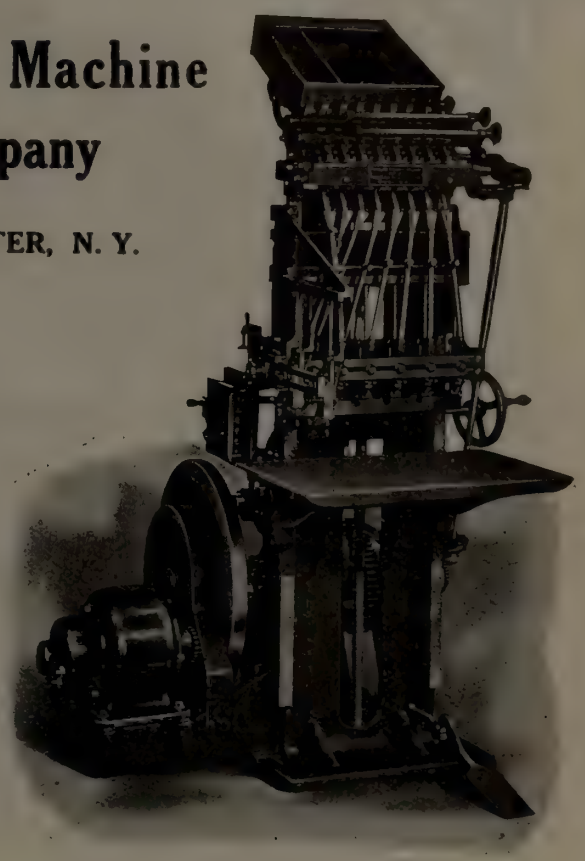


The "Dunbar" Shingle Machine works smoothly and swiftly, producing shingles of uniform cut at a low cost.
Users of the "Dunbar" Shingle Machine testify to its strength and reliability.
Specifications are 2 38 Shingle Saws and 1 36-in. Jointer Saw. Speed, 1,600 r.p.m. Capacity 16,000 to 30,000. Weight 2,800 lbs. Main Arbor, 2 7-16 in. Poilshed Steel. Adjustable ratchets. Boxes Ring-oiling.
The "Dunbar" Shingle Machine is made in two models, "A," having Jointer Saw driven from counter shaft or line shaft, and "B," having Jointer Saw driven by a leatherboard friction, which makes it self-contained.
Write us in regard to your Shingle Mill requirements.
We also make Sappers, Cedar Cut Offs, Lath Machines, Car Wheels, and Castings of all kinds.
We will gladly supply you with information and prices.

The
Smith Foundry Co.
Fredericton, N.B. Limited

Morgan Machine Company

ROCHESTER, N. Y.



Manufacturers of—

Nailing Machines,

Lock Corner Box Machinery,

Box Board Matchers,

Box Board Printing Machines.

Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the **Morgan Machine Company** for latest developments in machinery for the Box Industry.

Morgan Machine Company
ROCHESTER, N.Y.

We offer for Immediate Shipment

BASSWOOD

1″ and 1½″ Dry Basswood

DRY BIRCH STOCK

We offer in Birch End Stock—1 x 8½″ 1 x 9″ and wider
1 x 6 and 7″ 1½″ to 4″

Spruce, Basswood, Ash, Hemlock and Pine

HART & McDONAGH, 513 Continental Life Bldg., TORONTO
Phone Main 2262

FIR TIMBERS

WE CAN SUPPLY ANY SIZE AND LENGTH

Wire your enquiries to

McDONALD LUMBER CO.,

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WINNIPEG, MAN.

Mill—VANCOUVER, B. C.

The Best Lath Market

WE NEED 100 MILLION LATH

annually and can use

SPRUCE, BALSAM, JACK PINE,
RED PINE, WHITE PINE or HEMLOCK

—Specifications—

⅜ x 1½—4 ft.—50 pcs. per pack
No. 2 and No. 3 grades prefered.

Write us when you have Lath to offer. Will contract.

Cannon River Lumber Co.

"Lath Specialists"

Webster Bldg. **CHICAGO, Ill.**

For Lumbermen

"PETERBOROUGH"

This 16 ft. canvas covered Peterborough model is the ideal canoe for lumbermen. It has great strength and carrying capacity and is built to stand the rough usage incidental to portaging.

Ask for our catalogue

Peterborough Canoe Co., Limited

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What it Contains:

Chapter 1—Historical Notes.
Chapter 2—Manufacture of Glue.
Chapter 3—Testing and Grading.
Chapter 4—Methods in the Glue Room.
Chapter 5—Glue Room Equipment.
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Price 50 cents

Canada Lumberman & Woodworker

347 Adelaide St. West, Toronto

F. N. WALDIE, President. R. S. WALDIE, Vice-President. W. E. HARPER, Secretary.

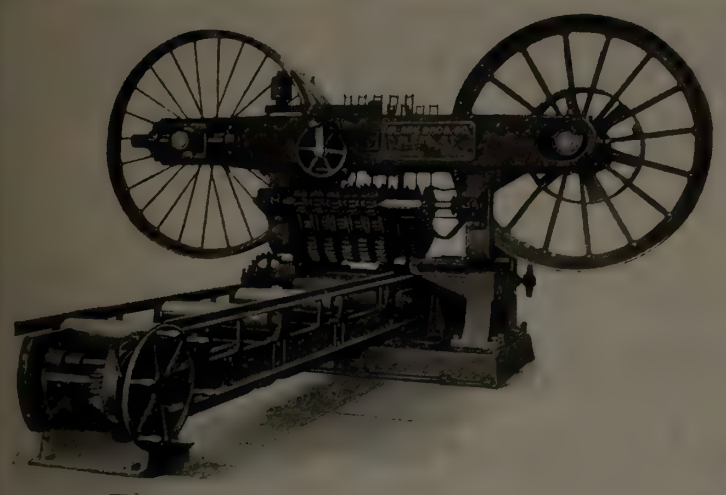
The Victoria Harbor Lumber Co., Ltd.

Manufacturers of

Lumber, Lath and Shingles

Mills at Victoria Harbor, Ont.

HEAD OFFICE.
12-14 Wellington Street East, TORONTO, ONT.



The Clark Horizontal Resaw

Made with tables 20 or 24 ft. long with quick, accurate set works for cutting any thickness of lumber from ½" to 4" by 1/32 nds.

Will saw slabs or half logs 18" thick 24' long at a feed of 200' per min. **AND MAKE GOOD LUMBER.**

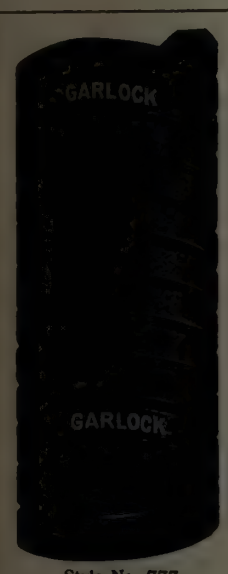
The two standard sizes have wheels 66" and 84" dia. and are made with either single or double table.

Write us for complete descriptive Catalog.

CLARK BROS. CO. - Olean, N.Y.

Garlock Packings

Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.



Style No. 777

Style No. 150

The Garlock Packing Co.

Hamilton, Ontario

Branches: Calgary, Montreal

Branches: Toronto, Winnipeg

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

Pink's Lumbering Tools

The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

Long Distance Phone, No. 87

Send for Catalogue and Price List.

Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants.

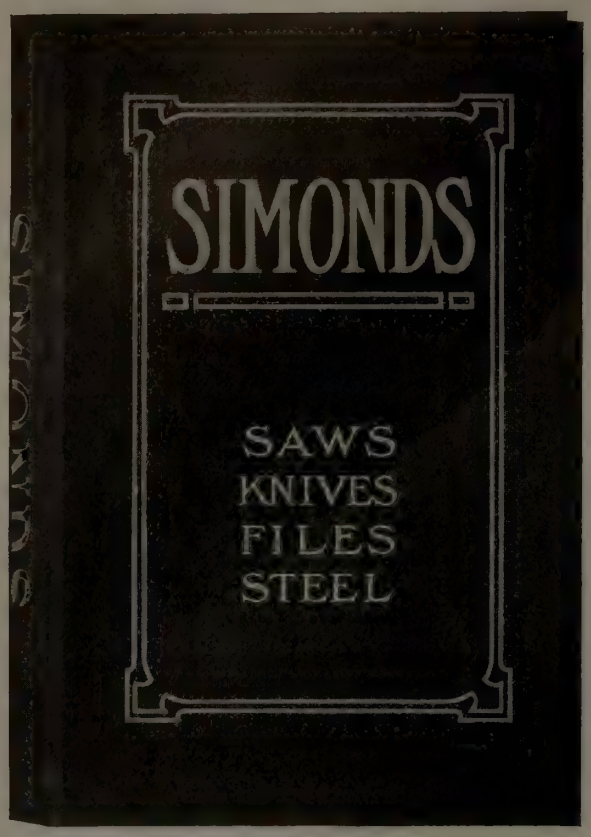
The Thomas Pink Company, Limited

Manufacturers of Lumber Tools

PEMBROKE - - - - - ONTARIO

MADE IN CANADA

It's a Pink anyway you take it, and it's the best Peavey made



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SIMONDS CANADA SAW CO.
LIMITED

St. Remi St. and Acorn Ave., MONTREAL, QUE.
55 Water Street ST. JOHN, N.B.

Provisions for the "Spring Drive"

WINTER has gone and lumbermen everywhere are now busy on the big drive. You'll need a fresh supply of provisions for the camp. We can supply you with just what you want at attractive prices. Let us quote you today on

Write us for prices today!

BARRELED PORK and BARRELED BEEF

If Urgent, Wire us at our expense!

Just the thing for the camp. Not only high class products but the cheapest foods you can buy. Other seasonable lines just now include

Long Clear Bacon — **Davies Pure Lard** — **"Peerless" Shortening** — **Fancy Pickles**

THE WILLIAM DAVIES COMPANY LIMITED

MONTREAL TORONTO WINNIPEG

Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

HUGH C. MACLEAN, LIMITED, Publishers

HUGH C. MacLEAN, Winnipeg, President.
THOS. S. YOUNG, Toronto, General Manager.

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TERMS OF SUBSCRIPTION

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Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster General for Canada, for transmission as second class matter.

Entered as second class matter July 18th, 1914, at the Postoffice at Buffalo, N. Y., under the Act of Congress of March 3, 1879.

Vol. 36 Toronto, July 1, 1916 No. 13

The Canadian Forestry Battalion

One of the most interesting features in connection with the formation of a forestry battalion in Canada recently, which went over to England to assist in cutting standing timber for use in connection with the war, and the further raising of two additional similar battalions, which is now in progress, is the fact that among Canadian lumbermen the matter was taken up with great enthusiasm from the very first and put through with wonderful expedition. There was not one single word uttered, so far as we have been able to ascertain, which would indicate anything in the nature of criticism, and there has been an entire absence of personal consideration and a unanimous co-operation to assist in raising these battalions, in spite of the fact that they have taken out of Canada a large number of skilled woodsmen, and have enabled the Imperial authorities to secure large supplies of timber in England which would otherwise be imported from Canada. The patriotic aspect of the situation is the only one that has been spoken of by Canadian lumbermen, and those who are engaged in the lumber business in Canada have reason to feel gratified with the splendid Imperial spirit which this situation has shown. It is indeed remarkable that there has not even been any discussion of the interference with the industry in Canada which the raising of these battalions has brought about, but only expressions of enthusiastic pride in the fact that the lumbering industry has been able to be of such definite and valuable assistance to the Empire.

For this reason we are glad to be able to publish, elsewhere in this issue, the remarks made by Mr. Acland (parliamentary secretary to the Board of Agriculture) in the British House of Commons recently, when referring to the work of the Timber Committee. Many kinds of labor had been employed, Mr. Acland reported, in connection with the cutting of home grown timber in Great Britain, "but of all these different sources, by far the most useful and valuable have been the Canadians. I cannot express to the Committee the energy which was shown by the Government of Canada, since the matter was put before them, and by the officers whom they appointed in raising a forestry battalion, which has come over here to work in our woods. The Government and the people of Canada are naturally interested in their own timber, but they realized that the position of the Empire as to freight was so serious that we could not now be expected to supply our needs from Canada if it were possible to supply them here at home. They have shown a true Imperial spirit in helping us to supply them in the most practical manner possible. The only difficulty will be to keep these men with big enough blocks of timber to cut."

This is a fine appreciation of the practical assistance given by the Canadian lumber industry, and should make the lumbermen of this country feel a glow of patriotic pride in having been able to take part in so practical a work. That the difficulty in finding enough timber to keep these men busy has been overcome, seems to be illustrated by the fact that two more battalions have been called for and are now in process of formation in Canada.

Can the Public be Taught to Use More Lumber?

It is interesting to compare the subjects that receive the largest amount of discussion at Lumber Association conventions in the United States and to see, not only how they are handled by the speakers, but how they indicate the direction in which the trade winds of the lumber business are blowing.

A few years ago, we heard more about co-operation among associations than anything else. These were the days when some of the largest associations in the United States were being investigated by the governments, both of the United States and some of the individual States, for the purpose of finding out whether their activities were strictly legal. The results of these investigations are well known. They led, in one memorable case, to an important association being found guilty of various infractions of the State law and being compelled to disorganize, while its individual members had to pay pretty substantial fines. The merits of this matter are not of much interest today. What we are interested in is that it was not long before the members of the same association worked out a far more efficient and valuable organization which has made them of even greater influence in the trade than they ever were before.

At one period, a few years ago, we had an example of association work going the limit, when the Lumber Trades Congress was conceived and brought into existence, which for one reason or another lived only for a few years. We had also a Wood Products Exposition which was held at Chicago and New York and drew widespread attention to the value of wood as a building material. All these events, though they may not appear at first to be intimately related, have been more or less connected with one another, and have been steps in the development of a more practical usefulness for lumber associations.

Another line of discussion, quite definitely related to all these matters, is that which has been devoted in ever increasing measure to what we have come to understand by the word "service." The changes have been rung upon this subject interminably, until some lumbermen must be sick and tired of it, but the general effect has been good. Many firms that were going along in their own quiet ways have been stirred up to a fuller appreciation of the importance of increasing and improving their businesses and at the same time being more useful to their customers.

Throughout all these discussions and developments there has been working out automatically, and to some extent even without the knowledge of those engaged, a gradual approach towards something astonishingly simple, once it has been brought to the attention of the trade, and yet something which has been altogether neglected during the past, namely; the great possibilities connected with advertising lumber to the consumer. In the first place the association movement seemed to spend most of its force in an effort to organize lumbermen in such a way as to limit production so that it would not run ahead of consumption. It was thought that this would surely result in good prices being secured for all the lumber produced and that everyone would then be prosperous who manufactured or sold

lumber. There was a flaw in this theory which was not perceived at first, but which soon became clearly evident, namely; that it neglected to consider the consumption end of the business at all. Keeping down production is, to a certain extent, a wise course, but when it is not coupled with some plan for keeping up consumption at the same time, there is likely to be trouble.

Lately, the consumption end of the problem has been getting a fair share of attention, and it has been discovered that keeping down production without paying any attention to consumption is almost a waste of time, for the substitute man is abroad in the land and is sitting up nights working out schemes for keeping down the consumption of lumber so that his own products may sell the more widely. So it happened for a time that the lumber organizations were limiting production and the substitute manufacturers were restricting the consumption of lumber, and between the two the business was in a worse state than ever before.

It was the logical result of the campaign for the restriction of output that someone should begin to think about keeping up the consumption and should first of all look into the possibilities of advertising. No sooner had this been looked into than its merits commenced to be recognized. We now believe that advertising lumber has come into existence in the United States for keeps. Unquestionably, a great interest is being taken in the matter by manufacturers and we hope to see the movement spread until the ordinary reader has become as thoroughly saturated with information about the merits of different lines of lumber as he has been with information about the merits of the different kinds of automobiles, talking machines, safety razors, clothing, and of cement, tile and other substitute building materials.

Here are a few of the bright things that have recently been said about this advertising situation, by the National Lumber Manufacturers' Association:—

The cement interests are spending $750,000 to make the lumber business trail the cement business. Do you want to be a trailer?

No other structural material is marketed with so little intelligence or with so little regard to the interests of the consumer as is wood. Who is to blame if he uses substitutes?

Many of the city building codes are unfair to wood. Did you ever think about this?

Is your sawmill of cement and steel or mill constructed with a sprinkler system? What kind of a house do you live in?

Oysters are trademarked; why not lumber?

The manual training schools are begging for information about wood and suitable material to work with. How long would they have to wait if they wanted a substitute material?

If the architects see eight times as much advertising for metal doors as for wooden doors, who has a wooden head?

The manufacturers of safety pins spend more money annually in advertising than the lumbermen do. Think of being below the creeping stage.

Within a very few years the public have been educated to buy "advertised goods." Are they buying yours as they can be taught to?

If you asked a clerk the price of a collar button and he told you $17 a gross, you would think he was crazy, wouldn't you? Well, how much is a thousand feet of lumber?

No Change in Hardwood Inspection

The refusal of the National Hardwood Lumber Association to change its inspection rules, as reported in the account of their annual meeting, elsewhere in this issue, is a matter of the greatest importance to the hardwood trade, both in Canada and the United States. We have refrained all along from commenting on the situation, either pro or con, and have been satisfied with printing the views of members of the Association, leaving it entirely to the Association to fight its own battle. Now that the battle is over and the majority of members of the Association have seen fit to leave the inspection as it was, we feel that we are more free to express our own views upon the subject.

The Canadian hardwood trade have been slow to adopt the rules of the National Hardwood Association and to make them universal throughout Canada, but it has now been pretty thoroughly demonstrated that these rules are the only workable ones available. The Canadian trade had in the end come largely to observe these rules, and had educated the consumers of lumber to doing business upon this basis. The result was that most of the troubles arising out of inspection had been eliminated. This was the state of affairs when the proposition came up to make a change in the rules. To Canadians it looked as if this change would tear away the foundation from under the hardwood trade and leave them in practically as disturbed a position as they were in before the rules began to be used in this country. In our opinion such a change would have given the hardwood trade in Canada a set back of one or two years. There would undoubtedly have been a great turmoil growing out of the changed rules, and it would have taken a long time for the disturbance to settle down.

Changes in the direction of improvement are adways a good thing, but we deem it a question whether the changes that were proposed would have been in the form of improvements. In the first place, they were the most radical changes that had ever been proposed in the National Hardwood Lumber Association. They would have done away with inspection from the poor side of the board and substituted for it inspection from the good side of the board, irrespective of what the other side of the board might show. As a simple matter of business honesty this does not seem to us to have been a proper principle. It appears to be practically on a par with the old-time practice of placing the best berries on the top of the box, a practice which has been so generally denounced that governments have legislated against it.

It must not be lost sight of that, although the National Hardwood Lumber Association is a body of dealers and manufacturers of lumber interested largely in the development of their own interests, they may also want certain things in connection with the handling of their business and may find it important to consider the rights of the trade to whom they are selling, who have to re-manufacture the lumber. It was stated by some of those in favor of the changes, at the convention, that it was the universal demand of the manufacturer for these changes that caused them to be drawn up and proposed, but it was pretty thoroughly proven during the debate upon the question at the convention that it is doubtful if there are very many consumers who wanted these changes.

The chief point of objection brought forward by those who opposed the change was that it is not possible to legislate value into lumber. The changes appeared to them to have this idea in view and to be an attempt to dictate to the consumer what class of stock he should buy. In taking such a stand the Association would have been undoing most of the good work it had performed in the past. It would have deprived itself of the important position it has secured as an arbitrator. There are three classes of people for whom the services of the Association as an arbitrator are valuable:—First, the man who makes the lumber and owns the stumpage; second, the wholesaler of lumber, who is just as necessary to the Association as anyone else, and third, the man who uses and consumes the stock. Any rules for the grading of lumber can only be successful when members of the Association are prepared to be fair minded and give a square deal to each of these component parts of the organization. It is impossible for any manufacturer to say, "I make this lumber, it is my own and I will sell it any way I see fit." It is equally impossible for the consumer to say, "I use this lumber and I will tell the manufacturer exactly what I will buy and what I will not buy." The work of the Association is primarily to bring these two opposed parties together in the most businesslike manner possible. This can only be done by the members of the Association working in unison under the rules which have now been in force for some time. This object has been obtained very successfully and we believe that if

the proposed changes had been put into effect, adding to the number of grades and introducing a great element of confusion in the inspection, it would have been impossible to work out anything like as effective a result as had been previously secured. When one considers that the chief purpose of the Association is to furnish inspection according to a set of standard rules he can scarcely conclude that the proposed changes would have been anything but fatal to the life of the Association itself.

In Canada we need hardwood grading rules perhaps more than the trade in the United States needs them. Manufacturers in Canada have unfortunately been very largely what is known as "price buyers," and for that reason they have required the protection of a standard set of inspection rules. Without such rules a "price buyer" stands a splendid chance of being trimmed in business. If he is educated on the line of good uniform grading rules there is far less likelihood of his suffering in this manner. We believe that the confusion which would result from the increased number of grades under the changes that were proposed would have encouraged that undesirable element of the trade which is here today and gone tomorrow, and is always seeking to take advantage of the uncertainties that may develop out of misunderstandsing about grades. In short, it is our conviction that the changes would have provided far too many opportunities for the man who likes to manipulate his grades, and we are glad to learn that the proposed changes have been defeated, and doubly glad because one of the most active opponents to the changes was a prominent member of the hardwood trade in Canada.

Association Work a Great Trade Benefit

The tendency on the part of retail lumbermen to take steps in the direction of protecting their trade from the competition of manufacturers or wholesalers who think they have a right to sell direct to the consumer is becoming more and more pronounced. Whether this is an indication that the necessity for such protection is greater now than it used to be is open to question. We prefer to think that it is an indication rather of the fact that the retailer is realizing more than formerly the importance of co-operative action, and is looking more closely into its effect and into the general question of trade ethics than he has been in the habit of doing in the past.

Every now and then one hears of the existence of a little association of retailers covering a well-defined locality in which the dealers are doing what they can to see that their trade is protected. The idea behind such a development is a reasonable and businesslike one, so far as we are able to understand it. It is simply an expression of the old truism, that in union there is strength, and is based upon the idea that one good turn deserves another, and vice-versa, one bad turn makes it necessary for the victim to take some radical step to avoid a second one of the same kind.

Take, for instance, the simplest form of co-operative protection by retailers, that of reporting firms of manufacturers and wholesalers who are selling to the consumer, so that in future the retailers may make it difficult for the invader to obtain trade in that district by refusing to buy from him. At first sight this looks to some suspicious persons like a combination in restraint of trade, but in reality it is a combination for mutual protection against a variety of business which most people have come to consider as a form of trade piracy. Reciprocity is really the keynote of successful business methods. Reciprocity in service is what we mean.

We have sometimes heard manufacturers and wholesalers who imagine that they have some grievance in connection with their trade, say that they intend to go direct to the retailer or the consumer and to show the wholesaler or the retailer that they are not dependent upon them for business. We have several times heard retailers talk about wholesalers delivering a car load of lumber to a large consumer in their territory and then claiming that because it was a large quantity they were quite justified in passing over the retailer. To the limit of our ability we have tried to discourage this sort of thing. So far as our own information goes it leads to only one thing, and that is definite loss of trade to the offender. The retailer who is a victim of this kind of competition is surely justified in joining with his fellow retailers to put a stop to it.

In its widest fields, the co-operative movement of trade associations to develop and protect the mutual interests of members has had a stony road to travel in the United States during recent years, but apparently a change has come over public sentiment and the pendulum is swinging now in the other direction, which recognizes that such co-operation is valuable, if it is confined within its legitimate channels. We mention the case of the United States so as to introduce a remarkable evidence of this change of public sentiment which is illustrated by the opinion expressed by Edward N. Hurley, vice-president of the Federal Trade Commission of the United States, which has been looking pretty thoroughly into trade conditions. In the strongest possible language Mr. Hurley commended trade organizations as being of great benefit, not only to the industries represented, but also to the people as a whole. "Conservatism," he says, "is the hand maiden of prosperity so far as our foreign trade is concerned. The owners of our vast natural resources are the trustees of the people. When they sell their products at ridiculously low prices—the lumber, the copper and the coal that come from Nature's store-house—they are violating their trust, for ruinous trade spells a waste that brings nothing in exchange." Although these remarks were inspired by a consideration of the foreign trade situation, they apply with equal force to domestic trade and the lesson they teach is exactly the lesson we have been trying to teach in our previous remarks, namely, that the best way to build up trade of any kind is to treat your customer honorably and not to pass him over when you see a chance of putting through a deal with his customer.

The statement made by Mr. Hurley is worthy of being prominently displayed in every merchant's office to act as a guide in the daily affairs of trade. We commend the statement particularly to those who sometimes have a feeling that they must pass over the retail lumber merchant and sell to the consumer direct. It is a poor rule that will not work both ways, and so far as we can learn, the party who initiates a selfish course of trade invariably suffers more than the one who is its innocent victim.

The amount of timber scaled as reported at the office of the B. C. timber inspector, Vancouver, B. C., during the month of May, exceeded all previous records. The exact quantity is not yet known, but will be at least 90,000,000 feet. All the logging camps of B. C. are now working at full speed and further records are expected this summer. According to present indications the demand will continue strong and loggers will give the mills all they can handle. The provincial forest revenue for the month of May amounted to $189,000, which is larger than for the same month of last year and 1914. Noticeable items were those indicating a large number of reinstatements of timber licenses previously allowed to go in arrears.

A Hint for Exporters of Canadian Timber

Our Colonial Timber Trade.—Our enterprising Colonial contemporary, The Canada Lumberman and Woodworker, has issued a very fine Annual Number, dated May 15th, which affords the reader an impressive idea of the magnitude and many-sided interests of the timber trade of the Dominion, as it includes the far-flung forest districts of Eastern Canada, the Maritime Provinces, and British Columbia. The articles in this issue deal with a remarkably wide range of subjects, all of which are of practical interest to the industry. We were pleased to peruse an ably written paper on "The European War and After: the position of the Lumber Trade Before, During, and Subsequent to the Great Conflict," by the well-known Quebec shipper, Mr. Edward Harper Wade. with whom many of our readers are personally acquainted. **Not the least interesting feature in this bulky issue are the 120 pages of business announcements, from which buyers of Canadian timber can glean much useful information.**—The Timber Trades Journal, London, Eng.

Hardwood Rules Remain Unchanged

Proposed Alterations Turned Down at Annual Convention —John M. Woods of Boston the New President

At the annual meeting of the National Hardwood Lumber Association, which was held in Chicago on June 15th and 16th, the most important subject under discussion was the report of the Inspection Rules Committee in regard to a number of additions and changes to the inspection rules. This matter had been under consideration for some time and the Inspection Rules Committee had finally prepared an exhaustive report, which we outlined in our issue of June 1st, the chief points of which were that a grade of selects should be taken out of the upper end of No. 1 common; that the grade of No. 1 common should be divided into "No. 1 common A" and "No. 1 common B"; and that the grade of No. 2 common should be divided into "No. 2 common A" and "No. 2 common B."

While the Inspection Rules Committee presented these proposed changes, its members were not unanimous in supporting them, and when the report was presented to the Association for discussion and action it developed that there was a minority report also to be presented, and that the members of the Association had already ranged themselves into two distinct camps, favoring respectively the majority and the minority report. One of the members of the Inspection Rules Committee, Mr. A. E. Clark, of Edward Clark & Son, Toronto, was an active supporter of the minority report and spoke forcibly in its favor. The chief point made in the minority report was a recommendation "that there shall be no change made in the rules."

The discussion upon the proposed changes occupied the greater part of the time of the annual meeting. Many committee meetings for discussing the matter were held on Thursday, and when it came before the general meeting on Friday there followed a debate which took practically the whole of the day. Finally the majority report was put to the vote. The interest was so keen that every member was polled after his credentials had been carefully examined, and the final tally was strongly opposed to the majority report and its proposed changes, the vote being 213 against and 141 for the changes. It would have required a two-thirds majority of the members voting to carry such a change, so that when it was supported only by an actual minority, the defeat was very definite.

The minority report was then presented, and its chief point, that there should be no changes, was carried after further debate. This means that the old rules will continue in force without any alterations. One or two additions, however, which were proposed by the minority report were agreed upon, making grades for Philippine mahogany and for plain sawed red gum (figured wood) and quarter sawed red gum (figured wood).

There was also a discussion in regard to the grading of cypress. The Association has formerly adopted the grading rules of the Southern Cypress Association. The 1914 rules of this Association were changed, however, and the National Hardwood Lumber Association, not being convinced about the advisability of following the 1916 cypress rules, decided to stick to those of 1914. A resolution to this effect was therefore passed.

In the election of officers a vote was necessary for the office of president, the nominees being John M. Woods, of Boston, and S. B. Anderson, of Memphis, Tenn. The vote resulted in the election of Mr. Woods by 139 to 105, which was subsequently made unanimous. The other officers elected were as follows:—J. V. Stimson, Huntingburg, Ind., first vice-president; F. L. Brown, Chicago, Ill., second vice-president, and C. A. Goodman, Marinette, Wis., third vice-president. The directors elected were as follows:—for three-year term: Geo. Breece, Charlestown, W.Va.; John R. Thistlethwaite, Washinton, La.; J. L. Retting, S. M. Nickey, T. M. Brown, Louisville, Ky.; E. V. Babcock, Pittsburg, Pa.; D. E. Chipps, Fort Worth, Texas; J. B. Wall, Buffalo, N.Y. For two-year term, Chas. F. Mitchell; for one-year term, F. T. Dooley, Memphis, Tenn.

President Wood was conducted to the chair by F. S. Underhill, and after being inducted into office delivered a neat speech in appreciation of the honor conferred on him, following which the meeting adjourned.

Canadian Shingle Exports to the United States

During the month of April 154,389,000 Canadian shingles were exported to the United States, bringing the total of Canadian shingle exports to that country up to 1,448,804,000 pieces for the first ten months of the United States Government's current fiscal year, as compared with 1,164,899,000 shingles for the same months of last year.

The value of the Canadian-made shingles shipped to United States markets for the month of April was $313,812, and the value of those shipped during the past ten months was $2,881,475.

For the calendar year of 1915 the Canadian shingle exports to the United States amounted to 1,775,130,000 pieces, having a valuation of $3,561,907. In 1914 Canada shipped 1,248,726,000 shingles into the United States at an invoiced value of $2,773,009. In 1913, under a 50-cent protective tariff for the first nine months, Canadian exports of shingles to the United States were 346,059,000 shingles; and in the last three months of that year, with the duty off, the total was 215,268,000 shingles, making the total for the year 1913 about 561,363,000 shingles. These had an invoiced valuation of $1,460,571.

During the year 1912, the last complete year in which there was a 50-cent protective duty, the United States Government reports show that 539,434,000 Canadian shingles were imported by the United States.

Increased Rates Proposed to Pacific Coast

The Transportation Department of the Canadian Manufacturers' Association have issued a circular, No. 110, under date of June 24th, calling attention to the fact that the Canadian railway companies gave notice at a meeting held in Toronto a week previous that they intended to make a number of additional changes in rates to the Pacific Coast. The Canadian Manufacturers' Association, in their circular, ask shippers, if they have any objections to the proposed changes to send them in at once, with reasons, as there is to be a meeting on July 6th at Montreal, to go into this question. Among the changes in rates which are included in the new list are the following:—

Commodity	Rates in Cts. per 100 lbs. Present	Proposed
Rail or Track Door, L.C.L	140	165
Peavies and Logging Tools, L.C.L.	190	Cancel
Hose, Metallic, and Metallic Tubing, L.C.L.	178	220
Iron or Steel Bar, Rod, Hoop or Band, L.C.L.	143	Cancel
Bolts, Lag Bolts or Screws, Butts, Nut Locks, Rivets or Screws, L.C.L.	145	Cancel
Castings (finished) Agricultural Implement, School Desk, Waggon, Carriage, Sink Bracket, etc., L.C.L.	175	Cancel
Castings, N.O.S., Sprocket Wheels, etc., L.C.L.	175	Cancel
Chain, N.O.S., including Link Belting, L.C.L.	143	Cancel
Paints and Varnish, L.C.L.	145	Cancel
Book Paper, News, Poster, Cover, etc., L.C.L.	165	Cancel
Wrapping Paper, L.C.L.	165	Cancel
Saws, N.O.S. and Hand Saws, L.C.L.	193	218
Sledges, Wedges and Mauls, L.C.L.	165	Cancel
Twine and Cordage, L.C.L.	175	Cancel

Separate Cheques on Certificates

Toronto Lumbermen Ask Architects to Insert Important Clause in Agreement with Contractors

A meeting of the Lumbermen's Section of the Toronto Board of Trade was held on June 23rd, at which the chief subject under discussion was a proposal to ask the architects of Toronto to insert a clause in their agreement with contractors, which will provide for a separate cheque being issued by the proprietor of a building under construction, payable to the lumber merchant as each progress certificate is due. This subject was brought before the Lumbermen's Section recently by Mr. A. R. Denison, a prominent Toronto architect, who expressed the belief that if the lumbermen would make a request of this nature, the architects would be likely to comply with it and have it put into effect.

The matter was fully discussed by a representative meeting of the Section, with the result that the following resolution, moved by Mr. A. E. Eckhardt and seconded by Mr. T. H. Hancock, was carried:

"That as architects and owners are deeply interested in the supplies furnished by lumbermen for building, and in order to avoid liens and other troubles, the Lumbermen's Section of the Toronto Board of Trade hereby submit, for the due consideration of the architects of Toronto, recommendations which we would like to have them insert in their contracts, as follows:—

"(1) That a clause be inserted in the contract made between the architect and the contractor, requiring the contractor to submit to the architect a summary of the material furnished by the lumber merchant to be used in the building.

"(2) That statements shall be rendered by the lumberman to the architect from time to time during the continuance of the work, showing what material has been furnished.

(3) That the proprietor shall be required to draw a separate cheque in favor of the lumber merchant as each certificate is due.

"(4) That the lumber merchant shall be subject to the drawback clause in the contract."

This resolution has been forwarded to the architects of the city through Mr. Denison, with the request that they endeavor to have the suggestion put into effect.

From the Canada Lumberman of Thirty-Five Years Ago

The Gatineau: We continue the description of the mills on the Gatineau River. The principal are the Gatineau Mills, belonging to Messrs. Gilmour & Company, situated at the village of Chelsea, about eight miles from the city of Ottawa and nine miles from the junction of the Gatineau with the Ottawa River. The scenery above and below the mills is exceedingly romantic and beautiful—four or five rapids and cascades, and sloping banks to the water's edge, covered with trees and foliage, render this portion of the river most picturesque and charming. The mills are situated on the south bank of the Gatineau, above the high falls, and are surrounded by a series of booms and works of great magnitude upon which immense sums have been expended. The whole of the saw logs which descend the Gatineau are caught in these booms, and a very faint idea can be conveyed to a stranger of the immense amount of skill required to separate those belonging to the Gatineau mills from those belonging to different manufacturers below.

During the summer this point of the river presents a scene of bustle and animation of the most extraordinary kind, and as the firm employs literally an army of workmen, the scene can better be imagined than described.

Below the booms, the worst point of the river has to be encountered by the logs descending the stream, and it is frequently enlivened by the appearance of perfect islands of stranded timber, technically called jams, and the efforts of the owners to set them afloat exhibit scenes of daring and endurance seldom witnessed elsewhere.

The mills were commenced about forty years ago. They now consist of two large, substantial buildings, and a smaller mill for preparing lumber for the United States market. The water power used is equal to about five hundred horse power. There are 13 saw gates containing about 220 saws; and twenty edging, buttoning, and re-sawing circular saws. These mills will manufacture 230,000 feet, board measure, in eleven hours, or about 35 million feet per season. About two-thirds of this lumber is cut for the Quebec market, and the balance for the United States. Attached to the mills there are about three miles of wooden canal for conveying the sawn lumber to the piling grounds. Messrs. Gilmour & Company possess timber limits to the extent of 1,700 square miles, whence they obtain the requisite number of saw-logs to supply these extensive works, and 1,000 men receive employment from them during winter and 500 in summer, including lumbermen, farmers, surveyors, etc. They also employ 250 spans of horses; and during each season they consume 40,000 bushels of oats, 600 tons of hay, 1,500 barrels of pork, and 3,000 barrels of flour, besides large quantities of clothing, boots, shoes, etc., tobacco, blankets, etc. These mills are amongst the most celebrated in the country, not only for the romantic beauty of the surrounding scenery, but for the perfection of the machinery employed and the order and good management exhibited throughout them.

On their limits this firm has nine farms, comprising in all about 1,500 acres. The whole of the produce of these farms is consumed by the employees of the firm. On the banks of the River Gatineau they have four principal depots from which supplies are sent to lumbermen at work in the woods. One of these is distant upwards of 200 miles from Ottawa. This firm pays from $275,000 to $300,000 in wages annually.

O. P. M. Goss comes to Canada

O. P. M. Goss, consulting engineer of the West Coast Lumbermen's Association and the Association of Creosoting Companies of the Pacific Coast, is temporarily working in British Columbia, in conjunction with the Forestry Department of British Columbia and the Dominion of Canada, in acquainting city engineers in Western Canada with the possibilities of creosoted Douglas fir for street paving and other municipal purposes. Mr. Goss may work as far east as Winnipeg, and the length of his services in Canada is indefinite. Mr. Goss' work in the United States has attracted the favorable attention of lumbermen in British Columbia, so much so that they made a successful effort to obtain his services for a time at least. The Government of British Columbia is making every possible effort to aid the lumber industry in market extension work. Wood block street paving is not only the most nearly perfect of all pavings in point of durability, dustlessness, sanitation, and low tractive resistance, but each square yard of such paving means a demand for sixty board feet of lumber. Canadian cities are especially adapted to wood block paving.

Major Frank Carew, Lindsay, Ont.

Major Frank Carew, Lindsay, Ont.

The accompanying portrait of Major Frank Carew, Lindsay, Ont., will be recognized by a great many of the lumbermen of Ontario, to whom Major Carew is well known as secretary-treasurer of the John Carew Lumber Co., Ltd., manufacturers of lumber, with mills at Lindsay and extensive timber limits.

Major Frank Carew, who is a son of John Carew, M.P.P. for Lindsay, joined the 80th Battalion, C. E. F., in September, 1915. With this battalion he filled the position of Paymaster with the rank of Captain. Subsequently he was transferred to the 109th Battalion, C. E. F., in which he also occupied the position of Paymaster. He was promoted a little later on to the rank of Major and is at present in camp at Barrifield, Ont.

Major Frank Carew is a splendid example of the best type of Canadian citizen, being a successful business man, splendidly set up physically and keen to assume his obligations both as a business man and a patriotic Canadian. His promotion to the rank of Major, when still a very young man, comparatively speaking, is a recognition of the thoroughness with which he applies himself to everything he undertakes. He is one of the youngest majors in the Canadian forces.

As secretary-treasurer of the John Carew Lumber Co., Ltd., Major Carew has had considerable experience in the lumber business and especially in the handling of employees, a fact which has fitted him in special manner for his duties as an officer in the Canadian forces.

Canada's Wood Exports Increasing

Canada's exports of forest products during the twelve months ending March were as follows:—1916, $51,271,400; 1915, $42,650,683; 1914, $42,792,137; 1913, $43,155,060.

Exports of wood and manufactures of wood during the twelve months ending March were as follows:—

	1915	Total	1916 To United Kingdom	To United States
Logs	$1,258,933	$1,078,999	$ 47,454	$1,031,205
Lumber—Deals, pine	1,148,738	1,249,595	1,170,784	48,441
Spruce and other	6,393,420	9,677,355	8,826,107	263,483
Laths, palings and pickets	1,912,341	2,485,345	11,268	2,460,474
Planks and boards	18,921,445	23,880,341	2,188,164	20,132,928
Shingles	2,987,764	3,644,159	.....	3,619,409
Timber, square	532,955	478,409	463,019	15,390
Wood blocks for pulp	6,817,311	5,743,847	.....	5,743,847
Wood-pulp	9,266,161	10,376,548	336,041	9,372,769
Total	$52,669,591	$62,700,840	$15,134,358	$44,128,021

The imports of wood and manufactures of wood into Canada for the twelve months ending March, 1916, were valued at $8,652,172. During the twelve months ending March, 1915, the value of imports under this heading was $14,505,163. The imports for the twelve months ending March, 1916, were nearly all from the United States, the total from that country being $8,214,991.

An Inspiration to Readers

Editor Canada Lumberman:— Vancouver, B. C.

The splendid arrangement of your extraordinary Annual Number, in which you have compiled information from all parts of the Dominion, and from other countries, thus giving your readers in concrete shape much material of rare value, gives it a just claim upon them for recognition.

While the wonderful amount of thought and energy required to produce such a creditable collection of information, and the task of securing and arranging such a splendid display of advertising are best known to yourself, yet your readers cannot fail to appreciate the value of such an effort in their behalf, even to the extent of a strong feeling of pride and satisfaction at being represented by so live and enterprising a journal. Even though the true value of such work is often under-estimated by busy readers, yet the salient features of this special issue will be an inspiration to its readers.

Yours truly,

E. H. Newton.

Retailers' Reports on Trade Situation

Improvement Noticeable in Several Localities—Quiet Continuing Elsewhere—Below Normal in all Quarters

Hamilton Trade About Steady

Editor Canada Lumberman:— Hamilton, Ont., June 15.

The demand for building material in Hamilton is not very brisk, and while there is a shortage of popular priced houses for renting purposes, nobody seems anxious to supply the demand. There is considerable building of a speculative nature in the east end, caused probably by the demand for homes for men who are employed in the east end munition plants, where a large number of men have been making good wages for over a year.

Comparing the present season with that of a year ago, it appears to us that the demand is about the same. For two or three years before the war broke out business was good. Prices were good also, and steady. Last summer and fall the volume of business declined and prices were cut. During the spring of this year there was some improvement.

The labor market has been the chief disturbing factor. Men were hard to get and the wages asked have been higher than seem to be warranted by the conditions governing our business. Many men have left positions which they have filled for years in large shops and plants at good wages, in order to take positions in munition plants, where fancy wages are being paid which ordinary business conditions will not warrant.

The financial condition of the farmers in this district is good, but large purchases have not been made by them this season, partly perhaps because of the crop outlook, which is not at all favorable, on account of the wet weather.

The demand for lumber for manufacturing purposes has been steady. Some manufacturers are still increasing the size of their plants, although not to such an extent as in previous years.

Yours truly,
D. Aitchison & Company.

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Farm Trade Reduced by Bad Weather

Editor Canada Lumberman:— Paris Station, Ont., June 15.

Trade conditions in most lines, and especially in all building materials and builders' supplies, do not compare favorably with those of a year ago. The building trade is very light, particularly in regard to new buildings in the towns. We were hoping for a fair trade with the farmers, but weather conditions have put a damper upon prospective trade of this kind. The outlook was very favorable at the close of last season, and even up to the beginning of the spring of 1916, as the farmers had had good crops and had realized good prices on almost all their lines. Weather conditions, however, have been extremely unfavorable since the beginning of spring. The continuous rain has held back seeding and germination, especially on the heavier land, and farmers are not showing the inclination to purchase that we were expecting before the commencement of spring.

Those farmers who own their farms are in first class financial condition, but it may be a serious matter for beginners who are working rented farms. Farmers who have live stock for sale are realizing high prices and are generally in good financial shape.

Yours truly,
Geo. E. Taylor.

* * *

Everything Depending on the Farmer

Editor Canada Lumberman:— Brunner, Ont., June 15.

Business with us was about on its usual basis until the middle of April, or a little later, when the farmers commenced seeding. Since then it has not been so good. On account of the great amount of wet weather, the farmers are not yet through with their seeding. This is a flat country, with heavy land, taking a long time to dry out, and therefore seeding has been greatly delayed. A number of farmers have dropped their building operations for the season, and the lumber trade, therefore, will not be so brisk as it was last year. Otherwise the farmers are doing well, as they are getting good prices for their products.

As near as we can judge, business will only be about half as large in volume as it was last year, in the lumber line, unless the weather improves very soon. No corn, roots or potatoes have yet been planted, and not all the small grain. The grass is doing well and fall wheat is fair. Everything in our district depends upon the prosperity of the farmers.

Yours truly,
C. G. Erb.

* * *

Decided Improvement at Hamilton

Editor Canada Lumberman:— Hamilton, Ont., June 16.

At present, conditions show a decided improvement over last fall, but the demand is not for standard lines. House building, with the exception of some of the better class, is very quiet, but additions and alterations to factories are a prominent feature.

The labor situation is in a very unsatisfactory condition and both skilled and unskilled help are scarce, and in the majority of cases very unsatisfactory. If the demand returns to normal it would tax the mills and lumber yards to meet it.

Strange to say, idle houses are few and far between, a condition that was not anticipated owing to the heavy toll enlistments have made in the population.

Yours truly,
The Patterson-Tilley Company.

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Promising Outlook at Stouffville

Editor Canada Lumberman:— Stouffville, Ont., June 15.

Our trade has been very good since March, but there was nothing going on during the winter. Although wholesale prices are somewhat higher than they were a year ago, we are making a better profit out of our sales now than we were at that time. The farmers around here have about 75 per cent. of their seeding done, and the outlook is for a fine season's business. On account of the farmers receiving a high price for practically everything they sell, ready money is rather easier to get than it was a couple of years ago. The farmers around here have been keeping what they made during the last two years or more, instead of plunging into western real estate, which had become quite popular around here. Our trade usually is about 75 per cent. country trade, but during the last season it was practically half and half.

Yours truly,
D. M. Heise.

* * *

Quiet Trade at St. Thomas

Editor Canada Lumberman:— St. Thomas, Ont., June 22.

January, February and March were very quiet in the lumber trade here, much more so than last year, and about 50 per cent. less than normal. April, May and June will be about the same as last year, but not nearly normal. The 1915 and 1916 business will be about 40 per cent. less than 1913 and 1914.

Lumber has advanced somewhat in price this year, especially hemlock and spruce. White pine is at about the same price as for the last three years. All hardware has advanced materially, especially screws and nails. Glass has taken a jump of about 35 per cent.

The labor situation would be very serious if business were normal, and at the present time it is almost impossible to get a man. There is not a man idle who wants to work.

Yours truly,
The Green Lumber Company, Limited.

* * *

Sixty or Seventy Per Cent. Normal

Editor Canada Lumberman:— Burlington, Ont., June 15.

Our retail lumber trade at the present time consists chiefly of business received from farmers and fruit growers, with a fair percentage of suburban home building. This class of trade is about normal and equal to other years, but there is practically no speculative building going on here.

Prices and collections are very good, as would naturally be expected with this class of business. Generally speaking, we do not believe that our retail business is more than sixty or seventy per cent. of normal, and it is principally made up of small cash business.

Yours very truly,
Nicholson Lumber Company, Limited.

* * *

Brantford Trade Active

Editor Canada Lumberman:— Brantford, Ont., June 15.

We are pleased to advise you that while the local building trade is seriously affected by the war, there are, nevertheless, a large number of contracts for factories and important improvements being let. The large number of war contracts that many firms have secured and the shortage of laborers, owing to the heavy recruiting in this locality, have made it possible for practically any person to secure a position. The trade, compared with that of a year ago, is much better; in fact we find it difficult to secure enough men to enable us to fill the various orders we have received. The local demand from manufacturers who have secured war contracts is benefiting us considerably.

Yours truly,
The Schultz Bros. Company.

* * *

Quiet Trade at Berlin

Editor Canada Lumberman:— Berlin, Ont., June 19.

The trade in our immediate district is not very brisk, in fact it is poor compared with conditions before the war.

The town trade is very slack, but the farmers seem to be doing consider-

ably more building and repairing than in other years, which makes it appear that the farmers are in better standing financially. The furniture trade in this district has apparently picked up considerably, but in our line it is very slack.

Yours respectfully,
H. J. Hall & Son.

* * *

Conflicting Conditions at Brantford

Editor Canada Lumberman:— Brantford, Ont., June 17.

Our business is now largely connected with the steel trade and not with the lumber interests. Incidental to our other business we manufacture wood tanks. Our output for this year is practically sold.

Many conflicting conditions exist on account of the very high price of steel products and the scarcity of labor, and it is next to impossible to sell the products we produce at a comparative advance in price to meet the conditions of excessive cost of both labor and material at this time.

Yours truly,
Goold, Shapley & Muir Company, Ltd.

* * *

Marked Improvement But Still Below Normal

Editor Canada Lumberman:— Hamilton, Ont., June 14.

We find a marked improvement in business compared with that of a year ago, but the volume is still much below normal.

Yours truly,
Wise Lumber Company.

In the Public Eye

A budget of comment presented in the interest of public welfare, independent of party politics and with malice toward no one.

The Ross Rifle Again

Startling indeed in view of the attitude adopted by the official and unofficial apologists of the Ross rifle is the news contained in the London letter to the Toronto Telegram. Briefly, the correspondence is to the effect that following complaints from all branches of the service, Gen. Alderson, in command of the Canadians, formally protested to the Canadian Government against arming the men with the Ross rifle, which has proved, according to the soldiers, a failure and a pathetic failure at Ypres and was later to be followed by a similar failure at St. Eloi.

General Alderson's protest was received and answered in a style that unfortunately for the good name of the Dominion is becoming to be regarded as characteristic of the administration of the militia department. He was told to mind his own business and the Canadian soldiers were told to take what the militia department considered good for them and were warned that any further objections to the use of the Ross rifle would not be tolerated. The printed circular containing this warning was apparently an artfully contrived defence of the rifle and an obvious attempt was made therein to blame the faults of the arm on the quality of the ammunition used by the troops.

The main point and the point that will appeal to most people who have little or no knowledge of what constitutes a good military rifle or makes a bad one, is that the men who are using the weapons should be the best judges of its fitness for the work they have to do. When a man's life depends upon the quality of the weapon which is his sole individual defence, he is apt to be curious about it, he is likely to watch its effect and eager to learn all about its dependability, or otherwise, in a crisis. In the case of the Ross rifle there seems to be little doubt that it was unsuitable in the opinion of the vast majority of the men armed with it. That in itself should have been sufficient to cause an investigation of the most careful and painstaking kind. Instead, we are compelled to hear that the protests of the men expressed through their officers and divisional commanders, were received with disdain, and that eventually the Canadians were collectively reprimanded for their attitude and warned that no further nonsense would be tolerated. This to men who were willing and ready to face death for the Empire, and who, it seems to us, should have been given every consideration and whose opinions should have been respectfully listened to and met, if possible. Putting aside all consideration of the technical faults or merits of the rifle, it would seem that it would have been a wise policy to have made a more tactful reply and to have demonstrated to the troops that they were not being sacrificed for political reasons or for any other reason. If the morale of the troops depended on a change of rifle, it should certainly have been effected, and at once. This aspect of the matter would seem to be the common sense view of the dispute.—Ottawa Citizen (Independent Conservative.)

Market for Doors in India

A report upon the market for doors in India has been received by the Department of Trade and Commerce, Ottawa, from Mr. H. R. MacMillan, Special Trade Commissioner, and published in the Weekly Bulletin. The report says:—

Nearly all doors in India are solid teak. The usual pattern is a double opening French door, each section of the door with three solid panels flush on one side, raised on the other, the double door being 3 feet 6 inches by 6 feet 6 inches. The retail prices at which these doors sell in Calcutta are:—

Thickness Frame	Panels	Price per Square Foot
1 in.	½ in.	32 cents
1½ in.	¾ in.	38 cents
1¾ in.	1 in.	44 cents

The accompanying illustrations show the type of door, both full panels and half panel half glass. Imported doors have not been used for the reason that it has been believed that no imported wood would withstand the climate or the white ants. Sample solid panel Douglas fir doors which have been in use in Delhi three years have not been touched by white ants and have in no way been affected by the climate, though the fluctuations in Delhi range from a very dry shade temperature of 112 degs. F. in the hot weather to a temperature of 95 degs. F. in the rains with an accompanying humidity of over 90 per cent., conditions as severe as any wood is likely to meet in use.

Doors are not commonly carried in stock in India except by

large hardware, machinery and general furnishing companies in three or four of the principal cities. The market, which is limited to government and other public buildings and the requirements of the comparatively small European and wealthy native community, is supplied with doors made to special order. Douglas fir doors are equal to the teak doors in appearance and superior in manufacture to the ordinary Indian-made door; they can be put on the Indian market, if shipped with lumber cargoes, much below the price for teak doors. The market, while small, should amount of several thousand doors yearly. Canadian exporters when making shipments of lumber should arrange with their representatives in India to introduce fir doors. The names of the three most important dealers in doors may be obtained from the Canadian Intelligence Branch of the Department of Trade and Commerce.

Mr. W. P. Kearney, manager of the Dominion Chain Company, Montreal, has been on a business visit to Newfoundland and the Martime Provinces.

Can Any Lumberman Furnish this Information?

Editor Canada Lumberman:— Moyertown, Alta.

I am informed that there is in use in some of the lumber and supply camps in the east, a single rail track built on ties without the roadbed being graded. The cars in use run on two wheels tandem and the power used is one horse, which travels beside the car and is hitched to an arrangement similar to a pack-saddle, thus helping to balance the load on the car. Can you give me any information regarding this, with cost of the equipment, cost of installation and maintenance? We are farming twenty miles from the railroad and one of the big difficulties is the transportation problem.

Yours truly,
E. H. Benner, Jr.

Advertising—An Aid to Retail Dealers

The Merchant's Duty to His Community Involves Active Business Campaigning—The Uplift of Good Advertising

By J. B. Powell

Two years ago an article entitled "How Advertising Affected the Construction of My Bungalow," appeared in one of the leading magazines of the business press. The article started out in this way:

"About five months ago I employed an architect to prepare plans for a residence for myself and wife. Today the house is completed and ready for occupancy.

"About four days after I gave the architect his commission I received a bulky package of literature on heating systems. Since that time I have received in all exactly one hundred and fifteen pieces of literature pertaining to house building.

"I am open minded to all forms of advertising, likewise my wife, so we both determined to see exactly to what extent advertising entered into the construction of our home. Yes, we had just been married, so it had to be a bungalow, of course.

"Therefore, the ads of bungalows stuck out from the magazine pages like doorknobs, but this is too early on doorknobs, for that comes a little later in the story."

The article told all about the selection of hardware, lighting fixtures, and so on, and then it came to the subject of lumber.

"Now about lumber, and in this connection I had almost forgotten something. Before our contract was let we were solicited by various retail lumber firms who wanted to look over our plans. Here we were initiated into some of the secrets of the trade! One lumber company said, 'Don't let that contractor Smith have the job, for he owns an interest in the Jones lumber yard, and everybody knows how punk they are,' and so on down the line. Before we let our contract we inquired into the contractor's lumber-yard affiliations and found he had none, so we obtained our lumber from a thoroughly reliable company. And thanks to our architect we got some of that 'Cypress, the Wood Eternal,' that we had seen advertised so much in our magazines and newspapers, and that we desired so much. And we got an excellent line of pine and oak for inside finishing and trimming. It's a pity such fine material should be nameless."

The writer of this article is quite well acquainted with the person quoted above, so it also should be stated here that the bungalow referred to was constructed of hollow tile and stucco. The Cypress for exposed places and the pine and oak for interior finishing was all the lumber that went into this house—thanks to the advertising of the manufacturers of other kinds of building material—lumber substitutes.

A few years ago we used to read articles telling about the rapidity with which our forests were being consumed and that the time was not far distant when there would be no more lumber. Now, if something is not done to increase the consumption of lumber, we may be reading articles wondering what we will do with our great unused forests. The only thing that will sell lumber, as well as shoes, or breakfast food, is advertising—and certainly the retailer has an interest in this subject. I will not vouch for the accuracy of the statement, but an officer of the National Lumber Manufacturers' Association told me recently that the manufacturers of safety pins spend more money annually in advertising than the entire lumber industry. To use his words and make a poor joke at the same time, he said that "Lumber advertising is below the creeping stage."

In a speech before one of the meetings of the Associated Advertising Clubs of the World, a member of the firm of one of the large department stores recently said that a store that did not advertise at all, or a store that did not advertise properly was simply lacking in its plain duty to its public. An officer of the Agricultural Implement Dealers' Association of Missouri, who is himself a successful small town dealer, recently made the same statement. He said:

"The merchant who by reason of inferior service in salesmanship; insufficient advertising; or poor business methods is not equipped to fulfil to the utmost his proper place in the community, to that extent is, himself, a factor in the community's downfall. The merchant's duty to increase his sales, or his business, should not come from robbing his weaker brother in business, but should come from an effort along with him to make the community in which he lives more productive and thereby to raise the purchasing power of that community."

If advertising is a definite part of the service that a store should render, certainly the lumber dealer occupies an excellent position for the greatest service. The progress of man can be marked in the character of his dwelling and its appointments. The word "home" has always had a sacred meaning. Statistics compiled in large cities show that most immorality and unhappiness result from congested conditions that make "homes" impossible. The census shows an alarming tendency for people to congregate in the cities, the most promising young men and women of the rural sections going to the cities. Investigation showed that one of the main causes for the exodus was poor living conditions on farms. Now there isn't a college of agriculture that does not have its classes in Rural Economics, Rural Sociology, and other courses all aimed to correct conditions in rural sections.

This has an interest for the lumber dealer, for he can make himself a potent force for better conditions in rural communities. And better conditions in rural communities mean modern homes, barns and silos, and better roads.

Advertising can be made one of the greatest forces in this campaign for community betterment. Advertising has been called one

ONE OUT OF THREE DIES

CAN YOUR BUSINESS STAND THIS LOSS?

Mr. Farmer, your hog market day has two drawbacks. It doesn't come often enough, and it doesn't bring you enough when it does come.

You can change this condition.

Will You Do It?

The most successful hog raisers in Bates county tell us that if a sow is not properly housed at farrowing time she will lose on an average of one pig out of every three that is born.

One farmer told us that he had 6 pigs out of a litter of 8 chilled to death for lack of proper shelter on his farm last week. He said in 4 months these 6 pigs that died could have been sold for enough to have built FOUR individual hog houses for four sows.

The manufacturer that makes the implements you farm with must have a house to make them in. Likewise, if you make a success manufacturing pork you must have a house to save your pigs in.

An individual Hog House, 6 feet square, made of good, tight Ship-Lap, will only cost you $3.75, the price of one pig, and it will be the means of saving three or four out of every litter.

Don't wait like the farmer did last week, and lose SIX nice healthy pigs, but build you a HOG HOUSE this week, and make a profit on every sow you own.

ARE YOU GOING TO LOSE?
INVEST $3.75 AND WIN

Logan-Moore Lumber Co.

Phone 18 Butler, Missouri.

This advertisement measures two newspaper columns by eight inches in depth. It was inserted in a local weekly newspaper by a lumber dealer three times with the wording changed each time. A circular containing much the same information was also mailed out to farmers. The ad. and the circular brought in $40.5 in new business. The hog-houses advertised had been built of rough lumber by carpenters in the dull season.

LUMBER IS THE BIGGEST THING
We Handle and Think About

It is therefore natural that we should have more knowledge of the use and protection of lumber than those who see very little of it.

A can of our pure paint mixed ready for use and one of our brushes, which have the bristles set in rubber, will do more to protect and beautify the woodwork on your house and about the premises than many times the same amount of money spent in any other way.

Tell us just what you want to paint or varnish and let us select the kinds that will do you the most good for the least spent.

NORTHWEST ARKANSAS LUMBER CO.
Phone 9 On Dickson Street

Flies are disease carriers.
Live and breed in all kinds of filth.
Infect food and drink by germs laden feet.
Each female fly can lay 150 eggs.
Screens should be used to keep them out.

THE HEALTH OF YOUR FAMILY
Is the Most Important Thing in the World to You

Fly and mosquito screens are a necessity. There is no further question as to whether or not these pesky little insects carry disease.

The right kind of screens can be made to beautify your home as well as protect the health of your family.

Whether it be a front door, a window or a sleeping porch, we have the goods right here to screen it.

Shall we send a man up to measure your work and give you an estimate? The work can all be finished to match your other woodwork.

Phone 9 **Northwest Arkansas Lumber Co.** On Dickson Street

These advertisements show how it is possible to attract attention to the individual advertisements by the use of simple pictures, plain type faces and simple borders. Manufacturers are always willing to supply the necessary electros.

of the greatest modern forces in the evolution of the race, for it makes persons want better things, and in order to obtain the better things, persons must work harder to obtain them. And therein lies advancement!

In connection with this article are shown two classes of advertisements; one illustrates advertising copy that the merchant can use to advantage in his "community betterment" work. The other advertisements are simple merchandising advertisements that show how it is possible to obtain best results from simple electroplate cuts that the manufacturers supply. One thing to bear in mind in advertising is, that before an ad is read it must attract attention. To attract the right kind of attention is to sell goods—or better yet—to sell lumber.

Improper Piling of Lumber Causes Great Waste

A valuable report upon the proper piling of lumber has been issued by the United States Government, which shows that improper piling of lumber both at the mills and in the retail yards results in needless waste of large quantities of valuable material that might be saved, and that lumber manufacturers and retailers could, by a very little exertion, not only eliminate the causes that lead to decay, and therefore save lumber, but furnish material in brighter and better condition than they sometimes do, is the gist of a report on the question of handling lumber just issued by the government. This report follows:

One of the most important problems confronting the lumberman is the storage and marketing of his product in as sanitary a manner as possible, both to prevent direct loss to himself through deterioration of his wares, and to protect the consumer against many avoidable outbreaks of rot after the timber is incorporated into buildings.

The investigations of this department during the past two years have revealed many deplorable conditions in the storage of timber and, coincident with these, have disclosed many serious outbreaks of rot in important structures. While many of these cases of rot in buildings may be due to faulty construction, particularly in insufficient seasoning of the timber before use and to the failure to provide for sufficient ventilation in basements, the fact remains that infected timbers placed in buildings are far more likely to cause trouble than sound ones.

Decay is due to the growth of wood-destroying fungi through the timber. These fungi consist of fine cotton-like threads which penetrate the wood cells and by the secretion of ferments dissolve many of the constituents of the wood. For their most active growth the timber must be moist and the temperature favorable. The true dry rot fungus (Merulius lachrymans), the most destructive fungus in buildings, grows best at seventy-two to seventy-five degrees Fahrenheit, but there are many others which thrive best at seventy-eight to eighty degrees.

Poor ventilation favors rot by not allowing the timber to come to an air-dry condition quickly enough to prevent the development of the fungi.

The spread of wood-destroying fungi may occur in two ways:

1. By the continuation of growth from an infected stick to a sound one in contact with it.

2. By the production of spores (bodies comparable in every way to ordinary seeds, but much smaller) which are blown about by air currents and, lodging on moist, sound timber of a kind susceptible to decay, germinate and start a new infection.

Many lumber yards are very lax in keeping the premises free from rotting debris which serves as a breeding ground for serious fungi, and hence a constant source of infection for sound timber. Other dangerous sources of decay are:—

1. The rather common practise, particularly at saw mills in the coastal regions, of piling timber over swampy land, subject to flood or tides, or so constantly wet as to make it very difficult or impossible to keep down the rank growth of weeds and grasses which cut off the air circulation and prevent the proper drying of the lumber.

2. Piling sticks which are thrown promiscuously about, or even piled directly on the ground, and allowed to become infected. Very few yards pay any attention to this important feature of sanitation. The almost universal practice is to throw them on the ground whenever stacks are torn down, leaving them there until needed for new piles.

3. Pile foundations of timber which in the course of a few years become diseased and produce many fungous fruit-bodies which release millions of fresh, vigorous germs in the form of spores. Many foundations do not permit of proper ventilation beneath the piles, a condition which often encourages severe decay in the base of the stacks by the gradual progress of fungi upward from the ground or debris over which the lumber is piled.

4. Improper methods of stacking lumber, which do not provide for sufficiently rapid drying.

5. Poorly constructed storage sheds, particularly with reference to insufficient ventilation beneath. A considerable number of such sheds have been investigated where very widespread and destructive outbreaks of some of the most virulent fungi with which the builder has to contend occurred.

6. Tramways and tracks about the yards which become severely infected with decay and permit the development of an abundance of fungous fruit-bodies and spores. This is of particular importance in the case of elevated tramways from which the spores can be distributed for long distances.

To sum up, then, the sources of decay lie in allowing rotting debris to accumulate, in allowing pile foundations, tramway timbers, track ties and supports under lumber storage sheds to become infected, thus passing the decay on directly to timbers which lie in contact, or indirectly to more distant timbers through the agency of spores.

Since decay is due to the presence of wood-rotting fungi the obvious first principle is to render conditions about the lumber yard unsuitable for the growth of the organisms. This can be accomplished by attention to the following details:

1. Location of Yards—Wherever possible storage yards should be on high and dry land, on mineral soil rather than filled-in debris. This will greatly simplify the weed control problem and insure proper ventilation around the base of the lumber stacks. Occasional wetting and silting of lumber by floods, tides and storm waves will almost invariably cause rot.

In all cases, weeds should be kept under control. This is frequently done by pasturing or mowing. Chemical sprays offer possibilities in this connection also. A concentrated solution of common

salt, (125 pounds per fifty-two-gallon barrel) is effective against a considerable number of weeds if applied to the younger plants twice during the year at the rate of one barrel per acre.

A 2½ per cent. solution of sulphuric acid would be much better, but requires considerable care in handling and must be used in glass containers or other kinds of material which has been enameled or coated with paraffin.

2. Cleaning-up of Yards –The most careful attention should be given to this phase of the question. The writer has seen yards where hundreds of thousands of feet of lumber have rotted in storage and either been left in the original piles, often with new lumber piled on top, or else scattered about the yard or its immediate vicinity until completely decayed. Such material should be thoroughly collected and burned.

3. Greater care in handling piling sticks and stacking lumber.—A piling stick infected with an actively growing wood destroying fungus can spread infection to any part of the pile of green lumber where it may happen to be placed, so the necessity for carefully guarding these strips and keeping them from contact with the ground is obvious. They should preferably be cut from heartwood of very durable timber, such as resinous pine, red gum, white oak or similar woods, and dried before use.

Many lumbermen prefer to use the lumber itself for cross-strips. This ordinarily gives little trouble where the boards are properly spaced and the narrower widths are selected for the cossers. In the larger piles, a central flue one board wide is often of distinct advantage. The edge piling of 2 x 4's as practised at some mills is favorably reported.

Timber should never be allowed to lie, even temporarily, in close piles on the ground or on decayed tramways.

4. Better construction for pile foundations—Very often pile foundations are altogether too low or are poorly constructed, not allowing sufficient ventilation beneath the sticks. The laying of a few planks on the ground parallel to the alleys does not make a good pile support. In the first place, it allows circulation in only one direction, and in the second place such a foundation is usually too low. Being more or less permanent structures and partly in contact with the ground, pile foundations should consist of horizontal timbers set on concrete or brick piers, or blocked up at intervals with wood, to a height of at least eighteen inches from the ground. Such timber as enters into their construction should be either highly durable or else treated with some wood preservative. Coal-tar creosote will serve as an efficient antiseptic.

Sound, air-dry blocking cut from many of the low-grade species of timber having a goodly percentage of sapwood can be given a satisfactory treatment by heating in a tank at about 200 to 220 degrees Fahrenheit for four to six hours, then allowing to cool in the oil. The longer horizontal timbers can be given three coats of hot creosote at 180 degrees Fahrenheit at intervals of twenty-four hours. Heartwood in this case is much to be preferred to sapwood.

These remarks apply to the construction of storage shed foundations as well as pile foundations in the open.

5. Preservation of tramway timbers and ties—The decay of these timbers can be overcome by treatment with creosote or some other good wood preservative. The work can be done by commercial wood preserving companies or by the lumberman himself in the ways above indicated.

6. Dipping stored lumber to prevent infection—Dipping green lumber in soda solution to prevent bluing is at present a recognized practice in the United States, particularly in the Southern pine belt. While soda is more or less effective against bluing it will hardly be of much value in preventing attacks of other fungi. A more toxic substance, such as sodium fluoride, is suggested. This substance can be substituted for the soda dip very readily and would serve the double purpose of blue-stain prevention and also protection against incipient decay.

Timber which shows any trace of decay should never be sold or accepted for building purposes, as open dormant fungi in dry timber can often start into active growth when placed under moist, comparatively warm conditions.

Mr. H. Shumway Lee, of Mixer & Company, Buffalo, N. Y., recently returned from a visit to Nova Scotia, where he completed arrangements for handling stocks of white pine, spruce and hemlock from that province. These stocks are shipped under normal conditions by vessel to Boston, but on account of the scarcity of tonnage it is likely that a rail business will be carried on with New England points and part of New York State.

Mr. J. H. A. Acer, secretary-treasurer of the Laurentide Company, Limited, Montreal, has been appointed captain of the 244th Battalion, now being raised by Lt.-Col. F. M. McRobie.

Handling the Consumer

By H. S. Sackett

The proper handling of lumber consumers in any community means a systematic listing of names, and a follow-up system. The best plan is usually to install a simple card system, giving the names and addresses, and noting on the cards the needs and requirements of the different individuals as ascertained, and the time of their last purchase. For example, if you find that a farmer in your community is contemplating building a new barn next spring, or a new silo, this should be noted, and should be followed up by letters and literature on the subject. A constant stimulation of interest is necessary, either by circular letters, by envelope inserts, or the distribution of literature.

You should have displayed in your offices attractive samples of the woods that you have for sale. You should show them in the rough, and in a surfaced condition; you should show samples of moulding, of casing, of base boards, of interior finish, panels, and all the various products of wood that you have to offer. You should fix them up so neatly and attractively that the man who is going to build a home would come to your office, and look over your commodities in just the same way that he goes to a dry goods store and looks over their goods before he buys.

It would be an excellent plan from time to time for groups of dealers in the larger towns and cities to get together, and have a dinner and invite your architect and engineer friends to come and talk to you about their problems.

Keep in touch with what is going on in your home town. If a change is proposed in the building ordinance, know all about it; find out what the changes are going to be; ascertain if anything detrimental to the use of wood is proposed; white the trade extension department of the N. L. M. A. what is going on, so that we may have an opportunity of sending one of our special representatives to help you, if help is needed.

Take an interest in the question of fire protection; keep in touch with your building commissions and city councils; show them that you are as much interested in safe building construction as any other good citizen, or as the manufacturer of non-combustible materials; make it clear to them that it is not the use of wood, but its unsafe use, that contributes to the fire danger, and here again, if you have any problems which you cannot solve and which you do not feel sure about, ask the National Association for the specific ways in which it can be of service to you.

There has been a great waste in the past and a failure to get the most out of available literature, because of the poor display or lack of distribution. You should have in your office an attractive rack in which the more important lumber literature is displayed. This would make it available to callers, and also serve as a reference library. A good plan is to send out notices from time to time to the consumers, stating the literature which is available in your office, or which will be sent upon request. You should notify your customers from time to time that you have a good reference library on farm structures which is at the service of any who may be interested.

Planing Mill Pleasures vs. Profits

By L. R. Putman

Were you ever afflicted with the malady known as a planing mill? talk about your leprosy and pellagra; why they're mere pastime. Operating for appendicitis is really amusement when compared to operating a planing mill. The oldest man in the world can't operate a planing mill with satisfaction either to himself or his customers. A fellow that runs a planing mill stays just about three jumps ahead of the sheriff and has got to take a hurdle every jump.

In the first place, he didn't have good sense or he wouldn't have gotten into the planing mill business, and then the longer he stays in the less sense he has. A man with a planing mill is afraid to go to bed at night for fear it will burn up and hates to get up in the morning for fear it hasn't.

Did you ever notice that the fellows who sell planing mill machinery never quote by letter. No, sir; if they did they'd never sell anything. The fellows that make and sell that stuff have got some kind of an instinct that informs them at just what moment some poor lumberman's mental capacity reaches an ebb sufficiently low to make him a victim. Then these vultures begin to approach their victim from all directions. One of them will ease up to him quietly and begin telling what so and so did with one of his machines. He spits out figures so fast that he gets the weak-minded lumberman to wobbling. Then the salesman slips him a cheap cigar and that finishes him; he doesn't wake up until he has signed the order and the salesman has gone. Then he begins to try to pacify himself by taking the salesman's side of the argument and going over all the wonderful things the machine will do. If a fellow will just give way to such dissipation he can figure himself out rich in about fifteen or twenty

minutes. Money made in the planing mill business is the prettiest money in the world—on paper.

No, if you write to a woodworking machine company and ask them for the price of one of their machines, you'll find one of their salesmen waiting for you at the office next morning when you go down to open the yard. He's a good natured cuss and he's sticking one of those fatal cigars out at you just as soon as you are close enough for him to know it's you. As soon as you get the office door open he'll begin to carry in his junk and pile it up on the desk in front of you.

He has photographs and steel engravings and wood cuts of every machine known to the human race. He strikes a match across the top of your newly varnished desk and you and he light the Flora-de-la rags and start up a smoke like the wood's afire.

Your last recollection is a string of machines passing in front of you like a moving picture show. Then the next strongest impression made on you is that you have a note coming due at the bank about every fifteen days for the rest of your life.

Of course, if there wasn't anything to buy but the machines a fellow could run his stock down and get along with a mixed car of C and better stuff in the rough and in that way take up the notes as fast as he could collect his outstanding accounts. But he's just getting started well when he gets his machines set up. He has to buy a lot of steel line shaft and pulleys and belt—say, did you ever buy any leather belt? Some of us have bought shoes for five or six children and thought leather was high enough. But you just tackle a leather belt some time. Why, I'll bet I can carry a thousand dollars' worth of two-ply leather belt around the block and never get a long breath. If you stuffed your safe full of good leather belt you'd have more value in it than if you used ten dollar bills. The machinery salesman will forget to tell you these little trifles when he hands you the knock-out cigar and that's the reason I'm telling you now. By the time you are ready to start you have got a mortgage on your real estate, and then you haven't anything to do but work and worry.

A Lesson Told in an Automobile Parable

Maybe some of you fellows have put in some time fooling with an automobile? You can look an automobile in the face today and she will run fine when, maybe, tomorrow she's got the same countenance and won't budge an inch. Well, now, suppose you had a whole flock of automobiles around you, you were ten miles from home and it would cost you a good customer if you didn't get there in the next hour? That's just the shape you're in every minute of your life when you're operating a planing mill. Of course, I don't want to discourage any man who wants to put in a planing mill. It's no use. If you don't let him spend his money that way he's apt to go and buy the Eads' Bridge in St. Louis or the Convention Hall in Kansas City. That kind of a man is dangerous as long as he's got money anyway. One of the brightest remarks I ever heard made along this line was uttered by a farmer who thought he wanted to break into the planing mill business. He let the word leak out and one of those machinery fellows bobbed up with a full line of pictures and bum cigars. Right there's where the farmer got the salesman's goat; the farmer didn't smoke. He made that salesman do all the smoking and talking and he just kept his mind on the price. Finally, after the salesman had done all he could to keep from setting a value on his goods and then when there was nothing else to be said and the farmer got nervous from inhaling the fumes of the cheap cigar, he began to figure up the price of a planing mill. The farmer watched the salesman's pencil and when he saw the total running up above $2,000, he said: "Here, young feller, you needn't go no further; if I had as much money as $2,000, I wouldn't have a durned planing mill."

But, of course, it's a well-known fact that there's a sucker born every minute, and consequently there's a fairly good demand for woodworking machinery around the retail lumber yards.

The Retailer's Planing Mill Equipment

Retail lumbermen have always handled woodwork and always will and they should. I mean the ordinary country retailer. Lots of it looks and is simple to make. The trouble is that stuff that is easy to make is made by everybody in the business and is therefore sold on a close margin. Some dealers imagine because they have handled woodwork for a great many years that they know all about it, and have a good idea what it should cost to make it.

They're a good deal like the fellow who went into a shoe manufacturer's office and asked for a job selling shoes on the road. The sales manager said: "Are you pretty well posted on shoes?" and the would-be salesman said, "I ought to be, I've worn 'em ever since I was twenty-one years old."

Now, two or three machines can often be worked to a good advantage, but I'm talking about a planing mill that can really take care of a job of woodwork. I like the word woodwork. I got it from a big sash and door house and it means more to the average consumer than millwork. You might be operating a good big planing mill and advertising mill work every week in the year, and then one of your oldest friends would come in and ask you if you were fixed to make a door frame ready to set in the building.

Most of the excitement comes when a fellow tries to figure out the price to put on a given piece of woodwork. The oldest man in the world can't figure out the exact cost of an ordinary job of woodwork. You can pay a man as much every year as your plant is worth and he can't take the work off a set of blueprints and specifications and tell you what it will cost to make it. This applies not only to the small country planing mills, but to the large sash and door houses in the large cities. Every retailer knows that if he sends the same plans to a half dozen big woodworking factories for estimates, he'll get a half dozen estimates which will vary from 10 to 40 per cent. He at once reaches the one logical conclusion and that is, that one fellow is letting his stuff go mighty reasonable or the other ought to be put in jail for grand larceny. But, stay, don't judge these poor devils too hastily. The next job you have, send it right back to these same mills and the chances are the high and low man will change places. They wouldn't take a dollar of your money unjustly, and they don't do it. Go and look over their books and they can prove to you that it's the stock stuff they job that makes them rich and not the special stuff they make. If a fellow keeps doing the same thing over and over again every day, the cost of his product can be arrived at fairly close, but if he does something different every day, then the fellow in the office who does the estimating must shut his eyes and grab in the dark. A good friend of mine who is connected with one of the biggest sash and door houses in the country, told me that they had a club in the city where his plant is located, to which only men who do estimating on woodwork are eligible. There are about thirty men in his city who belong. Once every week or two they bring all of the estimates they have made since the last meeting and go over them together. Each fellow tells how he arrived at the cost of the different jobs. They don't do this in order to fix prices and they couldn't, because the jobs have already been sold. But they do it in order to post themselves on how to arrive at costs.

He Forgot to Figure in the Cost of the Lumber

This man told me that at one of these meetings a certain job came up on which most of them had figured. It was an expensive piece of quarter-sawed oak work done in the form of a dome. Every man with any knowledge of woodwork knows that such work runs into money fast. One fellow was about $900 low on his bid, and, of course, all were interested in knowing how he was able to do it so cheaply. Each item was gone over carefully and every fellow watched his own figures for the big difference. In the wind up it was found that the fellow with the low figure had left out the lumber. It isn't a difficult thing to leave out something in figuring what it costs to make woodwork. At the present time it takes about as smart a man to let a job alone as it does to bid it in. One thing that a fellow nearly always manages to get into a job of woodwork is grief, and another thing he just as often leaves out, but which, of course, doesn't usually amount to much—and that is profit.—St. Louis Lumberman.

Forestry Battalion's Work Appreciated

In the British House of Commons recently, Mr. Acland (Parliamentary Secretary to the Board of Agriculture), referring to the work of the Timber Committee of the House, made the following interesting reference to the operations in connection with the conservation of home grown timber, for which the Canadian Forestry Battalion was recently formed and taken to England:—

Perhaps the most important Committee from a national point of view of these three Committees is the Home-Grown Timber Committee. This Committee was set up at the end of November last. Its object was to increase our supplies of home-grown timber, not by supplanting but by supplementing the efforts of the timber trade, particularly as regards the supply of timber for Government Departments—the clear, outstanding object of its work. To the extent to which this work can be successful there are two gains: First, the State obtains timber at a reasonable price, and, secondly, which is even more important, we save in freight, of which normally a very great deal is taken up by timber imports. The work of the Committee has divided itself into three distinct parts; (1) the organization of purchases; (2) the organization of plant; and (3) the organization of labor. In all three directions the task has been not to take hold of any existing valuable machinery, but to make available machinery which would not otherwise have been available for this purpose at all. We have had, in fact, to start from nothing and to build up an organization which, I hope, is now becoming fairly effective. I will simply report results, which are that we have either supplied or purchased, or are in the process of felling and converting, about 11,000,000 cubic feet of soft wood for use as scantlings or sleepers and in dug-outs at the front, and about 32,000,000 lineal feet of pit-prop and wire-entanglement timber. We have also bought less quantities of certain hardwoods. Landowners, on the whole, have been most public-

spirited in offering us their timber at prices which, I think, have been fair to them, but which often have been rather less than they could have obtained elsewhere from timber merchants. It is a pleasure to be able to add that the Crown has set an example with regard to the use of the New Forest and the Windsor plantations such as the Committee would expect in a matter of this importance.

As to labor for timber-felling purposes, we have been in negotiation as to, or have actually employed Belgians, Portuguese, Irish, soldiers, Public-school boys, Maltese, Indians, Canadians, German prisoners, and labor found through the Employment Department of the Board of Trade. Of all these different sources by far the most useful and valuable have been the Canadians. I cannot express to the Committee the energy which was shown by the Government of Canada, as soon as the matter was put before them, and by the officers whom they appointed in raising a Forestry Battalion, which has come over here to work in our woods. The Government and the people of Canada are naturally interested in their own timber, but they realized that the position of the Empire as to freight was so serious that we could not now be expected to supply our needs from Canada if it were possible to supply them here at home. They have shown a true Imperial spirit in helping us to supply them in the most practical manner possible. The only difficulty will be to keep these men with big enough blocks of timber to cut. We, as a Committee, shall do our best, but if any member of the Committee here has a block of, say, 2,000 or 3,000 acres which he would like to see melt away before his eyes under the most expert felling and conversion of our friends from the other side of the Atlantic, I shall be most happy to receive his offer.

The Committee has made an arrangement for the employment of 500 German prisoners. That number will be employed in felling timber under conditions approved both by the War Office and the Admiralty. In connection with this timber work it might interest the Committee to know that we have had to take the power of requisitioning timber. We do not intend to obtain our main supplies through requisitioning, but we have obtained the powers chiefly so as to make the best use of the timber, plant and labor which are available by concentrating on the best timbered districts, in order to avoid the constant moving about of the plant and labor. The powers we have enable us to do that, and, by so doing, to be fair as between one owner and another. It would be rather hard on the man who is willing to throw his whole possessions into the service of the State if we should have to take nearly all the timber he has got, while his neighbor does nothing. By using in certain cases the powers of requisitioning, we shall be able to ask both of them to make a fair contribution, in spite of any legal and other difficulties which are sometimes found on estates.. It is chiefly these difficulties which stand in the way; it has never been a case of lack of good will. Owners have always been willing to sell, but there have been these difficulties, which the power of requisitioning enables us to get over. We may have to requisition in a case if we know that timber merchants have options on timber, or have made purchases with no possibility of being able to fell or convert either now or in the immediate future. We want the timber now. If the War Office say they want the timber, we shall have to take it, otherwise it would not get converted at all. I want to make it quite clear that it is not intended to use the powers of requisitioning to supply coal mines or railway companies with timber at a rate less than that which allows to the timber owner or dealer a fair profit on his expenditure or work. Perhaps I may be allowed to make one further observation in this connection, which is that the inroads that must be made into our native timber supplies owing to the work of this Committee and otherwise during the war do make the development of a comprehensive national forestry policy at the earliest possible moment after the war a matter of the very first importance.

Tree Felling Contest at the Front

Canadians and Australians Compete—Maoris the Speediest—French Exhibit Their Skill

In a forest in France, during the spring of the present year, the prowess of Canadian, Australian, and French wood-cutters was displayed in a contest, which was of great interest. Describing the event, the Official Correspondent for Australia gives the following descriptive account:—

A contest had been arranged between Australasians and Canadians in France, to decide which could fell trees in quicker time. It began really with the French forest authorities who insisted on the well-known forest rule that no young trees under one metre twenty in girth may be felled after the middle of May, because if you cut the young tree after the sap begins to rise it will not grow again. The British officer in control of the forest had obtained an extension until the end of May, but he had to get felled by then all the young timber which he wanted before the middle of September. He had borrowed some Maoris to help, and he noticed how they cut and the sort of sportsmen they were. He was struck with an idea. "How long do you think it would take a New Zealander to fell that tree?" asked a French forest officer who was with him. "A minute," was the answer. "Unbelievable," exclaimed the Frenchman. A Maori was called up and the tree was down in forty seconds.

After that a contest was arranged between Maoris and French woodcutters. Trees had to be cut in the French style, which, it must be admitted, is much neater and more economical, and about five times as laborious—the trees are cut off at ground level, and so straightly that the stump would not trip you if it were in the middle of the road. Each team consisted of six men, and felled twelve small trees, using its own accustomed axes.

It was out of this that the big contest sprang. The Canadians and Australasians challenged one another. This time the teams were to be three men. Each team was to cut three trees—only service axes to be used. But otherwise each man could cut in any style he wished. The trees averaged about one foot ten inches thick. The teams started to practice—the Maoris for over a month, the others for about a week; and the officer's problem was solved.

The teams tossed for trees and for the order in which they were to cut. I believe that when some question arose out of this toss the Maoris immediately offered to toss again in order to have no advantage from the result.

It was interesting to see the difference of style. All three types of colonial woodsmen cut the trees almost breast high, but the Australian seemed to be the only one who took advantage of that understroke with a hiss through the clenched teeth which looks so formidable when you watch our timber-getters. It was a Canadian team which started. They cut coolly, and the one whom I watched struck one by his splendid condition—a wiry man, not thick-set, but well-built and athletic, who never turned a hair. I thing he was, perhaps, too cool to win. His comrades were not quite so fit as he. They cut the trees with a fairly narrow "scarf," the top cut coming down at a steep angle, and the lower cut coming straight in to meet it, so that the top of the stump, when the tree falls, is left cut off as straight as a table-top. The first tree crashed in fourteen minutes, the next in fifteen, and then they all three tackled the last and toughest, which fell in twenty-one—fifty minutes altogether, when the three times were added.

The next team was Australian. From the first rapid swing one's anxiety was whether they could possibly stand the pace. They tackled the job so much more fiercely than the Canadians. I watched a young Tasmanian, his whole soul in it, sweat pouring from his face. One would have thought that he was cutting almost wildly, till one noticed how every cut went home exactly on top of the cut before. With these Australians—they were Western Australians mostly—the top cut came down at an angle, and the lower cut came up at a similnr angle to meet it, making a wide open angle between the two. The odds would, I think, have been taken by most of those who went there as being in favor of the Canadians, and it was a surprise when the three Australian trees were all down in 31 minutes 8 seconds.

The New Zealanders cut third. Their team consisted of Maoris. They did not seem to be cutting with the fire of the Australians. There was not the visible energy—their actions struck one as easier, and one doubted if their great, lithe, brown muscles were carrying them so fast.

Yet the time told the truth. Their three trees were down in 22 minutes 40 seconds, and no one else approached them. One Canadian team improved the Canadian time to 45 minutes 22 seconds. The Maoris seemed mostly to cut with a narrower scarf even than the Canadians, both upper and lower cuts sloping downwards at a narrow angle.

An Australian won the log-chopping competition. He cut through a 14-inch hornbeam log (the French call it charme), standing on it to cut, in under a minute. And the Canadians won the cross-cut saw contest, with a single-toothed saw, cutting through a 12 to 14-inch hornbeam log in less than 30 seconds. A New Zealander won the competition for style, which was judged by the French Inspecteur des Eaux et Forets, Commandant Delaroche.

The men were mostly sitting watching the Frenchmen, workers in the forest, giving an exhibition cut. Two from a Canadian team were sitting on a log next to me yarning in the slow, quizzical drawl

of the Canadian countryman, when two of their mates sat down beside them. The man next me turned to them and the next moment they were all talking French among themselves—talking it as their native tongue. Their officer, a handsome youngster, spoke it, too. It was not till that moment that I realized that half of these Canadian woodsmen here were French.

Meanwhile, the exhibition chop went on. The French woodcutters were digging at the roots of their trees with long, ancient axes, more like a cold chisel than a modern axe. "I think I could do as well with a knife and fork," said a great, kindly Australian as he watched.

But to my mind that exhibition was the most impressive of all. For every one of those who took part in it was either an old man or a slip of a slender boy. The results were:—

Tree Felling Competition

First Prize—New Zealand (Corpl. Bannister, Pte. Rawiri, Pte. Tamaki), three beeches felled in 22 min. 40 sec.

These trees averaged 24 in. in diameter—quarter girth, 18 in.

Second Prize—Australia (Pte. Anderson, Pte. Church, Pte. Britten), three beeches felled in 31 min. 8 sec.

Third Prize—Canada (Lance-Corpl. Newbury, Pte. Salisbury, Pte. Geon), three beeches felled in 45 min. 22 sec.

Log Chopping Competition

First Prize—Australia (Pte. H. E. Anderson).
Second Prize—New Zealand (Corpl. Bannister).
Hornbeam (Charme) log, 14 in., cut in under 1 min.

Cross-cut Sawing Contest

First Prize—Canada (Sergt. Patton, Pte. Bain).
Second Prize—New Zealand (Ptes. Koati and Tamaki).
Hornbeam (Charme) log, 12-14 in., sawn through in under ½ min.

Exhibition Cut by French Bucherons

First Prize—Berthe.
Second Prize—Desire Albert.

Best Axemanship (Judged by the Commandant Delaroche).

First Prize—New Zealand (Pte. Pouter).
Second Prize—Canada (Pte. Phillipe Flageol).

General Birdwood, General Alderson, and many other distinguished officers were present.

The Logger's Interest in Pulp Wood and Acid Wood

By F. L. Winchester

Logging for the sawmill and logging for the pulp mill are different propositions. The sawmill man or operator can afford to pay more for the delivering of his logs to the sawmill than can the pulp manufacturer. The sawmill operator takes the cream and rich milk, metaphorically speaking, and the pulp manufacturer gets the skimmilk. Or, in other words, what the sawmill operator leaves as not profitable to handle, goes to the pulp mill operator. There are some exceptions to the rule, but it holds good in a majority of cases. It stands to reason, then, that the pulp wood operator cannot afford to go into such expensive methods of logging or getting his timber to the mill as the lumberman.

As a rule in the larger operations for both kinds of timber, the early developments are much alike, viz.: The building of a railroad or tram road for the hauling of timber to the mill or main line of transportation.

From this point, as a rule, the divergence of methods are considerable. The lumber operator installs his skidders and loaders. The pulpwood operator begins to get his contractors on the job. Also: To build V flumes up water courses which are of too steep grades for tram road building.

We will take up this proposition from the standpoint of cut-over operation. This opens the question in two ways. The pulp and acid wood operations following the sawmill logging, the pulp and acid wood operations taking the proposition after the entire lumbering for the sawmill is over. If the sawmill operator gets out the acid and pulp wood for market, it is only reasonable to say that he should follow his logging for lumber purposes with the pulp and acid wood operations as clearly as possible without interference of the one with the other. There are several reasons for this. The logging roads used are in better condition than if left for an indefinite period. There are less burned over areas, probably. If the pulp and acid wood stumpage has any stumpage value after your lumbering operation, the sooner you get that value into money the better. We will say that this stumpage has a value. Then if it has, how can we best handle the getting out of this product to convert that stumpage value into money? This cannot be done in a haphazard way. You need an organization for this work. This organization may be headed by your work superintendent, with an assistant who understands getting out wood.

You have your tram roads in operation, but you need some extra equipment for hauling wood. You cannot haul wood on skeleton logging cars. Equip some of your cars for wood purposes, and it is not a very expensive matter, but unless you do have these wood cars and can keep the wood part of the business going you will find the operation not panning out, as they say. You don't go into a lumber operation without carefully planning the whole system of operating and then get your organization together to carry out the work. This idea should be carried out in pulp and acid wood getting. It need not be on the extensive plan that has been used to develop the sawmill logging, for it is not necessary, and considerable of the development made for your lumbering precludes the necessity of further investment of the kind, for your pulp and acid wood getting. The main item is railroad building. This cost has been charged to the lumbering account. The next thing in order is getting your pulp and acid wood to the railroad or logging road. Contract work now is the proper method, as a rule, to consider. And your pulp and acid wood contractor is not, as a rule, a very reliable man, nor is he of the reliable financial standing that would make it advisable to give him very large contracts. If the stumpage lies up a considerable branch and the watershed of that branch embraces a very considerable area of land, it is very probable that a flume will necessarily have to be built. The operator had best build the flume, for it will, in a majority of cases, fulfill its requirements much better by so doing.

Divide Work Into Small Jobs

Now you are ready to let out contracts. Divide up the area into small jobs and make written contracts with your wood getter. The average man of this business likes to be classed as a contractor, and many of them take a certain measure of pride in being independent. A contractor is his own boss to this extent. Your wood contractors will be coming and going from their jobs to a greater or less degree, but by having a large number of contractors and always some undeveloped wood territory ahead, if the job is fairly well managed, your aggregate quantity of wood coming will be quite satisfactory. But, like any other part of a logging and lumber business, it takes organization and careful directing to prove a success. Your contractors have given acres to cut into pulp and acid wood, and deliver to and load on the cars at so much per cord, and the wood to fulfil standard wood specifications. The contractor may deliver his product direct to the logging railroad, or he may have to skid the logs and poles to places along flume line and cut the wood there and flume it to the road.

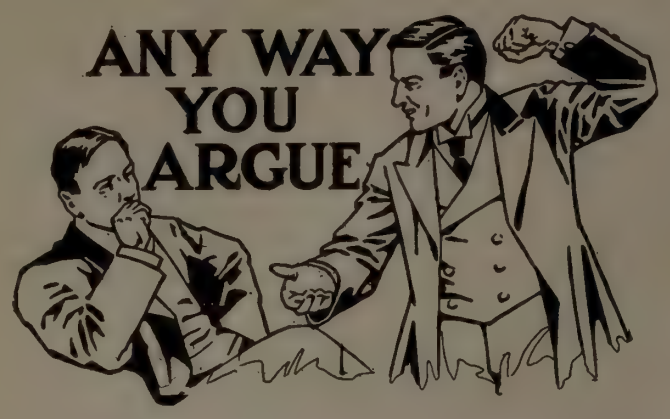
In considering the price to be paid per cord to your contractor it is necessary to know pretty closely costs of the work as it could be done by good workers through the different stages until the wood is delivered on board the wood cars. The flume, as an adjunct to the railroad in pulp and acid wood operations, is a necessity. For short distances, it is much the cheaper way of transporting wood, and with plenty of water, is a most satisfactory way of getting your wood out. In the fall season, when it is dry, and water low, you can facilitate the flume work by building small dams at the head of main flumes or tributaries of the stream leading to the main flume, and hold the water back, letting the water out slowly by means of a little slide gate, allowing just enough to go through to enable you to flume wood comfortably. When the water in the dam is exhausted, close the gate and collect another head of water.

We have now gone through the various stages of the work incident to manufacturing and delivering pulp and acid wood. We now come to the loggers' interest in the matter.

The owner's interest in the stumpage is what profit can be made out of the operation. The contractor's interest is for a job out of which he can make wages. With the owner's side of the question there is the interest in the subject which you take, probably. Most owners are not in business, especially lumbering and logging, as a matter of philanthropy. It is dollars and multiples of dollars that is the consideration.

Is There a Profit?

This fact brings us squarely up to the issue: Can the owner realize something out of his pulp and acid wood stumpage? The answer is: "Yes." With proper management you cannot, in reason, charge any part of the cost of building your railroad to the cost of producing the wood. You can charge a reasonable cost to hauling out your pulp and acid wood and transferring to the main line cars, but such cost should be a comparative one as to value of the total product transported over your road. A reasonable cost for delivering your acid or extract wood, from the stump to the logging cars, ranges from $1.75 to $3.00 per cord, owing to location and conditions, this being considered as being done by contractors. Then you have a small overhead charge for a foreman. This will give you a fair stumpage value under ordinary conditions for your output. You also have produced a good trade for your commissary department, and that trade is worth a considerable amount, for about seventy-five per cent. of the costs of producing your wood goes through your commissary at a reasonable profit.



"There's One Best Way"

There's one best way to buy and sell special lots of lumber, second-hand machinery, timber lands, etc., and that is by inserting a small advertisement in this department.

Every mail brings word of big results from these small ads. Last week a large lumber firm sold their entire 1916 cut, several million feet, through an advertisement on this page.

What Have You to Advertise?

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch. each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Wanted—Lath

Please quote us your best cash price on the following, either delivered Cleveland, Ohio, or F.O.B. Mill, giving rate to Cleveland:

⅜ x 1½ — 4 ft. No. 3 White Pine Lath.
Same—Red Pine.
Same—Spruce.
⅜ x 1½ — 4 ft. No. 2 White Pine Lath.
Same—Mill Run White Pine Lath.
Same—Spruce.

THE AMERICAN LUMBER CO.,
1502 New England Building,
12-15 Cleveland, Ohio.

For Sale-Lumber

For Sale

2,000 Cedar Poles 25 to 45 ft. long; 4,000 Cedar Fence Posts 4 in. and up, 8 ft. long; 2,000 No. 2 Cedar Ties, 3 in. face and up. Lynch & Ryan Lumber Co., Marmora, Ont. 12-15

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
6 Montreal, Que.

Wanted-Machinery

Machinery Wanted

One second-hand Alligator. Machinery must be in good condition. Will pay cash. The Field Lumber Company, Limited, Field, Ont. 13-14

Lorries Wanted

Fifteen second-hand lumber lorries, must be in good condition. Campbell MacLaurin Lumber Company, Limited, Drummondville, Que. 11-14

For Sale-Machinery

For Sale

Gasoline Engine, almost new, a bargain. Write Box 420, Canada Lumberman, Toronto, Ont. 13-13

For Sale

One 30-in. Double Surfacer; one 6-in. Four Sided Moulder; one Self Feed Rip Saw; one International Gas Engine, 12 Horse Power; one 50 Horse Power Corliss Stationary Steam Engine; all in first class working condition. Apply Box 421, Canada Lumberman, Toronto, Ont. 13-14

Timber Limits and Mills

Timber limits for sale in the District of Algoma, also a Band and Gang Saw Mill. For particulars apply to Geo. Niebergall & Son, Parry Sound, Ont. 11-13

Machinery for Sale

Complete Sawmill Outfit; One Hundred and Twenty-five H.P.; Single Circular; Steam Feed; Nigger Log Turn; Live Rolls; Four Saw Edger; Dutch Oven; Perkins Shingle Rig, including Cut-off and Jointer. Everything in first-class condition. Building also if desired.

McCAMUS & McKELVIE,
13-13 New Liskeard, Ont.

Machinery For Sale

One 26-in. Double Surfacer, Cowan.
One 6-in. four-sided Moulder, Cowan.
One Arm Sander, heavy type, nearly new.
One Power Feed Rip Saw.
One Steam Engine, Wheelock, 15 x 36.
One Steam Tubular Boiler, 4 in. x 14 in. Government certificate with same; 84-3-in. Tubes.
Or exchange for lumber.
T. H. Hancock, 1372 Bloor Street West, Toronto, Ont. 13-13

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

FOR SALE

Woodworking Machinery

1 Woods No. 32 Matcher; 1 Goldie 10-in. Moulder; 1 Goldie 24-in. Matcher; 1 Cowan 42-in. Sander; 1 Jackson Cochrane 36-in. Sander; 1 Egan 36-in. Single Surfacer; 1 McGregor-Gourlay 2-drum 30-in. Boss Sander; 1 Egan 30-in. 2-drum Sander; 1 CMC 8-in. 4-side Sticker; 1 McGregor No. 212 30-in. Double Surfacer; 1 No. 180 Berlin 30-in. Double Surfacer; 1 American No. 26 Hardwood Matcher, with boring attachment and end matcher; 1 Ballantyne 12-in. Sticker.

P. B. Yates Machine Company, Limited,
13-t.f. Hamilton, Ont.

Machinery For Sale

Woodworking Machinery for sale, consisting of Planers, Band Saws, Hardwood Flooring Machines, Mortisers, Buzz Planers, Shapers, Mitre and Tennoning Machines, etc., also Steam Boilers and 300 H.P. Steam Engine, Shafting, Pulleys, and large quantity of leather belting. Also a complete Sawmill outfit, a large stock of Rough and Dressed Lumber, Sashes, Doors, etc., manufactured and in process of manufacture. Reply to the Tobin Manufacturing Company in Liquidation, Bromptonville, P.Q. 12-15

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WANTED—Position by a first-class Accountant and office manager. Lumber business preferred. Acquainted with all departments of office work in connection with the lumber manufacturing business or lumber yard. Am capable of taking charge of any set of books. Fifteen years' experience. Married, 38 years of age. Strictly temperate and reliable. Best of references. Am employed now on monthly engagement. Apply stating salary and particulars to Box 419, Canada Lumberman, Toronto, Ont. 12-13

BAND OR CIRCULAR FILER or Mill Foreman wants position. Twenty-seven (27) years' sawmill experience. Gilt edge references. Box 405, Canada Lumberman, Toronto, Ont. 11-1

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Valuable Timber Tract, British Columbia; nearly 10,900 acres; 60,000,000 feet of timber; on railroad. Local market for mine props. First class mill, 30,000 feet daily capacity. Very attractive proposition. George W. Grant, P. O. 1676, Calgary, Alta. 13-13

Timber Limit For Sale

Thirty-six square mile limit, North Shore, License allows cutting all kinds of timber. Contains Hemlock, Birch, Spruce, Pine, Cedar Ties and Poles, Pulpwood and Hardwood. Railroad runs through part of berth. Cheap operation. Splendid opportunity for small mill. Apply Box 423, Canada Lumberman, Toronto, Ont. 13-t.f.

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

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For sale on Muskoka Lakes, saw mill complete; daily capacity 20,000 feet. Good trade connection; plenty of timber available. Rare opportunity. Must be sold. Owner deceased. Terms reasonable. Box 418, Canada Lumberman, Toronto, Ont. 12-15

For Sale

To close an Estate, the valuable Lumber Mill known as the Picnic Island Mill at Little Current, Ont., Georgian Bay, is offered for sale. Capacity about twenty million feet of lumber per season. Extensive docks with sixteen feet of water and booming capacity for about fifteen million feet of logs.

Picnic Island, which is freehold property, consists of thirty-seven acres, containing the mill and twenty dwelling houses for employees. Superior drying grounds. Can ship by rail or water. For further particulars write,

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Administrator Estate of Late John Conlon,
or
Thomas Conlon, 44 Church St.,
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Canadian Industry, Commerce and Finance

Canadian business men, and those in other countries doing business, or prepared to do business in Canada, have felt the need of a concise and accurate source of information concerning Canadian industry, commerce and finance. Such a volume has just been prepared, and published by the Industrial and Educational Press, Limited, 45 St. Alexander Street, Montreal.

The opening chapters of the book are devoted to a discussion of modern business methods as applied to Canada, in which the author deals with the three divisions—industry, commerce and finance—in a lucid and authoritative manner. The aim is to present the information in such a way as to make it easily comprehensible. The volume is of particular value to the young business-man and to foreigners doing business with Canadian merchants. The information is especially useful to Canadian merchants at the present time when so many firms are beginning to do an export trade, to which a considerable portion of the book is devoted.

First chapter on industry deals with each of the various branches of Canada's industrial development, in point of extent, production and possibilities. In his treatise on commerce the author treats the subject in all its phases, foreign commerce, domestic commerce, ocean transportation, inland water transportation, railroads, etc., are taken up in turn and the methods and terms explained. The various markets of the world are described, and a section is devoted to weights and measures in use the world over. The chapter on finance deals with a wide array of subjects. The author first describes the development of banking and instruments of credit, and then deals with all methods in present use, describing each separately—foreign exchange, bills of lading and shipping receipts, etc., mortgages, liens, deeds, stocks, bonds, and all classes of insurance are given attention in this chapter.

Another useful and principal feature of the volume is the trade index or directory of all marketable commodities and Canadian producers. This list embodies a description of most commodities and accurate lists of the Canadian producers of each, with addresses.

The book is published by the Industrial and Educational Press, Limited, Montreal, as a companion volume to the Journal of Commerce, of which the Hon. W. S. Fielding is President and Editor-in-Chief.

The Fire Season On in B. C.

Recent reports received by Government Timber Inspector Geo. D. McKay, at Vancouver, B. C., state that there is danger of serious forest fires in British Columbia this summer, unless plenty of rain comes soon. Several fires are already reported in various parts of the province, and everything is being done to prevent the outbreak of fires. The most serious fire so far is one reported from a little south of Port Moody, during the third week in June. Other fires are reported from the Squamish, Powell River, Texada Island, Green Point Rapids, Blubber Bay, Wolfson Bay, Cortex Island, Campbell River and Rock Bay. A report from Victoria states that many settlers have been burned out by serious forest fires in the Fort George and Hazelton districts, but that not much valuable timber has been destroyed as yet.

Want Subsidy on B.C. Shipments

At a recent meeting of the British Columbia Lumber Manufacturers' Association, held at Vancouver, B.C., the following resolution was passed:—

"That it is the opinion of this meeting in respect to Bill No. 43 now pending before the House, while an effort in the right direction, and should be of general benefit to the Province and the Government is to be congratulated to that extent, yet it does not go far enough, and we would suggest that a section should be added whereby a subsidy of $1 a ton deadweight should be paid to the manufacturers shipping British Columbia products on ships built in British Columbia. This, in our opinion, would stimulate the exportation of our products on British Columbia ships and materially assist the successful operation of a merchant marine.

Fort George Prospects

The Minister of Lands for British Columbia reports that while no sawmill timber is being logged in the Fort George forest district, present operations being confined to the taking out of timber for bridge and road construction, mining development and cordwood, the future of the lumber industry in that country is looked upon as being hopeful. The prairie demand for lumber has enabled one firm to resume cutting from a stock of logs which has been on hand for years, while another concern is preparing to start up again. The recent reduction in the freight rate on lumber between that district and Edmonton will have a favorable effect, and encourage the mills to cater for other than local needs.

A despatch from Niagara-on-the Lake under date of June 23rd states that requirements for men who desire to enlist in Forestry Battalions are to be relaxed in the case of laborers, to include men up to forty-eight years who may have lost a finger on either or both hands, or one or two toes, providing the lost digits are not great toes or thumbs. The test of eyes is also to be reduced.

Union Lumber Co.
Limited

White Pine Cuts

MILNET (Sellwood Jct.)—1915 cut

100,000—2 x 4 and up 10/16—No. 3 cuts and better
50,000—6/4 x 4 " " " "
50,000—1 x 7 " " " "

SPANISH—Bone Dry

18,000—2 x 4 and up 10/16—No. 2 cuts and better
(80 per cent. No. 1 cuts and better)
17,000—5/4 x 4 and up 10/16—No. 2 cuts and better
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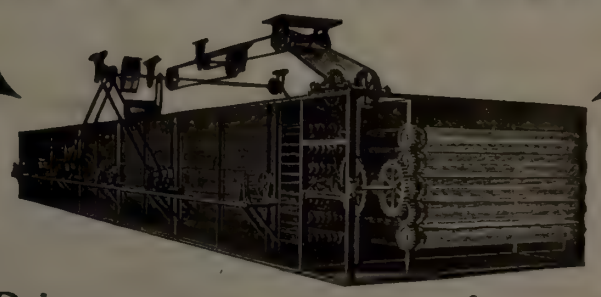

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Review of Current Trade Conditions

Ontario

Weather conditions have been altogether against the lumber trade during the past fortnight, and unless a great change for the better takes place within a very short time, it is certain that there will be nothing to report in the way of good trade for the early part of the present summer. So general and continuous has the bad weather been that farmers are far behind in their operations. Their seeding has been delayed in the great majority of cases and very few farmers are giving any consideration to their requirements in the way of lumber. Had there been a good season for seeding they would have been in the market for considerable quantities of building materials, as most of the Ontario farmers are well to do and can afford to make a number of improvements to their buildings. Now, it is probable that most of this work will be postponed for another year and the retail lumbermen will be minus just that much good trade.

As there is little in the way of house building in progress in the cities and as the country district trade is so quiet, the chief sources of business now are the requirements of manufacturers who consume lumber as a raw material, and the warehouse, factory, and public building work in the cities. In Toronto, there is a moderate amount of work of the latter description in progress, which is keeping stocks on the move to some extent, although it is only a fraction of what it would be under normal conditions. In the other cities of Ontario a small amount of building of this class is also reported.

Manufacturers of furniture and musical instruments continue active and their lumber requirements are fairly large. The munition box industry has come to the front again with extensive requirements in connection with the contracts which were let during the month of June. Just to what extent this business will be a source of profit to the box manufacturers and the lumber producers and wholesalers, is a matter of considerable doubt, as the prices are admitted on all sides to be so close as to make the proposition a questionable one from the manufacturing point of view. However, one satisfactory result will be the actual consumption of considerable quantities of stock which might otherwise be holding the market down.

The hemlock trade is only fair and it is difficult to dispose of anything except No. 1 stocks.

Eastern Canada

The letting of extensive shell box contracts, of which considerable quantities have gone to Montreal firms, is the most important event in connection with the lumber trade in that city during the past few weeks. Tenders are also being called for a large quantity of rifle boxes, and the trade expect that between these two lines the movement of lumber will be pretty satisfactory for a few months. The building trade at Montreal shows no improvement. The export trade with the United States is moderate in amount. The export trade to the United Kingdom has recently experienced an important reduction in the cost of ocean freight space. Rates declined 90s. per standard within one week and are now quoted at 275s. This is the result of the Government having released a number of vessels, and also is partly due to small offerings of grain. Quite a quantity of lumber is being exported.

At St. John, N.B., the trade has fallen off considerably during the past fortnight. Practically no new buildings have been announced and the prospects in this direction are not bright. Prices locally are somewhat easier. Refuse stocks are too plentiful, and there is not much demand for boards. The United States demand for boards is also very weak and prices are easier. Lath are inclined to be weaker. The English market has fallen off £3 to £4 per standard and deal buyers are hesitating about making contracts for future delivery. Freights are a little easier.

The best price for spruce frames at Boston has been shaded a little and they are now offered freely at $26, while some business is reported at $25.50. There is a better demand for random than for frames, and quotations are:—2 x 3, $20.50 to $24; 2 x 4, $21.50 to $22; 2 x 5 and 2 x 6, $21 to $21.50; 2 x 8, $24.50 to $25; 2 x 10, $26 to $26.50; 2 x 12, $27 to $27.50. Good covering boards 5 in. and up wide, 8 ft. and up long are bringing $21.50. Matched boards in stock lengths are offered at $25 to $26. Eastern hemlock prices are steady at Boston and the volume of trade is fair. Some eastern hemlock manufacturers are quoting $22.50 on clipped boards, stock lengths. Others will take $22 and some fair boards may be had at $21.50.

There is a fair demand for shingles at Boston and the removal of railroad embargoes is permitting a free movement in southern New England territory. Some good makes of white cedar extras are quoted at $3.50. Clears at $3.60 and at $3.55. Fairly good extras may be had at $3.50. Clears are firm at $3.20 to $3.30. Red cedar shingles are not plentiful and are firm. The best makes are bringing $4. The demand for lath at Boston is fair and stocks are plentiful. The price fo 1⅝ in. is about $4.10 and for 1½ in. $3.75 to $3.80.

United States

The lumber trade situation in the United States is in a rather uncertain condition at present, many manufacturers having developed an opinion that it would now be wise to curtail production, on account of a falling off in the demand for southern pine. An increasing number of manufacturers are following this plan, the curtailment varying from 15 to 30 per cent. and averaging about 20 per cent. The indication is that the curtailment will shortly be quite general. During the week ending June 9th the actual production of 157 southern pine mills was nearly eight per cent. below normal and 1.33 per cent. less than shipments. Reports from manufacturing centres in the Southern States show that an early buying movement is likely to develop. An improvement is reported in the car situation, a number of mills reporting that they are receiving as many cars as they can use. There is a better demand for timbers, particularly for railroad material. The export trade to Great Britain also shows a little improvement with increased parcel shipments, following lower quotations by the regular liners. Sales of yellow pine have recently been at figures indicating a reduction of about 50 cents per thousand.

On the west coast, production has also been in excess of demand until quite lately, and lower prices are reported. Curtailment of output is being brought about in that territory also. The demand has shown a considerable decrease and many of the mills in the Pacific Northwest are likely to be closed down for two or three weeks after the 4th of July. A number of manufacturers are also thinking of operating their mills only five days a week until the situation has improved and approached normal again. Continued lack of tonnage and high prices for ocean freight space are keeping down the Pacific export trade. There is unusual activity in all Pacific Coast ship yards in the production of wooden vessels for the lumber carrying trade.

Northern hemlock and hardwood manufacturers are experiencing a serious shortage of labor for the operation of mills. The shortage is an actual shortage of men and has nothing to do with the question of wages. Munitions and industrial plants are offering such high wages that men are leaving the sawmills in considerable numbers. This is already bringing about an enforced curtailment and may soon have a stiffening effect upon the market.

The trade in northern pine at Chicago is quiet, both for country and city yards. At Buffalo, wholesalers report many orders for northern pine on their books and are expecting an improvement as soon as good weather seems reasonably assured. The frequent rains have kept down the volume of building operations. There is a fair movement in the better grades, and the lower grades are about steady. An active market for northern pine is reported from North Tonawanda. Arrivals by lake are more numerous and orders are increasing, so that stocks are moving extensively almost direct from the vessels. Upper grades are stronger, and prices in general are steady.

Great Britain

The lumber trade at London has been very quiet for a few weeks past, chiefly as a result of the remarkably high cost of ocean freight, and the outlook is that similar quietness will continue so long as freight rates remain at a high level, because importers are not inclined to take much risk with so uncertain a market in front of them. Fairly extensive deliveries from the London docks are reported, but not nearly so great as they were a year ago, when housing material was required for the new armies. Dock stocks, however, continue quite extensive and fresh arrivals are preventing them from running down to any extent. Values show little or no change, but have no tendency to increase. In fact, it is expected that an opposite tendency will develop before long as the average requirements are not increasing. At the latest auction sale, prices were not so firm as they had been previously and buyers were quite reluctant about the top prices. Delivery at London docks during the week ending June amounted to 4,315 standards, as compared with 5,885 standards during the corresponding week of 1915. At Churchill and Sim's recent auction sale 3 x 11 third Montreal pine sold at £33 and £32 10s. 3 x 11 first Quebec spruce brought £34. Unsorted St. John spruce, 3 x 11, brought £31, and third 3 x 11 spruce from Three Rivers brought £30 10s. A parcel of 3 x 9 third red pine, 12 to 16 feet, from Montreal, brought £28 5s.

Quiet trade has been the rule at Liverpool during the last month

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

Arrivals have been moderate and deliveries generally fair. Tonnage has been offered a little more freely. Current c.i.f. values for spruce deals are still firm and the outlook is for a continuance of this condition. The tonnage situation in connection with the Liverpool trade is showing improvement. Freights have eased a little and a fair amount of tonnage has offered. Ship owners are less exacting in their rates and tonnage available is usually for prompt shipment. Recent liner parcels arriving on consignment have not brought quite as high figures as former ones. The spot market for spruce at Liverpool is firm and holders are not cutting values. Consumers are commencing to show a little more interest about future prices in view of the possibility of easier freight rates causing prices to drop. However, it must be remembered that cargoes on which top freight rates have been paid are only just coming on the market. Consumption is good to-day, but it is chiefly for Government requirements. Heavier arrivals are expected during the next few weeks.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Uncertain Trade Conditions at St. John, N. B.

St. John, N.B., June 23.—(Special to the Canada Lumberman).—Locally, the lumber trade market has had quite a setback during the past two weeks, and so far as material for building in and about the city is concerned, it has become a pretty hard seller. The month of May was a month well up to the average of any good year. As a matter of fact, it was much better in many cases. Practically no new buildings have come on the market during the past two weeks, and the future looks doubtful, although these days one can never tell what will happen. If a turn for the better should come in the war it will no doubt stimulate people to open up real estate propositions and give a stimulus to building, but this is unlooked for at least for some months to come. Prices locally are not as good as they were. Stocks of refuse lumber are excessive. Boards are not in demand, going steadily downwards, as they did last season, but should any demand arise for them, the price would no doubt go up. Last season the Admiralty stepped in and purchased large quantities for huts, but this year, so far, very few orders have come on the market for boards.

The American market for boards, as well as everything else, is weakening, and at present, indications are that the market will slide off for some time to come. During the winter and spring it showed signs of good things for summer months, but it has not lived up to the indications. At Boston to-day the base price is not over $24.50, and no doubt further concessions will be made.

Laths are also following the downward trend, but not to such an extent as long lumber. At present, lath are not worth over $2.50 f.o.b. St. John, but stocks are held largely in a few hands and this will no doubt be a steadying influence on the market.

The English market is said to have fallen off £3 to £4 per standard; this has made the deal buyers hesitate in buying anything more for future delivery.

Freights are somewhat easier, but in the same dangerous position as for some months. A charter was said to have been made from St. John at 300 shillings, which is considerably under the last quotation. Short lumber prices remain firm in shooks and shingles.

The mills are all sawing, but many are short of logs and no doubt will close down early.

The drives in the river are coming along in good shape and with the present pitch of water all logs in the main river should be in booms before many days.

Shell Box Contracts Helping Montreal Trade

Montreal, June 26.—(Special to the Canada Lumberman).—The most important factor in the last fortnight is the letting of shell box contracts by the Imperial Munitions Board. Montreal firms have their share of the orders, two companies obtaining orders, each for 300,000 boxes, which are of a new type so far as Canada is concerned, and in which a considerable amount of three-ply material is used. The Imperial Munitions Board has also called for tenders for a large quantity of rifle boxes, the specifications for which are stated to be very stiff. A contract for shooks for 400,000 boxes for a British firm, provisionally placed in Montreal, was subsequently cancelled on the ground that the price was too high. Many inquiries from Ontario have been received, asking for quotations on suitable box lumber, but it is said that there is some difficulty in quoting in view of the continued scarcity of certain descriptions. Apart from the box there is no change in conditions. The building trade is much about the same, and there is no prospect of any substantial improvement. Most of the permits are for small houses.

A fair amount of business is being done with the United States. Barges are scarce, owing to a break in the canal, and with lumbermen bidding briskly for the boats available, freight quotations have advanced from $2.50 to $3.50 per 1,000 feet.

In the matter of freight charges, the United Kingdom export situation has undergone a quite unexpected change. Rates dropped 90s. per standard within a week, and at the time of writing stand round about 275s. This is due to the release of vessels by the Government, but more particularly to the insignificant amount of grain offering. The shippers of the latter commodity are holding off, owing to the smaller demand from the United Kingdom, and as lumber rates are largely affected by the quantity of grain shipped and the rates, there has been a sympathetic downward movement in the charges for lumber. A considerable quantity of lumber is being exported, some on contracts made at the high figures prevailing at the beginning of the season, but firms are not disposed to book heavily ahead on a falling freight market. Some extensive shipments of birch have been made.

The sulphite pulp market is again very buoyant. The demand is as urgent as ever, and European supplies are by no means adequate. Mechanical pulp is also a stronger market, while news print is in good request.

Atlantic Freight Rates Easier

Alfred Dobell & Company, Liverpool, Eng., in their timber market report, under date of June 1st, report as follows:—

Spruce deals.—There is less inclination to buy, and current values are easier in consequence. Freights from the spruce ports are also easier, but in view of the general scarcity of tonnage it is probable that this feature may be only temporary.

Douglas Fir.—The arrivals have been limited to carload lots shipped via the Atlantic Coast ports per liners, and which have gone direct into consumption. The stocks held are a negligible quantity. In consequence of the continued difficulty in securing freight room, forward business is practically at a standstill.

Liverpool Market Report

Smith & Tyrer, Limited, Liverpool, Eng., report under date of June 1st as follows:—Both values and freights have an easier tendency, and there is a slackening off of the tension, which has been a feature for some time past.

Spruce deals have kept very firm until recently, but a slackening in the demand and lower freights have weakened prices. It seems possible that we shall have a lower range of values for a time, with an improvement later. Hemlock moves off quickly, but without any demand. Birch.—The withdrawal of the prohibition on timber is a relief to the Canadian shippers, and hopes are entertained that the prohibition on planks will also be withdrawn. Pine is without change and firmly held. Pacific Coast woods.—There has been more doing, space being available to a limited extent.

London Market Report

Churchill & Sim, in their montly wood circular, under date of London, June 5th, report in part as follows:—There has been a reduced importation of wood into London during May, and the aggregate of the overside delivery has amounted to some 8,000 standards only, as compared with 13,000 in May, 1915. The general tone of the market has been weaker; buyers having become uneasy and nervous of future developments. This attitude seems largely the result of the action of the Swedish shippers, who delayed the abandonment of their rigid terms of business until the ports were open; this was followed by considerable pressure to sell, and unfortunately coincided with a time when circumstances connected with the demand, a partial easing off in freight rates, and an uncertain outlook in both these directions in the immediate future, were bringing about a feeling of indifference among importers.

On broad principles it may safely be said that, with so many wood producing districts shut off from participating in the supply, there is again little danger of overproduction this season, and given a continuance of a normal demand, the future course of the market rests to a great extent upon the question of the rates of tonnage.

From the St. Lawrence there has been imported—

J. & D. A. Harquail

Company, Limited

Manufacturers of Lumber

Extensive New Brunswick and Quebec timber limits, abundant with Virgin Spruce, Pine and Hardwoods.

Twenty years' experience in Milling and Manufacturing, together with a practical knowledge of Building and Architecture, is why our Customers tell us that the Dressing, Grading, and Manufacture of our Stock is just a little better than they expected.

Large stocks of 1 in. Spruce Lumber always on hand.

Try a car of our Air-dried Dressed Spruce.

We also make a Specialty of Kiln Dried Stock.

Our personal attention given to every detail.

Write, wire or phone us for quotations.

Established 1894 ***Incorporated 1908***

Campbellton, New Brunswick

Pine Deals, 11,000 pieces; against 5,000 pieces in 1915.
Spruce Deals, 17,000 pieces; against 21,000 pieces in 1915.
Birch Planks, none, against 1,000 pieces in 1915.
and from New Brunswick, etc.—
Pine deals, 4,000 pieces; against 3,000 pieces in 1915.
Spruce deals, 303,000 pieces; against 1,056,000 pieces in 1915.
Birch planks, 28,000 pieces; against 30,000 pieces in 1915.
The season is only now opening from the St. Lawrence, and the importation is negligible so far. There is no change in the prices for pine deals, but spruce are a little weaker. Importations from the lower ports was on a very moderate scale during May, and buyers generally are showing no anxiety to secure stock; steamer freights are lower, owners' conditions being so onerous that importers are disinclined to take the risks incident to the possibility of another experience of congested ports and a depleted labor supply, at all events in the present state of demand.

Market for Canadian Timber in India

Limited Consumption and Indifference of Canadian Exporters Responsible for Smallness of Trade—Openings for Some Canadian Stocks

By H. R. MacMillan*

The use of timber in India is extremely limited. The annual per capita consumption of timber, including all forms of rough wood used for fuel and other purposes, is estimated to be 1½ cubic feet, of which four-fifths is used for fuel. The total quantity of timber used, aside from fuel, is 96,000,000 cubic feet, equal to about 960,000,000 feet board measure, or three board feet per year per head of the population. By far the greater part of this is used in the form of rough logs and poles for building purposes.

The use of imported timber is confined exclusively to the industrial centres, railroads, public works and military necessities. The agricultural population uses absolutely no imported timber.

That Indian forests are able almost completely to meet the requirements of the country for timber is due to the splendid forest administration inaugurated by the British Government half a century ago. About forty per cent. of the country is under forest. The whole of this area is administered carefully to prevent destruction by fire and overcutting, and although at the time of British occupancy the more accessible forests had been almost ruined, wise management has already greatly increased their productivity. There still remain in some provinces, notably in Burma, large areas of hardwood forest, suitable for industrial purposes, which through lack of capital, suitable machinery and equipment have not been rendered accessible.

It is natural to find, therefore, that the timber imports of India, aside from teak, which is brought in from Java and Siam to the extent of $800,000 to $1,250,000 yearly, consist almost entirely of rough lumbers for temporary uses only, or manufactured wooden articles introduced by Europeans or rendered necessary by the development of industries.

So far as can be learned, the total export of rough timber from Canada to India during 1913-14 consisted of a cargo of railway sleepers sent in 1914. After railroad sleepers the most important item of Indian timber imports, from a Canadian standpoint, is that classified in India as deals and pine. The imports of deals and pine, which include all soft coniferous lumber, in the form of timbers, dimension, rough or dressed boards or box shooks (excepting tea chests) during 1913-14 were drawn from the following countries:—

	Feet Board Measure
United States	12,556,000
Austria-Hungary	3,785,000
United Kingdom	2,546,000
Norway	1,484,000
Sweden	863,000
Others	257,000
Total	21,491,000

Douglas fir constitutes about 57 per cent. of the total softwood imports of India. This is due to the fact that it more completely fills the requirements of the Indian market than any of its important European competitors.

Whenever permanent buildings and structures are being erected in India, whether in the large coast cities, on important public works or in smaller towns, the presence of white ants prevents the use of timber. There are no wooden floors in India and the only wood found in a building is in the doors, door frames, sash and window frames and, in the older buildings, beams and joists. Everything else is brick, stone and cement. Modern buildings are built with steel joists. Ant-proof timbers only are used in buildings. None of the imported softwood timbers are ant-proof. The same policy is followed in railroad construction, the sleepers are frequently the only timber on the railroad.

The rolling stock, station buildings, workshops, bridges, are metal, brick, stone and cement.

The imported softwoods are restricted in use to supplying timber for falsework, for remanufacture into articles of temporary use or for use in the extremely few situations free from white ants.

*Special report in the Weekly Bulletin of the Department of Trade and Commerce.

Douglas fir is the only timber procurable in the long lengths used for falsework in bridges or large buildings. Even in the sizes in which Indian hardwoods can be secured for this purpose Douglas fir is preferred because it is lighter to handle and more easily worked, with the exception of one or two very conservative and prosperous railroads still using teak at $100 per thousand for falsework where Douglas fir could be purchased at $33. Douglas fir is now in universal use for temporary construction purposes.

Douglas fir has also been the favorite timber for use by the military and naval authorities in temporary bridgework, fortifications, pontoon building and refitting troop and remount ships in connection with the various expeditions constantly on foot in India. Large quantities were used in the Mesopotamian expedition until the exhaustion of the stocks in hand led to the substitution of teak.

The merchants carrying stocks of Douglas fir in India have relied chiefly upon the railroad, public works and military demand. The presence of the stocks in the country has gradually led to the use of the timber for other purposes. It was, until the exhaustion of the stocks during the present year, the most popular timber in India for shell boxes at the Government and other shell factories, and was also used extensively in private trade for packing cases. Boards and planks are purchased by boxmaking companies and resawn by hand at a cost of about $10 per thousand for the manufacture of candle boxes and machinery crates. A constant demand has arisen from the five principal harbors where it is the chief timber for hatch covers, gangways, fenders and temporary piling. Small quantities of Douglas fir are manufactured into cheap furniture. Very little of the timber is sent inland from the ports, except as it is needed for special construction work.

No stocks are carried anywhere in the interior of India. Aside from falsework the only market found in the interior of the country has been for drying room floors in the tea gardens, a use for which Douglas fir has given good satisfaction.

Though many uses have been found for Douglas fir in India the total quantity of fir imported annually must remain as at present comparatively small because of the limited industrial development of the country. The Indian market is, however, extremely important in that it shows the excellent reputation which it is possible for Douglas fir to earn in a tropical climate. The climate of India is much more severe on timber than the climate of South Africa. Nevertheless, Douglas fir is used throughout the country for temporary bridges and no complaints have arisen concerning strength or suitability. Though for some years Douglas fir has not been accepted in South Africa for refitting transports, it is the most popular wood for this purpose in India. The different opinions held in South Africa and in India concerning the fitness of this timber for identical uses in the two countries illustrates the extent to which the use of wood is built upon first impression and upon prejudice.

An excellent instance of the life of Douglas fir merchantable timbers in a tropical climate was provided recently in Calcutta when timbers which had been in use for six years or more on different contracts for falsework were sold for resawing. The timbers though checked were sound and in good condition. No trace was discovered anywhere of Douglas fir having been affected by dry rot in India. This bears out the opinion expressed concerning the occurrence of dry rot in South Africa, that it develops in cargoes making long passages in sailing vessels. The shipments of Douglas fir to India are nearly all in steamers making the passage in less than two months.

The prospects for the development of valuable Canadian trade in Douglas fir to India depend upon two factors:—

1. Competition with United States shippers.
2. An increase in the use of Douglas fir.

Competition with United States

India is probably the only country importing Douglas fir to any extent, in which Canada has not maintained a share of the business. All the Douglas fir imported to India has come from the United States.

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The importers in India have even been under the impression that no Canadian ports were in a position to export Douglas fir cargoes. Of all the managers of timber importing companies in India only one, when directly asked, was aware that cargoes of such timber as they secure on Puget Sound could be secured with equal satisfaction and despatch from British Columbia. Even this gentleman had only learned within a few months that Douglas fir could be secured in British Columbia. This incredible state of ignorance on the part of the Indian importers can only be understood when the manner of handling the business is known.

There being no liner service from the Pacific ports of North America to India the timber trade is entirely dependent upon tramp cargoes. The importation of Douglas fir is therefore in the hands of companies strong enough to finance cargo shipments and carry the stocks for the year or so necessary to turn over a cargo in the Indian market. There are only five or six such companies in India. All are large trading companies interested in jute mills, coal mines, general engineering, importation of cotton piece goods, railroad construction, etc., with whom timber is only a side line. The timber branch of the business is in the hands of a subordinate employee of office experience. North American purchasing agents of these companies are located without exception in the United States. The timber buyers in India have not had any inducement to inquire if they could secure their supplies from brokers or shippers in Canada and no Canadian shippers have made any effort to get into the Indian market. Within the last few months the situation has slightly improved. One of the leading importers has established connections with a Canadian company and several others are desirous of doing so. The names and North American buying connections of the Indian importers of Douglas fir have been sent to the Commercial Intelligence Branch of the Department of Trade and Commmerce, Ottawa.

Once relations are established so that Canadian exporters secure inquiries sent out from India there should be no difficulty about securing a good share of the business. The sentiment of the importers is all in favor of buying in Canada if prices are equal.

The usual cargo imported to India is 2,500,000 to 3,000,000 feet. The specification as a rule calls for nothing but merchantable, a grade which has been found satisfactory for the uses to which Douglas fir has been put in India. One-third of the cargo is ordinary timbers, the remainder consists of a small quantity of 5/8-inch by 6-inch, 1-inch by 6-inch, and the balance in 1/2-inch, 1-inch, 1 1/2-inch, 2-inch, 3-inch, 4-inch, 5-inch, and 6-inch by 12-inch in 16-foot to 30-foot lengths. The importers do not do a retail business. Very rarely does any one importer bring in more than one cargo a year. The timber is carried in stock several months at least and is seldom carefully piled or protected from the weather.

A large proportion of the Douglas fir imported is resawn. All resawing is done by hand with whip or frame saws and costs about $10 per thousand feet. If the specifications were varied so as to decrease the amount of sawing in India the cost of the timber would be decreased. As a matter of fact, however, the interest of the importer lies in the other direction, his chief concern is to make his stock suitable for all needs. He accomplishes this by carrying a larger proportion than is really necessary in timbers which can be cut down to any size. The profit on handling Douglas fir is attractive, there being only a few firms in the business the competition is not ruinous.

The timber is usually sold out of the yard at $5.30 to $11.60 per thousand feet more than the landed cost in addition to any charges for resawing. Very much larger profits have been made during the past few months because of freight increases. The stocks now remaining in India (March, 1916) are held at $78.30 to $96.60 per thousand feet for merchantable. The ordinary selling price for merchantable was in normal times $30 to $35 per thousand feet. All timber in India is bought and sold by the ton of 50 cubic feet, equivalent in sawn and square timber to 600 board feet.

Increased Use of Douglas Fir

The increased use of Douglas fir is dependent on the decrease in the use of Scandinavian and Austrian timber and the increased industrial development of India.

Scandinavian and Austrian pines, which were in normal times higher in price than Douglas fir, owed their ability to compete to the fact that they could be imported by persons of limited capital or credit in small portions by liner shipments, and that they were used for packing cases, chiefly in the textile industry. Austrian pine was imported chiefly to Bombay, in rough planks, 1-inch x 3-inch x 12 feet at about $33 to $42 per thousand feet. Scandinavian timbers, which were used to a limited extent dressed and matched, were imported at about $45 to $50 per thousand.

The best prospect for meeting the Austrian and Scandinavian competition, including the importations of Baltic timber via the United Kingdom, which is centred chiefly in Bombay, is by the introduction of British Columbia spruce both in merchantable and dressed. When working arrangements are completed with Bombay importers, quotations should be submitted for rough spruce planks 1-inch—3-inch x 12-inch x 12 feet, 3-inch x 9-inch x 12 feet and for dressed spruce 5/8-inch x 6-inch x 12 feet, so that trial shipments could later be made with Douglas fir cargoes.

Important increases in the use of Douglas fir in India, aside from railway sleepers, may only be expected with further industrial expansion. Every effort is being made by the government and by private initiative to prepare for industrial development after the war. There are still many resources undeveloped, extensive railroad systems yet await completion; the labor reserves of the country, the astonishing fertility of the land, are assets which render assurance that industrial expansion, even if delayed, is inevitable.

About 20,000,000 feet of mixed hardwoods, classified in the table of imports as "other woods," are imported annually, chiefly from the neighborhood of the Malay Peninsula. These woods are cheaper than Douglas, costing $16.80 to $27 per thousand feet c.i.f. Indian ports. They are suitable for use only when small sizes are needed for crating, packing, or temporary purposes. The forest areas from which these woods are drawn are extensive but have not yet been developed on a commercial scale. The timbers are not so popular as Douglas fir. These timbers benefited greatly by the high freights which have kept Douglas fir out of the Indian market during the past year.

The quantity of Douglas fir sold in India yearly would not be in any way affected if the price were increased at the port of shipment by $5 per thousand feet. There are no competing timbers which would replace Douglas fir in uses for which Douglas fir is now purchased.

The Japanese are, during the war, making a determined effort to put rough lumber on the Indian market. Though the Japanese lumber exporters appear in some unaccountable manner to quote c.i.f. prices to India which appear entirely out of keeping with the freight rates quoted elsewhere for equal distances, they have not arranged much business. The prices quoted c.i.f. Calcutta, February, 1916, are $31 per thousand feet b.m. for Hokaido pine 12-inch x 12-inch x 8 feet and up and $53.50 per thousand for the same timber 1-inch x 6-inch x 8 feet and up. This wood resembles spruce merchantable in appearance, quality and uses. Oak and ash are also quoted. The mills making the quotations claim export outputs varying from 150,000 to 400,000 feet per month.

The c.i.f. prices quoted would be possible only if they were given substantial freight reductions by Japanese lines, probably to enable them to develop a new market at the present opportune time.

Tests of Fire Retardents, with Special Reference to the Shingle Roof

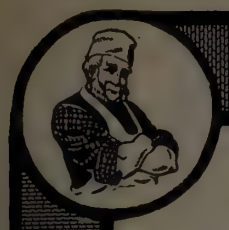
By Herman von Schrenk and Arnold von Schrenk

It has been known for a great many years that wood can be made more or less fire-retardent or fire-resistive. Such wood has, in the past, been called "fireproofed wood," which is an incorrect designation, because no process of treatment has ever made wood absolutely fireproof, and this is no less true of every other class of building material, none of which is absolutely fireproof under all conditions.

During the past year we began a series of investigations, on behalf of the National Lumber Manufacturers' Association, on fire-resistive treatment of wood. It was found that innumerable tests had been made in past years, both in this country and abroad, to demonstrate the efficiency of various compounds. These tests have usually taken the form of completed small buildings, one of which was built of wood in its untreated condition, the other built of wood treated with a fire-resistive compound, and setting fire to both of them. Such tests, while they are more or less spectacular, have very little practical value except in demonstrating that there are certain compounds which will retard ignition, or prevent it entirely. Conclusions of value cannot be drawn from these tests, because they hold only for the particular condition under which the test is made and have given practically no information as to the relative value of different fire-retardent substances, or of their permanence and weather-resisting qualities. In the same category fall other types of tests, made with torches, heated irons, the burning of shavings, etc., etc.

After an exhaustive study of the entire question, it was concluded that the first requisite for the proper interpretation of the possibilities of using fire-retardent wood was to develop some method for testing, first of all, the relative efficiency of fire-retardent substances as applied to wood, particularly as to the fire-retardent qualities of such compounds as distinguished from their permanence, availability, or cost. The second point concerning which very little information of definite value is available was the permanence of fire-resistive wood or the manner in which such wood resisted the action of wind and weather.

It was furthermore soon found that any discussion of the subject fell naturally into two divisions, due to the different methods of use



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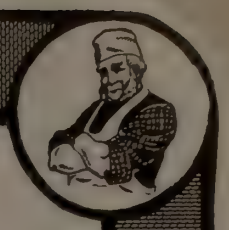

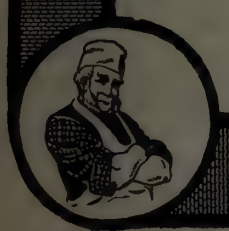

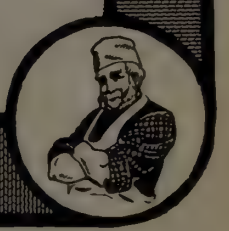

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and application of fire-resistive wood, one of which naturally deals with the problem as applied to building lumber and the other as applied to shingle roofs. The requirements for a successful fire-retardent will be very different for these two classes of use. A good shingle fire-retardent must be a compound which will be (1) fire-retardent, (2) permanent, that is, that it will remain unchanged on the roof, (3) that it will not be soluble in water, so as not to contaminate water for possible use in cisterns, etc., (4) that it will have a neat and attractive appearance, and (5) that it will be reasonable in cost.

In the case of building lumber, the question of insolubility in water is not of so great importance, and it frequently will also be found that the class of material used, for interior work particularly, will permit processes too expensive for use on shingle roofs. It will thus be seen that any investigation dealing with wood in relation to fire-retardent substances is an extremely complex and far-reaching matter.

The Tests

After a complete analysis of the problem, it appeared to us that the first thing to be done was to obtain definite information of the relative and actual fire-resistive qualities of the principal compounds advocated for rendering wood fire-resistive. It was determined to make the preliminary investigation with a small electric furnace developed by the United States Forest Service, to whom we are indebted for advice and assistance in this connection.

Without going into a detailed description of the apparatus, it may be said that the furnace is one in which treated wood is tested under definite conditions, which are identical for all of the tests made. The tested sections are exposed at the same distance to a plate heated electrically to a constant temperature (in all of the tests so far made the temperature was 450 degs. Centigrade, or 832 degs. Fahrenheit.) The efficiency of the material tested was measured by the length of time which it took, under the conditions described, to bring about ignition.

For these preliminary investigations all of the pieces of wood tested were kiln-dried. The fire-retardents used were bought in the open market or were contributed by the companies manufacturing them. The various compounds were applied to the test pieces as nearly as possible in accordance with the specific directions given by the manufacturer. Immediately preceding the tests, the pieces were carefully weighed, and they were again weighed after the tests. The difference in weight may be taken as a general indication of the relative value of the various compounds after ignition had once taken place. During the progress of the tests careful records were kept of the period of ignition and the duration of the burning of each piece tested. In addition to this, records were kept of the general characteristics, such as the intensity of burning, rate of spread of the flames, etc.

Up to the present time approximately 24 compounds have been tested. Two series of tests have been in progress, one using red cedar shingles and the other using yellow pine panels 6 in. x 12 in. x 5/8 in. thickness. The manner in which the tests were conducted was the same for both series.

The Shingle Roof

The proper construction of a fire-retardent shingle roof involves not only the treatment of the shingles with an actual fire-retardent, but also the problem of using a material which will withstand the action of the weather and which will not contaminate the rain-water. It is obvious that a compound may show very high fire-retardent efficiency, but very poor lasting power on a roof, either because of checking or flaking or by being more or less soluble in water.

In order to get some preliminary information as to the permanence of various compounds advocated for application to shingles, a number of experimental roof sections were constructed, each 6 ft. x 6 ft. These have now been under observation for approximately nine months. Each roof section has a gutter and a downspout leading into a barrel, so that the water coming from each individual section is collected for subsequent examination.

The Problems

It was inevitable that, early in the development of the investigation, we were confronted with an increasing number of problems and with a growing realization of the necessity for widening the scope of the investigations if we were to obtain the practical results contemplated. It should be remembered that the problem of first importance is getting an efficient fire-retardent shingle roof. The application of the fire-retardent must result in reducing the flying-brand hazard, and this must be done at minimum expense. The principal investigations so far conducted have dealt almost wholly with the question of fire-retardent efficiency.

The Needs

While these investigations have thrown much light on the present status of the fire-retardent question, the principal results obtained indicate in the strongest possible manner that it will be absolutely essential to enlarge upon these investigations before they can be practically applied. The present apparatus, while it has given and is giving valuable indications, will in all probability have to be considerably modified. The means at command have not permitted reconstructing this apparatus or undertaking a number of exceedingly important tests to increase its efficiency. The importance of having an approved national standard method for testing fire-retardence is of the utmost importance, because in the event that one or more such fire-retardents prove to be commercially practicable, it will be necessary to control the character of the fire-retardent, so that one may at all times know what class of material is being sold.

The second line of investigations (which should be very considerably extended and enlarged) deals with the construction of more exposed roof sections for testing permanence and possible water contamination. In addition there should be a considerable number of such roof sections available, treated with the same compounds, to be used for actual ignition tests after varying periods of exposure. While the results obtained in the electric furnace are of great significance, it should not be forgotten that after all a severe roof test under thoroughly known conditions will be necessary to draw reasonably accurate conclusions. The roof sections which are under observation at the present time are too few in number, and were erected with the modest means at our command to arrive at a method for making such determination. It is not at all impracticable to have a very considerable number of such roof sections constructed in various parts of the country in order to obtain data as to the influence of various climatic conditions upon the permanence of the material. It has already been shown that, after only nine months, some of the compounds tested are absolutely unfit from an exposure standpoint, although of very high value as fire-retardents.

Other Points

Intimately connected with the problem of rendering roofs fire-resistive is the question of the relative heat conductivity of the wooden shingle when compared with tile, slate and other forms of roof covering. A very small beginning has been made in this direction by the installation of self-registering thermometers in the garret of one building having a wooden shingle roof, a corresponding instrument in a protected place out-of-doors, and a third in a garret of a building covered with a metal roof. While the fire-retarding qualities of the wooden shingle are of the first importance, the allied problem of heat conductivity is so intimately connected with the fire-retarding qualities that the investigation of the two problems should go hand in hand.

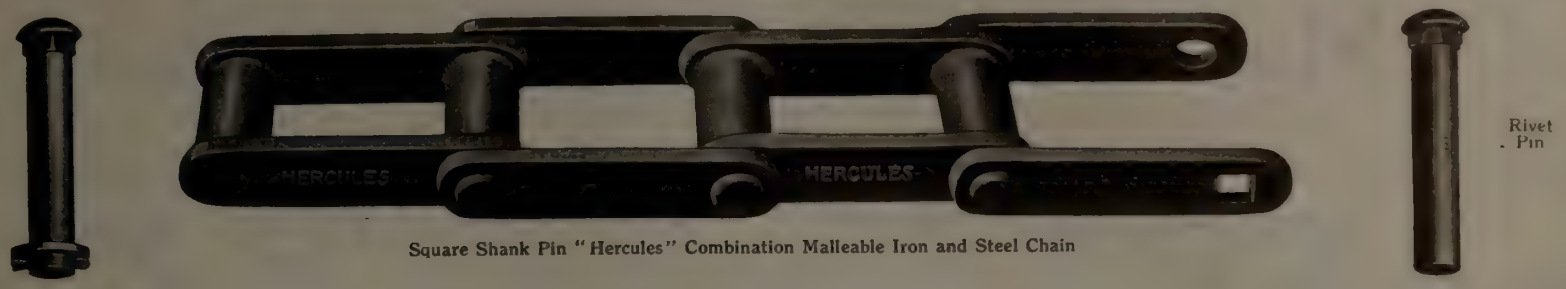
Conclusions

The conclusions so far reached indicate that several compounds are now available which, if properly applied to wooden shingles, will give a shingle roof a very high degree of fire-resistance. These same compounds at the present time have every guarantee of permanence, so far as this can be determined from a chemical investigation. They are insoluble in water and give a roof a pleasing appearance. For interior work, or for such places where direct weathering is of secondary importance, a very considerable number of compounds can be recommended, ranging from good mineral paints to more expensive materials. The strongest emphasis should be placed on the statement already made, that these results must be regarded as purely preliminary and that it will be absolutely essential to carry out some of the plans suggested before definite recommendations can be made as to the widely extended practical application of one or more of the substances investigated.

The results certainly indicate that there is every probability that a number of substances will be not only practicable, but fairly cheap, which with simple directions can be applied by the ordinary house owner and give him a high degree of fire protection, whether on a roof or in a building. The time is here now when advantage should be taken of the facts so far ascertained by enlarging on the scope of the demonstration tests. When such enlarged determinations have been made, there will be no reason why the manufacturers of lumber should not go before the public with a perfectly definite and concrete statement as to what may be reasonably expected of their product when properly safeguarded.

Mr. Harold Kennedy, who was at one time a very prominent lumberman in Quebec city, carrying on an extensive export trade to the Old Country, has acquired an estate near Maidstone, England, which will be placed at the disposal of the Canadian Medical Service as a convalescent hospital. The mansion is a very fine one and the estate comprises 5,000 acres. Mr. Kennedy has already placed Bromley Hotel at the disposal of the Canadian Medical Service for the same purpose.

During the year ending May 1, 1916, the National Hardwood Lumber Association inspectors were called upon to inspect in the Toronto district, 3,384,481 feet of lumber.



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The special feature of the Carbic system of lighting is the use of "Carbic cakes," which take the place of ordinary carbide of calcium. The carbic cakes are simply dropped into the machine as required and each of these cakes will produce approximately 15 cubic feet of pure acetylene. By the construction of the generators, the gas is automatically produced as required; that is to say, as soon as the lights are turned out generation ceases, and it is resumed when the lamps are again put in operation. There is, therefore, no waste, nor is there any after-generation, which is such an unpleasant feature in connection with some classes of acetylene lights; none of the characteristic unpleasant smell of carbide is experienced. Each cake will generate up to the last fragment. The operating expense is below that of ordinary coal oil. One filling of "Carbic Cakes" will keep the lamp burning steadily up to 12 hours, giving from 500 to 5,000 candle power as required. This system is possibly the newest, most simple, and most efficient method of producing a volume of perfect light, by which work can be carried on the same as in daylight. Many lumbermen are at present using the Carbic Light System with success. W. L. Foster, 8 Lombard Street, Toronto, is the Canadian agent.

New R. H. Smith Company Officers

The R. H. Smith Co., Ltd., St. Catharines, Ont., saw, knife and tool manufacturers, announce the following new officers: President, Mr. C. J. Shurly, Galt; Vice-President, Mr. R. F. Shurly, Toronto; General Manager and Treasurer, Mr. Fred Shurly, St. Catharines; General Superintendent, Mr. H. W. Byrne, St. Catharines; Secretary, Miss M. M. Parks, St. Catharines.

The President, Mr. C. J. Shurly, has had a long acquaintance with the saw trade, having been for many years senior member of Shurly & Dietrich, Maple Leaf Saw Co., Galt, Ont., from which company he withdrew some six years ago.

Mr. Fred Shurly, General Manager, is also well known to dealers and users of saws throughout Canada, having been associated with his father as representative salesman, as well as having a practical experience of the business.

Mr. H. W. Byrne, General Superintendent, has had a wide experience in the manufacture and use of saws, both in the United States and Canada, fourteen years of which he spent with the lumbering industries in the Ottawa Valley.

The new officers have acquired all the stock and holdings of the R. H. Smith Company, Limited,, have no connection whatever with any other concern and are purely Canadian in their organization. They are now remodelling and equipping their plant with new and improved machinery, which will enable them to maintain the "Leader" quality of goods.

It is interesting to note that the R. H. Smith Company, Limited, is the oldest saw works in the Dominion, having been established in 1855 by Joseph Flint, and has been doing an uninterrupted business for over 61 years. It is also of interest that the Vice-President, Mr. R. F. Shurley, and the General Manager, Mr. Fred Shurly, are grandsons of the founder.

The slogan of the company is "Goods of Quality."

A Hose Reel Adaptable to the Lumber Trade

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C. J. Shurly, Galt, Ont.
President

R. F. Shurly, Toronto, Ont.
Vice-President

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You have the Goods. Place your Lists with full particulars in our hands. We are in daily touch with all the Buyers in the United Kingdom.

PLEASE NOTE.—We pay cash against all documents, and take the whole of the Delcredere risk on Buyers.

Special "C C" Steel Loading Chain

For Lumbermen's Use

Light and Exceedingly Strong

The Columbus Chain Company

Lebanon, Pa. **Columbus, Ohio**

Address communications to Columbus, Ohio

Canadian Agent—

ALEXANDER GIBB

3 St. Nicholas Street - MONTREAL, QUE.

—an investment not an expense

We will dispose of all the Wood Pulp you can manufacture.

The Largest importers into Europe of Canadian Wood Pulp urge every Saw Mill in the Dominion to instal a small SODA PULP PLANT to take care of its Slats, Tops, Bottoms and Waste Wood. Contracts for long periods of years can be obtained. For full information, apply

BECKER & CO., LTD.
36-40 Ludgate Hill
LONDON, E. C., ENG.

WHO HAVE IMPORTED NINETY PER CENT. OF THE CANADIAN PULP SUPPLIED TO EUROPE SINCE 1899.

The Initial Outlay is a negligible item when the ever increasing demand for **Canadian** Pulp in the United Kingdom is taken into consideration. Investigate our proposition.

The EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS-DIEU-RIEN
MONTREAL - Canada
Head Office at Montreal.

SPRUCE rough or dressed

1" No. 2 and Better Birch, 1914 cut
also Basswood, Hemlock and Pine

Saw Mills at MONT LAURIER.
Dressing Mills at ST. JEROME.

Herman H. Hettler Lumber Co.
Midland, Ont.

DRY STOCK. 1915 SAWING

1 car 4/4	White Pine Good Shorts.
3 cars 1 x 7 in.	Mill Run White Pine.
5 cars 1 x 7, 9, 11 in./up	Mill Run White Pine.
5 cars 1 x 12 in.	Mill Run White Pine
2 cars 2 x 10 in.	Mill Run White Pine.
5 cars 2 x 12 in.	Mill Run White Pine.
5 cars 1 x 4 in. and up	No. 1 White Pine Culls.

Also complete assortment of White Pine, 1916 Sawing

EXCELLENT PLANING MILL FACILITIES

Everything in Spruce

Dressed and in the Rough

Campbell, MacLaurin Lumber Co.
Limited
Board of Trade Building, MONTREAL

Pine, Spruce Hemlock Hardwoods, Lath

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber. Lath and Shingles
Offices—500 McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

The Hogan lumber yard at Savanne, Ont.. was destroyed by fire on June 10th.

The Blind River Boom and Slide Company, Limited, Blind River, Ont., have secured an extension of their period of existence for a further term of ten years, from May 26, 1916.

The sash and door factory belonging to the Peter McLaren Lumber Company at Brockville, Ont., was seriously damaged by fire recently. The loss was partly covered by insurance.

The by-law to grant exemption of taxes for ten years to the Elmira Planing Mills Company of Elmira, Ont., was carried unanimously. This business was formerly carried on by Bauman and Letson, both of whom are interested in the new company.

Woodsplitter Limited, has been incorporated with head office at Toronto, Ont., and capital stock of $100,000, to carry on business as timber merchants, sawmill proprietors, etc. The provisional directors are R. McCulloch, F. H. Roberts and E. Gillis.

The Baetz Bros. Furniture Company, Limited, will take over and carry on the furniture manufacturing business of Baetz Bros. and Company, of Berlin, Ont. The capital stock of the company is $75,000. C. J. Baetz and J. A. Scellen are the provisional directors.

The Frontier Pulp & Paper Company, Limited, have been incorporated with head office at Thorold, Ont., and capital stock of $50,000, to carry on a general lumber, paper and pulpwood business. Mr. G. W. Knox, Niagara Falls, N. Y., is attorney for the company.

The Kilgour Davenport Company, Limited, have obtained a charter and will manufacture furniture, particularly davenports. The head office of the company is at Toronto, Ont., and the provisional directors are H. P. MacGregor, A .MacGregor and W. Keenan, all of Toronto.

The Wright Furniture Company has been incorporated at Port Arthur, Ont., to carry on the business of manufacturing, buying and selling furniture. The company is capitalized at $40,000, and the provisional directors are W. A. Wright, W. F. Lanworthy and A. J. McComber, of Port Arthur.

A group of Meaford manufacturers are negotiating with the Town Council of Stayner, Ont., for the erection of a planing mill and woodworking plant at that place. The manufacturers propose erecting a building to cost $25,000 and are asking for a loan of $15,000 from the town. If the deal goes through 35 men will be employed the year round.

The National Wood Manufacturing Company, Limited, South River, Ont., have commenced the erection of a large factory and a small sawmill, where they will manufacture veneers, baskets, broom and mop handles and a number of other kinds of small woodenware. The company already have secured such machinery as they require at present. They purpose selling their output wholesale. Among those interested are W. J. Ard, general merchant, C. A. Jackman, Albert Howard and T. J. Ryan, all of South River.

Eastern Canada

G. Lachance & Cie, pulpwood dealers, Chateau Richer, P. Q., have been registered.

La Lac Blanc Cie, have opened a lumber and granite yard at Montreal, P. Q.

J. A. Guertin, Shawinigan Falls, P. Q., sash and door manufacturers, have been registered.

The large woodworking factory belonging to Mr. John Gaudet at Memramcook, N. B., has been destroyed by fire. The loss is estimated at nearly $20,000.

Tuttle's lumber mill at Moncton, N. B., was destroyed by fire on June 11th. The loss amounted to about $8,000. The mill had not been operated for some time. There was no insurance.

A new company to be known as the Sorel Shipbuilding and Coal Company has been formed to engage in shipbuilding and ship repairing. The capital stock of the company will be $100,000, and the head office will be located at Montreal, P. Q.

An amalgamation has been brought about between the Montreal Box Board Company, of Montreal, and the Trent River Paper Company, of Frankford, Ont., makers of straw and wood board. When the details of the amalgamation are complete the firm will be known under the name of the Canada Box Board Company.

The Canadian Forestry Products Limited, has been incorporated with head office at Montreal, P. Q., and capital stock of $9,500, to carry on business as manufacturers of and dealers in timber, wood, timber limits, pulpwood, cord wood, railway ties, etc. Those interested are L. H. Boyd, A. R. Johnson and J. O. O'Brien, of Montreal, and A. Ross, of Westmount.

Western Canada

A. Forsythe & Company, lumbermen, High Bluff, Man., have opened a branch at MacDonald, Man.

Councillor Williams, Sperling, B. C., who recently sold his sawmill to Wm. MacDonald, will start another mill at Salmon River, near Jardine, B.C.

The sash and door factory and stock belonging to J. G. Morton at Vic-

toria, B. C., was recently damaged by fire. The loss is fully covered by insurance.

Wm. Warren Zlyth, of New Zealand, who has extensive investments in British Columbia, proposes to construct and operate a shingle mill near Vancouver, B. C.

The Hammond Cedar Company, Limited, has been incorporated with head office at New Westminster, B. C., and capital stock of $40,000, to carry on business as manufacturers of and dealers in timber, logs, lumber, etc.

Extensive floods in the East Kootenay Valley, B. C., through which the Elk River and its tributaries run, are reported to have destroyed mills belonging to the Riverside Lumber Company, the Ross-Saskatoon Lumber Company and the Elko Lumber Company.

Wm. MacDonald has purchased the Sperling Lumber Company's plant at Sperling, B. C., and is moving it to a new location adjoining a timber limit containing some 6,000,000 feet, largely of spruce. It is expected that the mill will be in operation shortly after the first of July

Sealed tenders are being received by the Minister of Lands for British Columbia, until July 5, 1916, for the purchase of License X649, to cut 3,000,000 feet of spruce, fir, balsam, and jackpine on an area situated on Bugaboo Creek, Kootenay District. One year will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia until July 5, 1916, for the purchase of License X549, to cut 2,000,000 feet of spruce, fir, balsam, and jackpine on an area adjoining Lot 9023, Bugaboo Creek, Kootenay District. One year will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia until July 5, 1916, for the purchase of License X615, to cut 1,070,000 feet of Douglas fir, cedar and hemlock on an area adjoining Lot 2696, Green Bay, Nelson Island, New Westminster District. Two years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia until July 5, 1916, for the purchase of License X617, to cut 3,737,000 feet of fir, cedar, hemlock, and 730 poles on an area adjoining Lot 672, Skookum Chuck Narrows, New Westminster District. Two years will be allowed for the renewal of the timber.

The Fegles-Bellows Engineering Company, Limited, has been incorporated with head office at Winnipeg, Man., and capital stock of $100,000, to carry on the business, among other things, of manufacturers and dealers in lumber and timber, wholesale and retail lumber merchants, to operate sawmills, planing mills, etc. Those interested are D. B. Fegles and W. S. Bellows, of Fort William, Ont., W. H. Carter, F. E. Halls, G. E. Elliott and W. Smith, of Winnipeg, Man.

Messrs. Wilson Bros., a United States firm, who have large holdings of timber on the Nimpkish River, Vancouver Island, have nearly completed negotiations with the B. C. Government for the right to develop 30,000 h.p. on the Nimpkish River. When these negotiations are concluded they will commence the construction of a dam on the river and will put up a large sawmill. It is reported that the company will spend from three million to four million dollars on their various plants.

Liverpool and Manchester Stocks

The following report upon Liverpool and Manchester stocks for the month ending May 31st, 1916, is furnished by H. W. Lightburne & Company, Liverpool, and their St. John, N. B., representatives, John E. Moore & Company, Limited.

Spruce and Birch

Month Ending 31st May, 1916

Liverpool

	Import			Consumption			Stock		
	1914.	1915.	1916.	1914.	1915.	1916.	1914.	1915.	1916.
N.B. & N.S. Spruce & Pine, Stds. ..	1,970	3,540	1,900	2,140	1,940	1,530	5,660	5,370	6,010
Birch Logs, Loads	400	120	0	480	220	40	640	40	360
Birch Planks, Stds.	291	73	121	230	176	133	443	67	303

Manchester

Spruce, Stds. ...	1,630	2,400	1,670	3,000	1,820	1,630	8,510	2,780	6,920
Birch Logs, Loads	380	0	0	80	60	60	540	0	480
Birch Planks, Stds.	327	0	121	91	91	121	497	103	327

Stocks in Manchester and Liverpool Combined

Spruce

	1912.	1913.	1914.	1915.	1916.	
Manchester	6,530	4,710	8,510	2,780	6,920	
Liverpool	2,710	3,960	5,660	5,370	6,010	
	9,240	8,670	14,170	8,150	12,930	Stds.

Birch Logs

Manchester	300	480	540	0	480	
Liverpool	800	780	640	40	360	
	1,100	1,260	1,180	40	840	Loads.

Birch Planks

Manchester	206	418	497	103	327	
Liverpool	485	715	443	67	303	
	691	1,133	940	170	630	Stds.

SPRUCE LUMBER

About Two Million Feet Inch Stuff.

Early Shipments

From Monteith, Ontario

The Monteith Pulp & Timber Company, Limited

123 Bay St. - Toronto

PHONE ADELAIDE 1999

H. BOURGOUIN

Dominion Express Bldg., 145 St. James St., Montreal

Wholesale Lumber and Timber

SHELL BOX STOCK

White and Red Pine, Spruce

Hemlock, Birch, Maple

Railway Ties, Fence Posts, Etc.

Prompt shipment. Satisfactory stock. Good service Write for Prices.

A. F. B. AUSTIN, Manager

"TORONTO" Blower Systems

We have the experience and staff of engineers that enable us to design and construct the most efficient blower and exhaust systems for removing shavings, sawdust, emery dust, lint, smoke, odors, etc.

The FOSTER BLOWER will save you money

WRITE US.

The Toronto Blower Co.

156 Duke St., Toronto

A New Adam Hall Camp Heater

The accompanying illustration shows a new camp heater which has recently been put on the market by Adam Hall Limited, of Peterboro, Ont. This is a somewhat smaller heater than the former ones produced by Adam Hall Limited, being only 23 inches in diameter, and consequently lower in price. It is made with a solid steel body, cast ends and adjustable shelves, and is a successful addition to the extensive line of lumbermen's stoves and ranges manufactured by this well-known and reliable firm. Adam Hall, Limited, have for years

The New Adam Hall Camp Heater

been exclusive manufacturers of lumbermen's ranges and not only in Canada from coast to coast, but through many other parts of the world their ranges can be found. Accompanying the Canadian Forestry Battalion now operating so successfully in the English forests, went Adam Hall ranges exclusively, with which the whole camp has been equipped.

Jeffrey Mfg. Company Re-open Office at Seattle

The Jeffrey Manufacturing Company, of Columbus, Ohio, announce the re-opening of their Northwestern branch office at Seattle, Wash., and the appointment of Mr. Percy E. Wright, Consulting Mechanical Engineer, as District Manager for Oregon, Washington, Alaska, British Columbia and Alberta. Mr. Wright, who has been in the Northwest since 1910, and whose connection with this company dates back to 1902, has had a wide and varied experience and training in the handling of the Jeffrey line in the engineering, construction, and sales departments, which will enable him to be of great assistance to customers in solving their elevating, conveying and transmission problems.

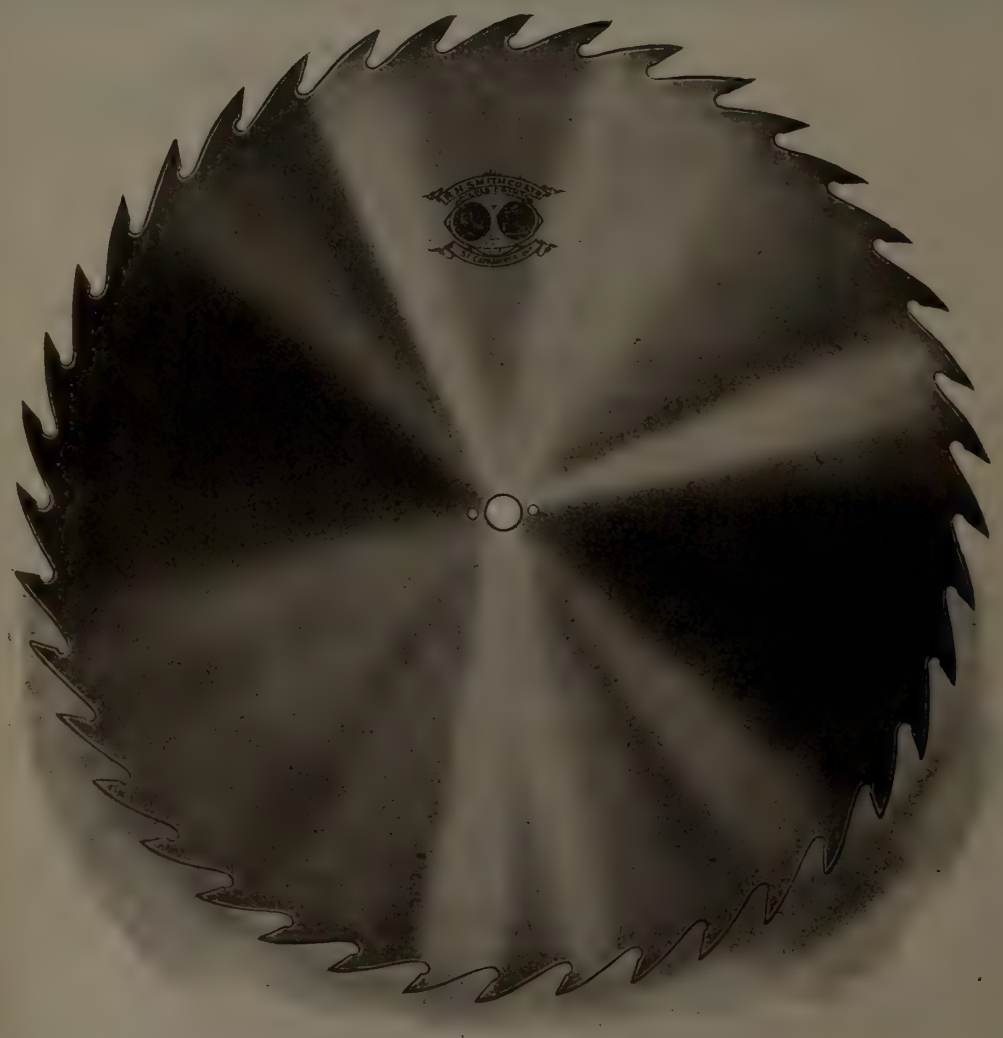
Hoe Chisel Tooth Saws

Mr. H. J. Cooper, sales manager for R. Hoe & Company, 504-520 Grand Street, New York (America's oldest saw manufacturers), has just paid a business visit to Ontario, Quebec and the Maritime Provinces. Mr. Cooper reports an exceptional improvement in lumber manufacturing conditions in these provinces, and states that the future outlook for the lumber industry throughout the whole of the North American Continent is decidedly bright.

Naturally Mr. Cooper is particularly pleased with the increased demand this year for Hoe chisel tooth saws, chisel bits and shanks. Hoe products have been before the buying public now for nearly ninety years, and the fact that their sales this year show a substantial increase is evidence of their exceptional merit.

Through the efforts of Mr. H. J. Mackin, of the Canadian Western Lumber Company, Fraser Mills, B. C., a donation of 30,000 feet of lumber has been made by a few of the larger B. C. mills to the Vancouver Aero Club, for the purpose of building hangars for the use of the B. C. Aviation School which opened at Coquitlam on June 15th.

Philip T. Coolidge, who has been assistant State Forester of New Jersey since January, 1915, has opened an office for timber estimating and forestry work in the Stetson Building, 31 Central Street, Bangor, Me. He will undertake particularly such work as timber estimating and mapping, surveying, management of lumbering operations, supervision of stumpage contracts, and forest planting, having had wide experience which fits him especially for such lines of work.



Our repair department will give you the best of service

R. H. SMITH CO., LTD.

ST. CATHARINES, ONT.

Quality remains long after the first cost disappears.

Using only the highest grade steel (extra fine) coupled with our 61 years' saw experience in Canada, is a guarantee to the trade.

We Specialize in

Single, Solid and Inserted Tooth Circulars, Gang and Crosscut Saws

"GOODS OF QUALITY"

TENTS

For the Lumberman and Contractor
Every Style, Every Make, Every Good Quality

Send for Our "CATALOGUE DE LUXE" and Prices

OTTAWA
MONTREAL

Smart-Woods LIMITED

TORONTO
WINNIPEG

RUBBER GOODS
FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable.

Hose for Steam, Water, etc., in various grades, made especially to give satisfactory and economical service under different conditions.

Fire Hose One or more of our twenty brands of Fire Hose will be found, not only in the best equipped Factories, Mills, etc., but in almost every Fire Department in the Dominion.

Gutta Percha & Rubber, Limited

TORONTO MONTREAL WINNIPEG REGINA SASKATOON CALGARY EDMONTON VANCOUVER

HOE

Chisel Tooth Saws

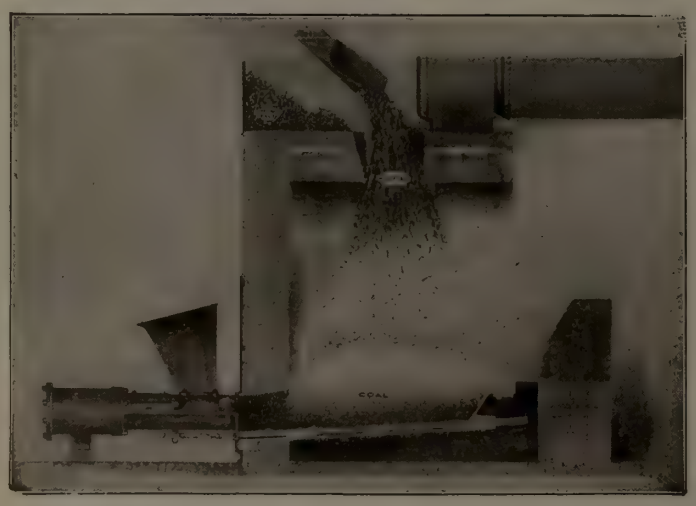
The Choice of Lumbermen in two Hemispheres

More than 80,000 of these saws are now in use in all parts of the world. Hoe Chisel Tooth Saws are backed by 86 years' experience in the manufacture of saws. They are made from the finest steel, evenly tempered throughout. Special Flanged Shanks and Superior Bits are supplied for sawing hardwood.

We are the oldest Saw manufacturers in America

R. HOE & CO. 504-520 Grand Street, NEW YORK CITY

Make Steam and Dollars From Your Refuse



Arrangement of Jones Underfeed Stokers in Dutch Oven for burning paper mill refuse in conjunction with coal.

Burn your saw mill and paper mill refuse in our special Jones Underfeed Stoker Dutch Oven and increase your profits.

Our stokers are installed in many of the most modern pulp and paper mills throughout Canada and the United States using a system combining the burning of mill refuse in conjunction with a small proportion of coal and are giving excellent results. If you have refuse to dispose of or if you depend on coal alone to fire your boilers the addition of a Jones Underfeed Stoker will make an enormous cut in your costs for steam.

Partial List of Users

	Boiler H.P.
Cleveland-Sarnia Sawmill Company, Limited, Sarnia, Ont.	1,200
St. Lawrence Pulp & Lumber Corporation, Chandler, P.Q.	3,000
E. B. Eddy Company, Hull, P.Q.	2,700
Kinleith Paper Company, St. Catharines, Ont.	450
Abitibi Pulp & Paper Company, Limited, Iroquois Falls, Ont.	1,672
Edwin Crabtree & Sons, Limited, Crabtree Mills, P.Q.	300
Minnesota & Ontario Power Company, Fort Frances, Ont.	1,533

Jones Underfeed Stoker Co., Limited

National Trust Building - TORONTO

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa, Deputy Minister.
December 20th, 1912.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	31 00	32 00
1 x 12 common and dressing	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft.		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft.		16 00
2 x 4 to 12, 10 and 16 ft.		20 00
2 x 4 to 12-in., 12 and 14 ft.		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet: 8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain		31 50
Fir flooring, 1 x 4, edge grain		35 00
Fir flooring, 1 x 4, flat grain		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 25
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	40 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1st and 2nds, 4/4	42 00
Birch, No. 1 com. and bet., 4/4	35 00
Birch, 1st and 2nds, 6/4 and 8/4	45 00
Birch, 1st and 2nds, 10/4 and 12/4..	52 00
Birch, 1st and 2nds, 16/4	55 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4..	34 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet...	28 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	32 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1st and 2nds, 4/4	40 00
Hard Maple, common and better, 4/4	30 00
Hard maple, 12/4 & 16/4, 1sts and 2nds.	46 00
Red oak, plain 1st and 2nds, 4/4....	66 00
Red oak, plain, No. 1 com., 4/4.....	40 00
Red oak, plain No. 2 com. 4/4.....	32 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain 1sts and 2nds, 4/4.	68 00
White oak, plain, No. 1 com., 4/4....	40 00
White oak, plain, No. 2 com., 4/4....	32 00
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	66 00
Red and White oak, plain, No. 1 com. 5/4 and 6/4	43 00
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00
Red and White oak, plain, 1sts and 2nds, 8/4	72 00
Red and White oak, plain, No. 1 com. 8/4	48 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00
White oak, ¼ cut No. 1 common	57 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$52 00	54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips	23 00	24 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	24 00	25 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00	27 00
Pine, 1-in. x 10-in. M.R.	28 00	29 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x 10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	17 50	18 00
1"x 3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16'	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles:		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	75	80
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Quebec Spruce Deals		
12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00
Cuts and Better	
4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00
No. 1 Cuts	
1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00
No. 2 Cuts	
1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00
No. 3 Cuts	
1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00
Common and Dressing Mill Run	
1-in. x 4-in.	25 00
1-in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00
No. 1 Barn	
1 inch	31 00 45 00
1¼, 1½ and 2-in.	36 00 45 00
2½ and 3-in.	45 00
4 inch	50 00
No. 2 Barn	
1 inch	28 00 36 00
1¼, 1½ and 2-in.	30 00 36 00
2½ and 3-in.	38 00
No. 3 Barn	
1 inch	21 00 28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00 25 00
Box	
No. 1, 1, 1¼, 1½, 2-in.	22 00 25 00
No. 2, 1¼, 1½, 2-in.	19 00 23 00
Mill Culls	
Mill run culls, 1-in.	19 00
1, 1¼, 1½ and 2-in.	20 00
No. 2	17 00 18 00
Lath	
No. 1, 32-in. pine	1 80
No. 2, 48-in. pine	4 35
No. 1, 48-in. pine	4 85
No. 3, 48-in. pine	3 85
Hemlock Lath 48 in.	3 80

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1. E.			
	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8	14 00	17 00	20 50	21 50
2 x 10	18 00	18 50	21 50	22 50
2 x 12	18 00	19 00	23 50	23 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension	
2 x 4, 8, 12, 14, 16	21 50
2 x 4, 10, 18, 20	23 50
2 x 6, 8 to 16	21 50
2 x 8, 8 to 16	21 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	29 50
2 x 10 and 2 x 12; 8-16 ft.	26 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	28 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	30 50
No. 1 Common Boards	
4 inch	22 00
6 inch	24 00
8, 10, 12 inch	26 50
Mixed widths	25 50
Flooring	
4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00
Shiplap—Finished	
6 inch	22 50
8, 10 and 12 inch	23 50
Siding	
6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00
Lath	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed)	4 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	27 10
3 x 8 in.; 8 to 16 ft.	24 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	27 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	29 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	20 50
2 x 4 in.; 12 and 14 ft.	21 50
2 x 4 in.; 10 and 16 ft.	22 50
2 x 4 in.; 18 and 24 ft.	23 50
2 x 4 in.; 22 and 24 ft.	24 50
2 x 4 in.; 26 to 32 ft.	26 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	23 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	25 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	26 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	28 00
2 x 14 in.; 10 to 16 ft.	28 00
2 x 14 in.; 18 and 20 ft.	30 00
2 x 14 in.; 22 and 24 ft.	31 00
2 x 14 in.; 26 to 32 ft.	33 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	24 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	25 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	26 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	27 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	27 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	27 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	28 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	28 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft.	23 00
No. 2 Shiplap, 6 in.	22 00
No. 2 Shiplap, 8, 10 and 12 in.	23 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 85

LATH

Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ⅜ x 1⅜ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$94 00
Uppers 5/4 to 8/4	92 00
Uppers 10/4 to 12/4	97 00
Selects 4/4	84 00
Selects 5/4 to 8/4	82 00
Selects 10/4 to 12/4	92 00
Fine common 4/4	61 00
Fine common 5/4	65 00
Fine common 6/4	65 00
Fine common 8/4	67 00
No. 1 Cuts 4/4	51 00
No. 1 Cuts 5/4	57 00
No. 1 Cuts 6/4	59 00
No. 1 Cuts 8/4	61 00
No. 2 Cuts 4/4	32 00
No. 2 Cuts 5/4	43 00
No. 2 Cuts 6/4	45 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	33 00
No. 3 Cuts 6/4	34 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	46 00
Dressing 5/4 x 10	51 00
Dressing 5/4 x 12	52 00
No. 1 Moulding 5/4	58 00
No. 1 Moulding 6/4	58 00

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NATIONAL

LOGGING CARS

THE LOGGING CAR Department is in good shape to give exceptional Service on orders for logging cars of any capacity. The special features of National Logging Cars are worth looking into when you are considering the purchase of new cars. The Engineering Department will gladly send full details and illustrations of Stock or Special Cars.

National Steel Car Co., Limited

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SHAUGHNESSY BLDG.

Works and Operating Offices:
HAMILTON, CANADA

CURRENT LUMBER PRICES — Continued

No. 1 Moulding 8/4	58 00
No. 2 Moulding 5/4	47 00
No. 2 Moulding 6/4	47 00
No. 2 Moulding 8/4	47 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	34 00
No. 1 Barn 1 x 10	36 00
No. 2 Barn 1 x 6 and 8	32 00
No. 2 Barn 1 x 10	34 00
No. 3 Barn 1 x 6 and 8	26 00
No. 3 Barn 1 x 10	27 00
Box 1 x 6 and up	23 00
Box 1 x 10	25 00
Box 1 x 12	26 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	37 - 39	24 - 26	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in...		98 00
Selects, 1 to 2 in.		88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	72 00	74 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	38 00	40 00
No. 2, 1 x 10	34 00	35 00
No. 2, 1 x 8	33 50	34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 50	30 00
No. 3, 1 x 8		29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	28 00	29 00
Spruce, 12 in. dimension	29 00	30 00
Spruce, 9 in.		27 00
Spruce, 8 in. and under dimen.	27 50	28 00
10 and 12 in. random lengths, 10 ft. and up	27 50	28 50
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 50	23 00
All other random lengths, 7-in. and under, 10 ft. and up	21 50	23 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50	23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled		22 00
1⅝-in. spruce laths	4 15	4 25
1½-in. spruce laths		4 00

New Brunswick Cedar Shingles

Extras	3 50	3 60
Clears	3 10	3 15
Second clears	2 40	2 60
Clear whites	2 25	2 30
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.		3 75
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear		3 65

Logging Locomotives
Made in Canada

Our fifty years' experience in the design and manufacture of logging locomotives is at your disposal. Many of the largest logging operators in Canada are using our "Canadian Made" locomotives.

Our logging models are as carefully designed and built as our 200 ton sizes—oil or coal burning.

MAY WE SEND YOU SPECIFICATIONS?

This engine is 13½ ins. x 18 ins. and weighs 35 tons.

Canadian Locomotive Company, Limited, Kingston, Ont.
Taylor and Arnold Ltd., Sales Agent, Montreal and Winnipeg

Meet Me at the TULLER—for Value, Service, Home Comforts.

NEW
Hotel Tuller
DETROIT, MICH.

Center of business on Grand Circus Park. Take Woodward car, get off at Adams Avenue

ABSOLUTELY FIREPROOF
200 Rooms, Private Bath, $1.50 Single, $2.50 Up Double.
200 Rooms, Private Bath, $2.00 Single, $3.00 Up Double.
100 Rooms, Private Bath, $2.50 Single, $4.00 Up Double.
100 Rooms, Private Bath, $3.00 to $5.00 Single, $4.50 Up Double.
TOTAL, 600 OUTSIDE ROOMS
All Absolutely Quiet

Two Floors—Agents' Sample Rooms. New Unique Cafes and Cabaret Excellente.

PRATT & WHITNEY CO.
OF CANADA, LIMITED
SMALL TOOLS
Taps — Dies — Reamers — Cutters — Drills
MADE IN CANADA
As good as money can buy—Guaranteed absolutely!
Head Office and Works, DUNDAS, ONT.
SALES OFFICES:
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Packard 3-Ton Chainless Motor Truck operated out of Blind River, Ontario, by Eddy Brothers & Company, Limited.

CHEAPER "TOTING"

Several Canadian lumbermen are effecting a considerable saving by hauling supplies to their camps with

Packard

MOTOR TRUCKS

One Company makes a fifty-mile round trip per day and finds that the cost of operation and road repairs is saved several times by a

Lower cost per ton to deliver goods. Saving of interest and insurance on supplies formerly "toted in" on the snow and carried over for Fall use.

Our truck operation expert will make a trip over your roads and report on the practicability of your using a Packard motor truck, absolutely without obligation to you. If a Packard truck can't "make good" for you, we don't want to sell it. Write us today or

Ask the man who owns one

THE ONTARIO MOTOR CAR COMPANY, LIMITED

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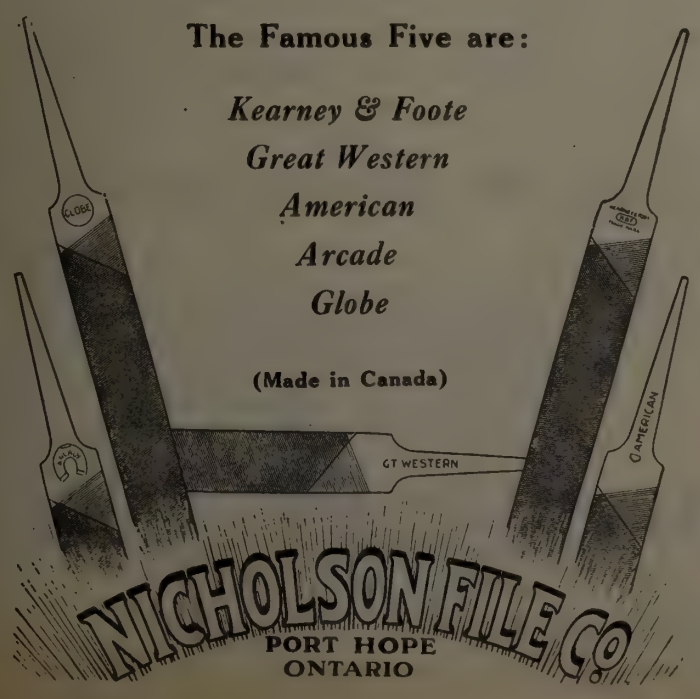

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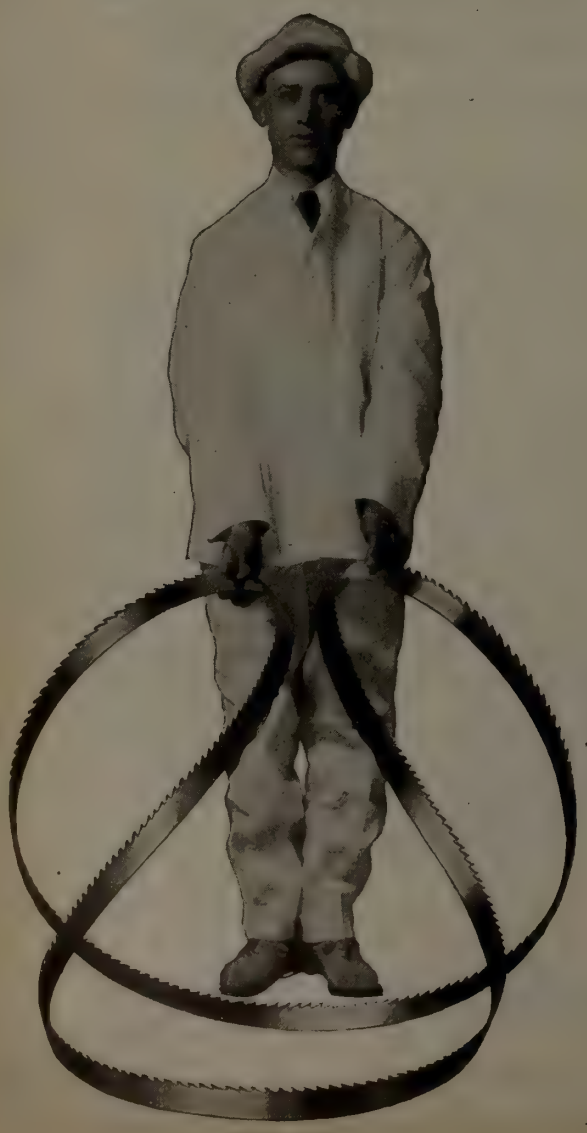

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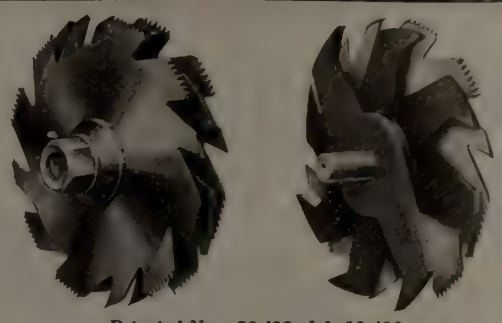

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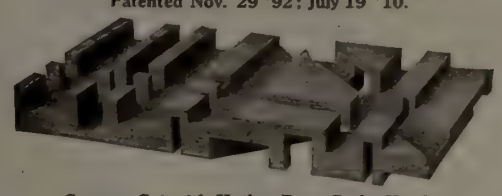

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Each and every part must be sure to fit not only the locomotive for which it was made, but every other locomotive of the same size and design. Spare parts must be instantly available, made so well as to go into place without a machine shop.

We have a number of standard sizes of locomotives in stock and can make immediate delivery.

MONTREAL LOCOMOTIVE WORKS, LIMITED,

DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

The Peter Hay Knife Co., Limited

GALT, ONTARIO

MANUFACTURING WOODWORKING

Machine Knives, Circular Cutters and Mortise Chisel

No. 2 Bolter

Our No. 2 Bolter is constructed in the same careful manner used in all Long Lumber Machinery.

It is of a size designed especially for the single band or circular mill. The No. 2 Bolter carries three 16 inch diameter saws that can be spaced for lath, for pickets or for slat service. The main frame has a one piece construction, covering a floor space of just 4 feet 4 inches x 3 feet 11 inches. Machine complete weighs 1600 pounds

Send for Catalogue No. 102 and prices.

The E. Long Manufacturing Company

Orillia Limited Ontario

Advantages Offered in the Waterous Bandmill

1.—It is built in 8, 9 and 10 ft. sizes—one for every kind of work.

2.—The spring-cushioned, all knife-edged tension device is the most sensitive in use.

3.—Upper and lower guides swing about the exact centre of the saw blade.

4.—The upper guide is raised and lowered by steam, an accurate, easy and swift adjustment unequalled by any other.

5.—Wheel raising device and tilting device are roller bearing.

6.—All operating mechanism is enclosed within the columns—sawdust and slivers cannot reach it.

7.—Massive design of bed and columns precludes vibration during cutting. This mill is absolutely steady doing the heaviest work.

8.—Mandrel bearings, both upper and lower, are easily adjustable and align rapidly and accurately.

9.—Every part of the mill is designed to make millwrighting easy and adjustments and inspections can be made without difficulty.

10.—Waterous Band Mills are designed and built in a plant that has specialized in the manufacture of Canadian sawmill machinery for more than seventy years.

Ever See This Mill at Work?

Ask us to send you a list of users. There is one in your neighborhood.

The Waterous Engine Works Co. Limited

Head Office Brantford, Can.

Branches and Agencies

WINNIPEG, MAN.
VANCOUVER, B.C.
BRISBANE, AUSTRALIA
VALPARAISO, CHILI
SYDNEY, N.S.W.
ST. PAUL, MINN., U.S.A.

"FROST KING" METAL

$5,000,000.00
worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price 30c per lb., Fort William and East; West of Fort William 35c per lb., delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

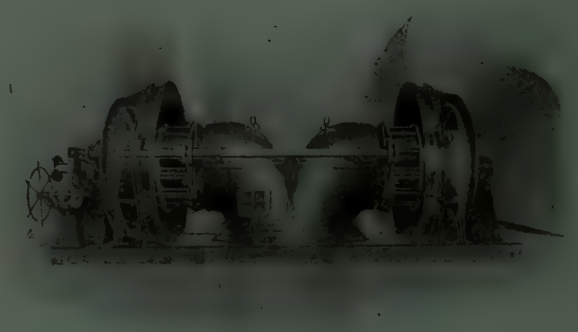
For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, 40c per lb.; West of Fort William, 45c, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

The Low Head Plant
with
SMITH HYDRAULIC TURBINES



has established a reputation for real service that is second to none in the field of water power utilization. It is the result of all-round efficiency, hydraulic as well as mechanical, and has been attained by the careful consideration of every feature entering into the design of turbine equipment.

Our thorough investigation of the conditions peculiar to any proposition assures a practical and economical solution of the problem.

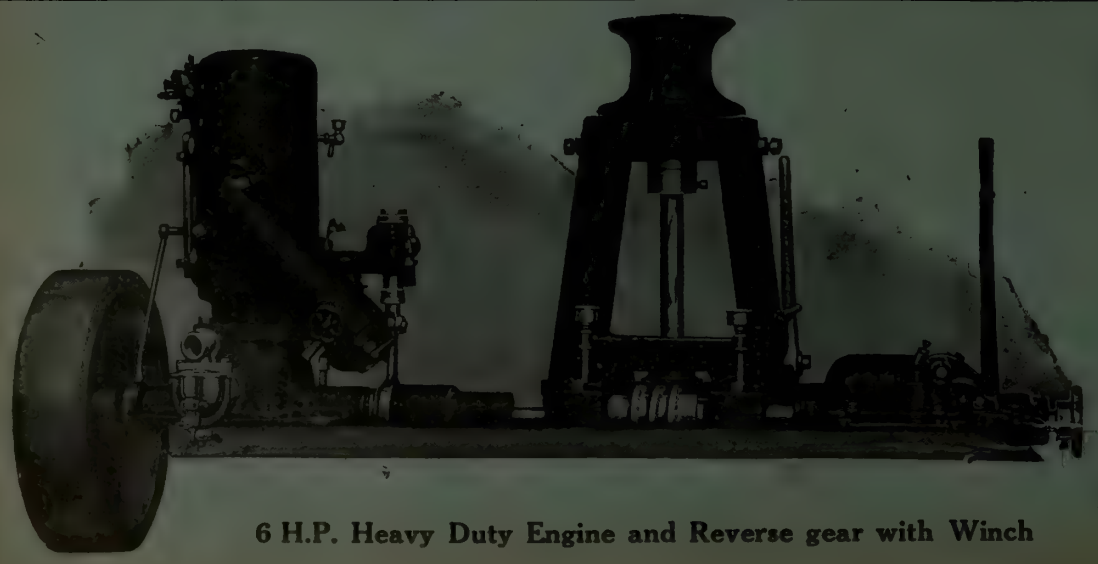
Write for Bulletin F

S. Morgan Smith Co., York, Pa.

H. B. VanEvery—CANADIAN REPRESENTATIVE
405 Power Bldg. - - - Montreal, Can.

Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.
Limited
General Mill Supplies MONTREAL



6 H.P. Heavy Duty Engine and Reverse gear with Winch

River Driving Costs

will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

Adams Launch & Engine Co.
Penetang, Ont.

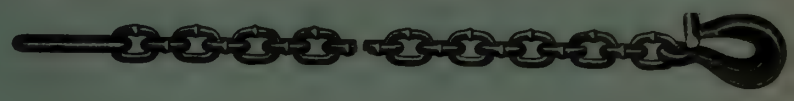
Vol. 36 Toronto, July 15, 1916 No. 14

Canada Lumberman & Wood Worker

EVERY dollar you spend for Dart unions to make the connections on your piping will return you two for one in saving and service.

That's why Dart unions are guaranteed two for one. Your jobber sells them.

Dart Union Co., Limited, Toronto



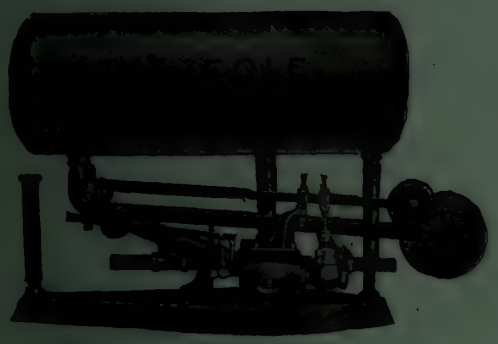
Made in all styles

Electric-Welded Boom Chain

We also specialize
Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.



The "Cole" for Coal Economy

You do not have to cool condensation down to 180 degrees to accommodate your pump. The result is an enormous saving of fuel. The good circulation means top-notch efficiency. The COLE also saves water, oil, time and worry.

GEO. W. COLE CO. : : 838 DUNDAS STREET TORONTO.

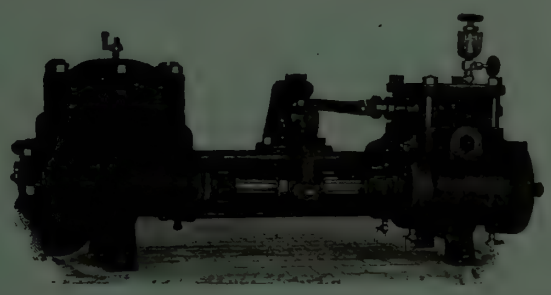
"TOWER"

HAIR BELTING

Woven from Camel's Hair Yarn

Manufactured and guaranteed by

Turner Bros. Canada Limited
Montreal



There's a
SMART-TURNER PUMP
to meet your every need.

Buy the best, and join the "Don't Worry" Club.

The Smart - Turner Machine Co., Limited
HAMILTON, - CANADA

GEM EJECTOR

J. M. T. Steam Specialties

J. M. T. Steam goods have been designed to meet present-day needs. They are made of high-grade materials only and the workmanship is finished and thoroughly dependable.

Whether you need stop valves, safety valves, ejectors, injectors or any other steam goods, you can select your requirements from the J. M. T. line with the full assurance that they will serve you well.

Prices, etc., sent on request.

The James Morrison Brass Mfg. Co., Limited, 93-97 Adelaide St. West TORONTO

Alphabetical Index of Advertisers, Page 62 Classified Directory to Advertisements, Page 64

"AMPHIBIA"

BELTING

For Difficult Runs

The supreme test—the acid test of belting is on heavy duty machines, over high-speed small pulleys. "AMPHIBIA" Belting on these runs, as shown above, makes you forget belting troubles, because no trouble develops. The wear is there under all conditions.

Prove it. Try a sample of "AMPHIBIA" Planer and see for yourself.

Sadler & Haworth

Tanners and Manufacturers *Established 1876*

FOR 40 YEARS TANNERS AND MANUFACTURERS OF THE BEST LEATHER BELTS

MONTREAL, 511 William Street

TORONTO 38 Wellington St. E.
ST. JOHN 149 Prince William St.
WINNIPEG Galt Building
VANCOUVER 107-111 Water St.

"Leather like gold has no substitute."

Shell-Box Stock

WE are now running on SPRUCE and JACK PINE and are prepared to book orders for your requirements in 1 in., 5/4, and 4 x 5— Our Jack Pine is being used with good results by several of the largest shell-box manufacturers.

LET US SHIP YOU A SAMPLE CAR

Bartram Brothers

Limited

White Pine, Spruce, Norway and Jack Pine

Ottawa, Canada

QUALITY LUMBER

Do Any of the Following Items Interest You?

300,000 ft. 1 x 5" 10/16' Mill Run Spruce.
46,000 ft. 5/4 x 5" 10/16' Mill Run Spruce.
100,000 ft. 2 x 4" and wider 8/16' Mill Cull Spruce.
100,000 ft. 1 x 4" and wider 6/16' Mill Cull Spruce.
20,000 ft. 5/8 x 4" 6/16' Mill Run Spruce.
100,000 ft. 1 x 4" and up 10/16' Mill Run Tamarac.
30,000 ft. 2 x 4" and up 10/16' Mill Run Tamarac.
20,000 ft. 3 x 5 and 6" 10/16' Mill Run Tamarac.

40,000 ft. 4 x 5" 10/16' Small Log Mill Run White Pine.
40,000 ft. 4 x 4" 10/16' Small Log Mill Run White Pine.
105,000 ft. 1 x 10" 10/16' Small Log Mill Run White Pine.
60,000 ft. 1 x 4" and up 10/16' No. 1 White Pine Mill Culls, 60 per cent. 10 and 12 in. Choice stock.
40,000 ft. 2 x 4" and up 10/16' No. 1 White Pine Mill Culls; even widths, choice stock.

We want to move promptly 100,000 feet No. 1 Common sound knotted British Columbia Red Cedar Boards.

HEMLOCK IN ALL SIZES
AT BALA, ON THE C. P. R.
BRACEBRIDGE, ON THE G. T. R.

Branch Office
852 Cambie Street
Vancouver

Terry & Gordon
Wholesale Lumber Merchants

Head Office
704 Confederation Life Bldg.
Toronto

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

SNAPS

1 x 4 & up Mill Run Red Pine Culls 80,000. Contains 10% No. 2 Culls.

Hardwoods 1914 & 1915 Cut

46,000	1 x 4 & up Mill Run Maple
50,000	1 x 4 & up No. 3 Com. Birch
30,000	1 x 7 & up No. 3 Com. Birch
25,000	1 x 4 & up No. 2 Com. Birch
13,000	1 x 4 & up No. 2 & 3 Com. & Better Ash

Get our prices on Dry Hemlock at Longford.

We have 5 cars 3x B. C. Shingles in Transit.

The Long Lumber Company

HAMILTON, ONT.

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 8-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

HIGH GRADE

TO THE TRADE

We are THE SOLE EASTERN REPRESENTATIVES of all the large mills in British Columbia producing the SOFT BRITISH COLUMBIA WHITE PINE.

THIS STOCK IS SUITABLE FOR ANY PURPOSE FOR WHICH PINE CAN BE USED, such as Pattern, Tank, Sash and Door, Flooring, Ceiling, V Match, Bevel Siding, and All trim.

THIS STOCK IS FREE FROM SHAKE

TO THE SHELL BOX MANUFACTURERS

We are shipping large quantities of B. C. Soft Pine, Kiln Dried, 1 x 10 x 10/16, dressed full 7/8 in. It will pay you to phone or write for prices. We guarantee quality and prompt shipments.

WE SPECIALIZE IN ALL BRITISH COLUMBIA PRODUCTS. ALSO A FULL LINE OF ONTARIO STOCKS.

LET US QUOTE YOU

Western Office
1007 Dominion Bldg.,
VANCOUVER, B. C.
GEO. R. POTTER.
Manager

MUIR, KIRKPATRICK & SHARPE
WHITE and NORWAY PINE, HEMLOCK, SPRUCE, JACK PINE

Eastern Office
1325-6-7-8 Traders Bank Building
TORONTO, CAN.

LUMBER

Murray & Gregory, Limited

Head Office: St. John, N. B. Quebec Office: St. Camille, B. Co., Que.

WE will now book orders for our new cut of SPRUCE and PINE from our Quebec mills. If you want some very nice stock for early fall delivery it will pay you to communicate with us promptly.

Our

Spruce and Pine Lumber, Laths and Pulpwood
cannot be beaten for Quality and Manufacture

Large Mills, Woodworking Factories and Glass Works at ST. JOHN, N. B.
Also Mills at St. Camille and Lac Frontier, Que.

Address all enquiries to our Head Office, ST. JOHN, N. B.

BRITISH COLUMBIA RED CEDAR
SHINGLES

are PACKED Full Count are Smoothly Sawn and are otherwise well manufactured

are GRADED for No Sap Clear and are all Edge Grain

Is this car being loaded for you, Mr. Dealer?

Your customers are learning the advantages of

British Columbia Red Cedar Shingles

British Columbia Mills are in a position to give you service

That is what counts

through advertisements in the following Journals, Papers and Magazines:

FARMERS ADVOCATE, London, Ontario
FARMERS ADVOCATE, Winnipeg, Man.
GRAIN GROWERS GUIDE
NOR'-WEST FARMER
MONTREAL HERALD AND WEEKLY STAR
FARM AND RANCH REVIEW
SATURDAY PRESS AND PRAIRIE FARMER
PRAIRIE FARM AND HOME
FARMERS MAGAZINE
CONSTRUCTION
CANADIAN BUILDER AND CARPENTER
CONTRACT RECORD
WESTERN CANADA CONTRACTOR
TORONTO SATURDAY NIGHT
McLEAN'S MAGAZINE
TORONTO SUNDAY WORLD

For full information on ***British Columbia Red Cedar Shingles*** and other forest products, apply to BRITISH COLUMBIA LUMBER COMMISSIONERS, Excelsior Life Building, Toronto, Ont., or Dominion Building, Regina, Sask.

Write one of the Lumber Commissioners for copies of this Booklet, to hand your customers when they ask for them.

Are you prepared to supply the inevitable demands of your customers for this unsurpassed Canadian product?

Watson & Todd Limited
OTTAWA
DRY 1½" NORWAY

1915 CUT 1½" SPRUCE
In Good Shipping Condition
Send us your enquiries

The
Harris Tie & Timber Co.
Ottawa - Canada
Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

ESTABLISHED 1855
THE McGIBBON LUMBER CO.
OF PENETANGUISHENE
Manufacturers of and Dealers in
Lumber, Lath, Shingles, Etc.
HEMLOCK BILLSTUFF a Specialty of which we have the Best Assortment on Georgian Bay.
Don't wait to write. Phone us your requirements.
All stock sized or matched if required.
Our Yards are Unequalled for Drying Lumber

Fraser Bryson Lumber Co., Ltd.
Office, Castle Building 53 Queen St. Ottawa, Can.
Wholesale Lumber Dealers and Selling Agents for
Fraser & Co.
Mills at
DESCHENES - - - QUEBEC
White Pine
Red Pine
Spruce
Lumber and Lath

California White Pine
California Sugar Pine
and Arizona Soft Pine
Best Stock for Factory and Pattern Lumber
Ask **LOUIS WUICHET**
Room 716 Railway Exchange, CHICAGO, ILLINOIS

River Ouelle Pulp & Lumber Co.
Manufacturers of
SPRUCE
Lumber Lath Pulpwood
Head Office and Mills at:
St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of Quebec City
Also Mills at:
Crown Lake, Powerville Riv. Manie
On Nat. Transcontinental Ry.

RESULTS!

TELEPHONE HARRISON 6121

Cannon River Lumber Co.

HANDLE FACTORY AND WOODWORKING PLANT AT MONROE, WIS.

"LUMBER SPECIALISTS"

542 WEBSTER BLDG.

LUMBER FOR MANUFACTURERS

CRATING, BOX LUMBER

LATH

CHICAGO,

April 25, 1916.

Canada Lumberman & Woodworker,
347 Adelaide St. West,
Toronto.

Gentlemen:

Replying to your valued favor of April 24th, we were very much pleased with the results we obtained through advertising in your Journal recently.

At the time we gave you this ad. we also gave a similar one to two of the other Lumber Journals published in Chicago, and we are frank to state that the only results we obtained came through your publication. As the writer advised your Mr. Simpson, we were obliged to discontinue our ad. with you after running it two or three weeks, as we received sufficient replies to more than take care of our requirements.

Thanking you and with best wishes,

Yours very truly,

CANNON RIVER LUMBER CO.

By E. R. Moore

Almost daily advertisers in the "Wanted and For Sale Department" of this paper tell us the same story as the Cannon River Lumber Co.

Send us that "Want Ad."

QUALITY HARDWOOD

Birch
Beech
Maple

If you are interested in Hardwoods, you will be interested in us.

We are manufacturing high quality Hardwood Lumber, sawing and grading according to National Hardwood Association Rules.

The Logs are cut from our own soil-right Lands, and particular attention given to quality.

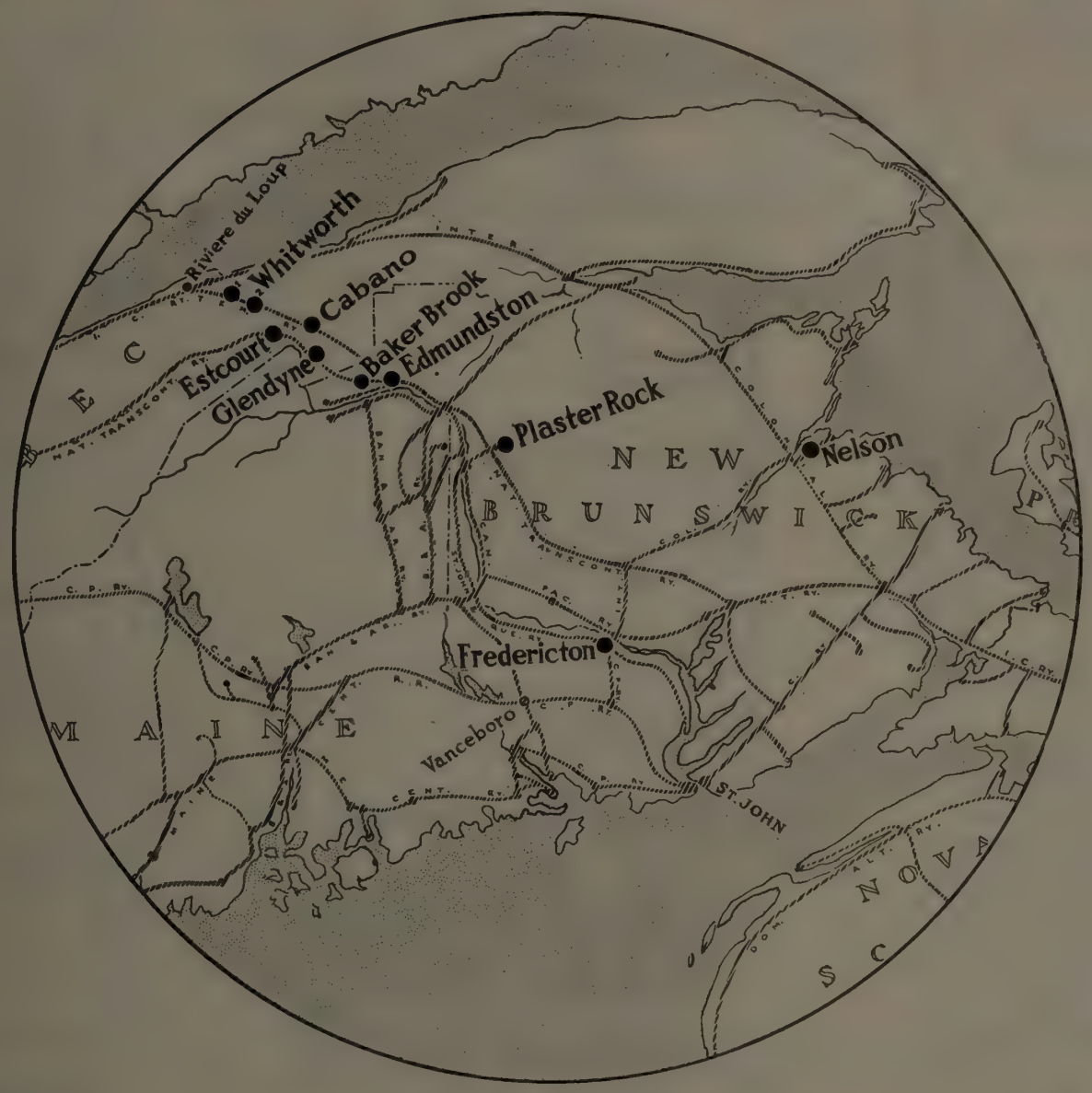
Our Mills are located on Canada Eastern Branch and Transcontinental Branch of the Canadian Government Railway, and in the heart of the best forests in New Brunswick.

Our Head Office in St. John will answer all enquiries.

Edward Partington Pulp & Paper Co.

ST. JOHN Limited **N. B.**

Ten Band Mills to Serve You



Mills and Railway Connections

Fredericton, N.B.	Railway connection		C. P. R.
Plaster Rock, N.B.	"	"	C. P. R.
Nelson, N.B.	"	"	I. C. R.
Edmundston, N.B.	"	"	C. P. R. or Temiscouata Ry.
Baker Brook, N.B.	"	"	Temiscouata Ry. and N.T.R.
Glendyne, Que.	"	"	N. T. R.
Escourt, Que.	"	"	N. T. R.
Cabano, Que.	"	"	Temiscouata Ry.
Whitworth, Que. (No. 1, No. 2)	"	"	Temiscouata Ry.

Fraser Limited, Fredericton, N. B.

ROUGH AND DRESSED SPRUCE, WHITE CEDAR SHINGLES, SPRUCE LATH, PIANO SOUNDING BOARD STOCK.

JOHN MCKERGOW, President — W. K. GRAFFTEY, Managing-Director

The Montreal Lumber Co. Limited

Wholesale Lumber

Ottawa Office: 46 Elgin St. — Montreal Office: 759 Notre Dame St., W

James P. Grant — John K. Campbell

Grant & Campbell

Manufacturers of

SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

New Glasgow, N. S.

PRESSES

Hydraulic and Screw for VENEER VENEER DRYERS PULP

Special machinery made to order

WILLIAM R. PERRIN

TORONTO, CANADA Limited

PATENTS SECURED OR OUR FEES RETURNED

Being next door to the Patent Office, we have personal interviews with Examiners, thus earlier allowance of your Patents. We have access to all Records and solicit the business of Manufacturers, Engineers, and others who realize the advisability of having their Patent business transacted by Experts. Send for our Booklet, etc.

HAROLD C. SHIPMAN & CO.

Reg. Patent Attorneys — Ottawa, Canada

BOX SHOOK WIRE

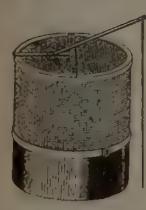
Wire tied box shooks can be handled more easily, more economically and with the safe assurance that wire will not break. Write for Quotations.

LAIDLAW BALE-TIE CO., Ltd.

HAMILTON, ONT.

CANADIAN OFFICE & SCHOOL FURNITURE CO. LIMITED
PRESTON ONT.
FINE BANK, OFFICE, COURT HOUSE & DRUG STORE FITTINGS.
OFFICE, SCHOOL, CHURCH & LODGE FURNITURE
SEND FOR CATALOGUE

Spark Arresters



Wire Cloth for Refuse Burners

Our spark arrester is substantially built and will last for years. Don't wait until a fire has visited your property, equip your mill at once.

Prices on application

Canada Wire & Iron Goods Co. Limited

HAMILTON, ONT.

Lumber

Good Grades — Right Prices — Prompt Shipments

Canadian Hardwood. National Grading Rules

Birch
Basswood
Maple
Elm
Beech

All Thicknesses

Also full line in

White, Red

and

Jack Pine

All grades and sizes.

Get in touch with us for prices

C. G. Anderson Lumber Company, Limited

Manufacturers and Strictly Wholesale Dealers in Lumber

705 Excelsior Life Building

Toronto

WE Buy, Sell and deal in all kinds of Lumber and Timber in Canada and United States: Spruce, White Pine, White and Basswood, Ash, Cedar, Douglas Fir, Beech, Birch, Walnut, Cherry, Chestnut, Cottonwood, Hemlock, Maple, Norway Pine, Short and Long Leaf Yellow Pine, Oak, Redwood, Birch, Maple and Oak Floorings, Pulpwood Ties, and Cedar Poles.

AUGER & SON

QUEBEC

HAEBERLE LUMBER CO.

LUMBER AND TIMBER

White Pine, Norway, Yellow Pine, Hemlock Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties,

Yellow Pine Timber a Specialty. Interior Trim Mill Work

NIAGARA FALLS, N.Y.

WHOLESALE DEALERS

Eastern and Southern Lumber

We are at all times in the market for dry WHITE PINE, DIMENSION SPRUCE, SPRUCE BOARDS, HEMLOCK BOARDS, LATH and CLAPBOARDS.

Advise us of your Market Prices and Stocks

A. H. Richardson Lumber Co.

176 Federal Street, BOSTON, MASS

SPRUCE BIRCH HEMLOCK

Merchantable	100,000'	1" Spruce
"	100,000'	2 x 4 Spruce
"	300,000'	2 x 5 and up to 8" Spruce
100,000'		1" Birch
300,000'		3" Birch
100,000'		1" Hemlock

Prompt shipments

J. A. LAFERTÉ

Room 38-9

55 St. Francois Xavier Street

MONTREAL

HARDINGE

Watchman's Clocks

Write for details

SIGNAL SYSTEMS CO.

205 Stevenson Bldg., TORONTO

SPECIALTIES

Sawed Hemlock
Red Cedar Shingles
White Pine Lath
Bass and Poplar Siding

James Gillespie

Pine and Hardwood

Lumber

Lath and Shingles

North Tonawanda, N.Y.

Experience—
Technical Training—
Thoroughness—

allow us to render clients correct reliable and economical service in estimating timber, executing topographic and boundary surveys and in forest planting. We have crews out on 400,000 acres now.

Let us handle your work also.

JAS. W. SEWALL
OLD TOWN, - MAINE

Lt.-Col. L. J. D. Marquis
FOREST ENGINEER
Timber Estimates and Valuations.
Topographical and Logging Maps.
Forest Management and Operations.
TRANSACTIONS ON TIMBER LANDS
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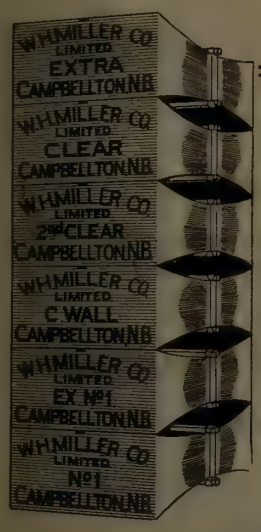

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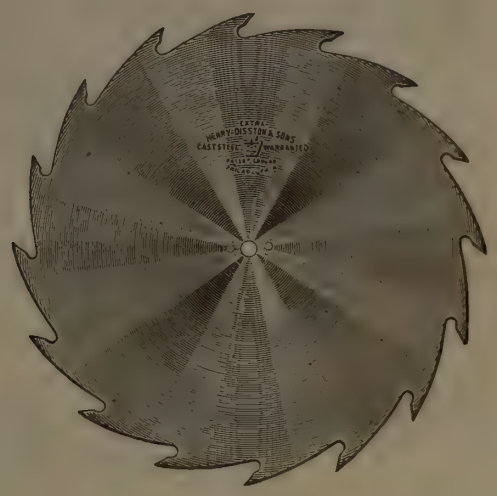

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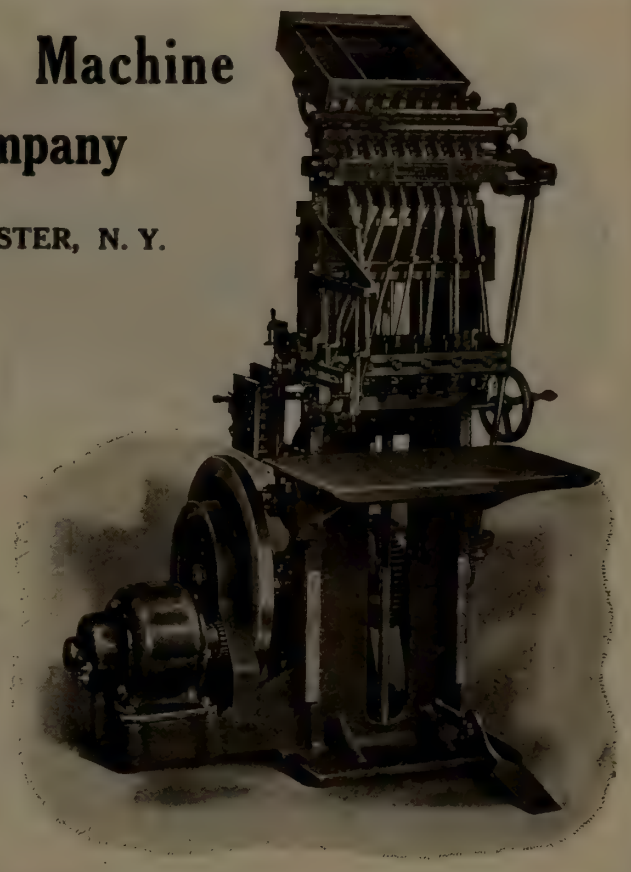

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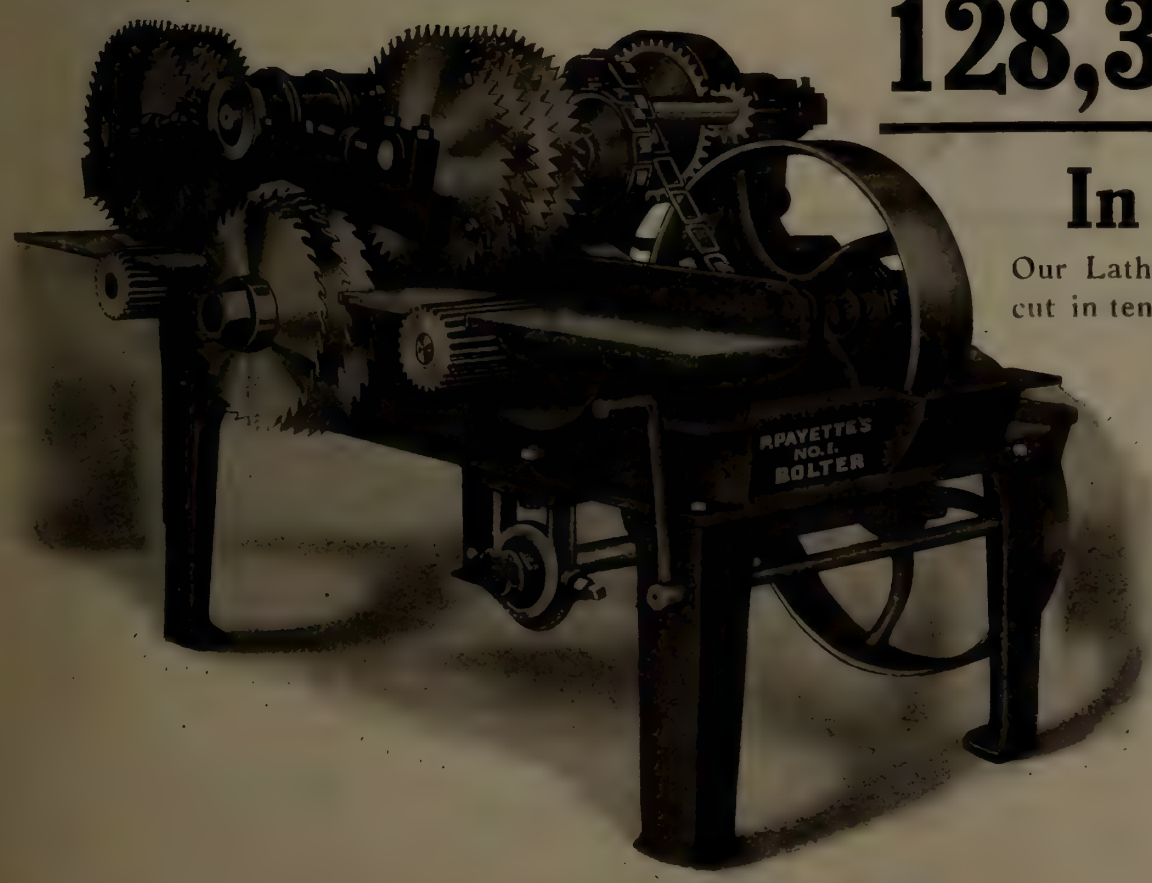

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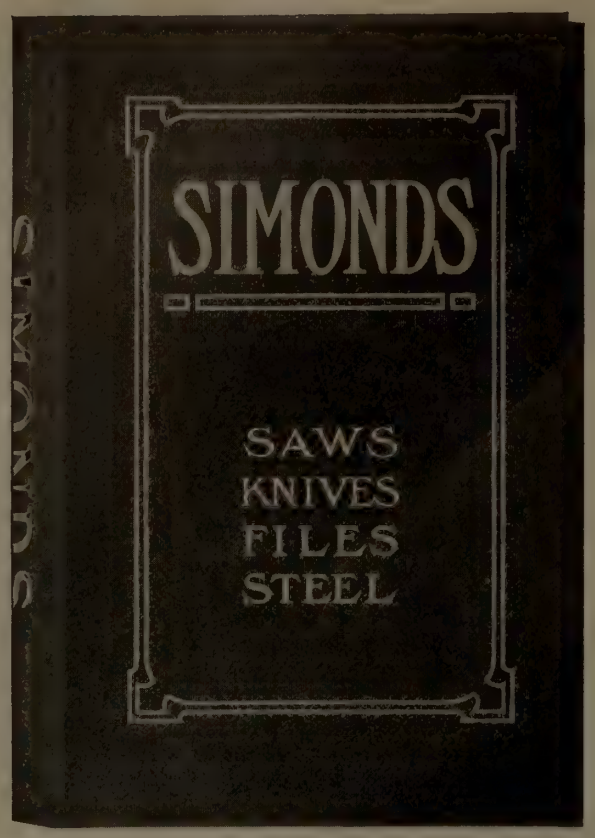

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MONTREAL TORONTO WINNIPEG

Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

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Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster General for Canada, for transmission as second class matter.

Entered as second class matter July 18th, 1914, at the Postoffice at Buffalo, N. Y., under the Act of Congress of March 3, 1879.

Vol. 36 Toronto, July 15, 1916 No. 14

Utilization of Sawmill Waste

An increasing amount of attention is being given by Governments and by lumber manufacturers to the problem of utilizing sawmill waste. So far as the results of investigations in Canada are concerned, we have little or nothing as yet to go upon, and it is important that the Forest Products Laboratories of Canada should give special attention to this question, so that the large amount of information which they are in a poistion to gather regarding all phases of the lumber producing and consuming industries may be tabulated and made available for practical use. Important results are likely to be obtained from a scientific study of this problem in its various phases and we hope to learn that such a study will soon be undertaken in the thorough manner it merits.

So far as we are aware, the Forest Products Laboratories of Canada have only been able to make a preliminary survey of the field of available information, which consists largely of the statistics prepared by the Forest Products Laboratories of the United States. This information may be used as a basis upon which to work. The fact that all this information is available and that the problem is of such great importance to the lumbering industry should warrant the Canadian Forest Products Laboratories in devoting a large amount of their attention to this study. The problem is one that will never be completely solved, but in which we may hope, almost any day, that scientific research will develop information of great value.

The information which has already been gathered by the Laboratory staff indicates that sawmill waste usually amounts to 35 to 40 per cent. of the whole original tree, being made up about as follows: slabs, trimmings and edgings, 15 to 20 per cent., sawdust about 11 per cent., and bark about 10 per cent. The lumber produced by the sawmill amounts to about 40 per cent. of the whole original tree. Where the quantity of material wasted bulks up so largely in comparison with that which is converted into a merchantable article, the incentive to study possible means of converting a large portion of it into something for which there is a market, is undoubtedly great.

One need only mention a few of the chief methods in which the material that formerly went to waste is now being converted for useful purposes, in order to be convinced of the possibility of making great advances as a result of further study. The most natural way of using up sawmill waste is in the manufacture of small wooden articles by mechanical processes, such as sawing, turning, etc. Much progress has been made in the production of laths, box shooks, small dimension stock, woodenware, novelties, mouldings, pegs, toothpicks, wooden floors, excelsior, etc. The problem in connection with these lines of conversion seems to be very largely one of organization, or in other words, of bringing the sawmill man into closer touch with the consumers who manufacture such small products from wood. Pulp and paper production undoubtedly will consume an ever increasing quantity of sawmill waste. Many other lines might be mentioned.

Probably the greatest advance in the utilization of sawmill waste product is that which has been made in the use of sawdust. Its chief use of course is as fuel. Other uses are as insulating material, bedding for stables, covering for butcher shop floors, polishing material for metals, cleaning material, floor sweeping compounds, artificial wood, moulding, composition board, composition flooring linoleum, special cement, poruos bricks, low grade pulp for fibre board, etc. Shavings also are put to many uses either at the plant or in domestic use as packing material, bedding, material for drying wet land, mixing with concrete, etc.

We have sought only to indicate some of the uses that have already been developed for wood waste. It will be noted that in the majority of these cases the use is dependent to a great extent upon the fact that the material is readily available for the consumer without any considerable added expense in the way of transportation cost. The cost of transportation is one of the chief causes for restraining the economic use of much of the waste material of the sawmill. With increase in poulation, the opportunities for reducing waste will increase. It is, therefore, of much importance to the manufacturers of lumber that the Forest Products Laboratories of Canada should give this problem a large share of their attention. That they are laying plans for doing so and have, in fact, already made a promising beginning, we understand is the case, and we hope that before long they will be able to publish information upon the subject that will be of benefit to the industry.

A School of Salesmanship

In working out ways of combining entertainment and profit through the holding of conventions, our friends across the international boundary unquestionably carry off the palm. Their latest stunt was the holding of a convention known as the S. O. S., or School of Salesmanship, which was brought off successfully at St. Louis, Mo., on June 26th, 27th and 28th, under the auspices of the Southern Pine Association. During these three days, the most prominent and successful salesmen in the association delivered addresses, telling one another how they managed to sell southern pine. Their addresses were remarkable for their variety and for the fund of practical information which they contained. By way of a sample, we have reproduced elsewhere in this issue parts of the address of Mr. M. B. Nelson, General Sales Manager for the Long-Bell Lumber Company, of Kansas City, Mo., whose subject was "Co-operation with Distributors and Consumers."

Mr. Nelson's opening remark is one which may be questioned to some extent. though many lumbermen give it full credit, namely, that there is no other manufactured commodity produced anywhere in the world to which so little thought and study are given to the merits of its use or promotion by the manufacturers and distributors, as is given to lumber. Mr. Nelson was referring particularly to Yellow Pine and we are not in a position to agree with him or criticize his statement, but it is a good statement for our purpose and has a sufficient shafe of truth in it to form the basis of an argument in favor of greater co-operation for the good of the lumber business.

Undoubtedly there is far less of this co-operation than the merits of lumber call for, and Mr. Nelson places the blame chiefly upon the

sales organizations. Getting down to the root of the matter he finds that the average young man who goes into the lumber business with the idea of becoming a salesman, spends a little time at a mill or in a yard or office, and then considers that all he needs in order to become a full-fledged salesman is an order book, some expense money, and sufficient familiarity with the vocabulary of the trade to enable him to talk to the average retailer whom he visits.

We have seen something of this sort of thing in Canada and we know that it is much more prevalent than it should be. The selling of lumber is a task which demands far more than the ordinary intelligence and acquaintance with fundamental facts of the business. It is not now as it was in the good old days when lumber was easy to sell, or rather when it sold itself. The man on the road for lumber today must not only know what his stock is good for, but why it is good and in what ways it is superior to the many lines of substitutes that are fighting for the same buisness.

The first requisite for turning out the best possible class of salesman is to educate him about the product he handles. This should be done far more thoroughly than is customary during the early stages of a young man's business career. The prospective lumber salesman should be given a long enough term in the woods and at the mill to become familiar with the raw material in its natural state and as it comes to the mill. Such an experience will be a fine preventive in after years when he is tempted to cut prices. It will recall to him the fact that the cost of production is not a simple economic term, but a matter of great importance as a basis upon which to commence figuring out prices. He should have enough experience in connection with the retail trade to appreciate the difficulties and problems of the man who buys lumber from the wholesaler and sells it to the consumer. He will then have something to counteract a desire to boost prices in and out of season. He should have a fairly long experience of the office end of the business, so that he will know the value of a business-like reputation for handling orders, and of business-like methods in making reports, to say nothing of a first-hand knowledge of the ideals of his firm.

When a young man has gone through all these experiences he is ready to make a trial of the road. The only things he then requires are experience and a natural gift as a salesman. Thus equipped, he can go forth confidently and will quickly become a force to be taken into consideration in connection with the operations of his firm, but without such experience he is likely to become a liability instead of an asset to his firm, besides being a disturbing element to the trade in the country which he covers.

So far, the equipment we have referred to is that of the man himself, in direct reference to his actual business life. There is coming forward nowadays something which is all important and which will do much to improve the lumber trade, namely, the equipment a man may secure by becoming an active member of an association representing his direct buisness interests. This movement, applied to the salesmen, in the way in which it is applied by the Southern Pine Association, will become a great force for the good of the trade. It will give the salesmen a feeling of mutual interest instead of one of antagonism, and will enable them by exchange of ideas to become far more efficient in their work. Association work has of late years been extending its field greatly and its introduction into the field of the salesman promises great things.

Why Not Get Closer Together?

Retail lumber dealers are developing quite a tendency to co-operate with one another in promoting their mutual trade interests, and are getting encouraging results in practically all cases. One of their ways of improving trade conditions is to watch the producer and the wholesaler and make a note of any cases where stock is sold by them direct to the consumer. When they find someone transgressing in this way they tell one another about him and make things so hot for him that he gets no more trade from these retailers until he mends his ways. No manufacturer or wholesaler who does a legitimate line of business can object to this variety of co-operation. In fact they approve of it and are glad to see that the retailers are alive to their own interests.

While the retailer is keen to protect himself in this way against those from whom he buys, there is a reverse side to the matter which ought to receive a good deal of the retailers' thought. We received, a short time ago, a letter from a successful and progressive retailer in Ontario, who stated that the manufacturers of hemlock ought to make their grading more uniform. "What is the use of buying some thing we cannot sell?" he asks. "Some wholesalers tell us we are getting too particular, but we have to buy what our customers will buy and not what the manufacturer wants to sell to us."

The retailer is the man who should know best of all what lines of stock he can sell to the consumer, and in most cases he is best informed on this point. The problem, to our mind, however, is one of mutual co-operation, with a view to the production and marketing of those lines which the consumer requires and with a view also to enlarging the consumer's ability to use a greater variety of stock.

It is not the manufacturer's fault that, in turning out certain lines of stock which the consumer requires, he also has to turn out other grades which the logs contain; and having turned them out he must sell them, or he cannot stay in the manufacturing business. It is up to the retailer, it seems to us, to make a special point of assisting the manufacturer by continually seeking methods of disposing of a larger share of those lines that are not so saleable as others. Individual cases bearing upon this point vary considerably in their merits. We have no doubt that the retailer who wrote us about this matter is, to a considerable extent, justified in criticizing the manufactuerrs for trying to make him take stock he does not want, by varying the contents of grades. We have a lot of sympathy, however, for the manufacturer who finds that the retailer wants nothing but No. 1 and who, therefore, accumulates a lot of No. 2, which cannot be sold.

We have published elsewhere in this issue the views of a manufacturer of hemlock in Ontario upon this question, and he puts it in a form which shows the necessity for a greater measure of co-operation between the retailer and the wholesaler than has existed in a good many cases in the past. The complaint of the manufacturer is that the retailer will not listen to him when he tries to sell him No. 2 hemlock, and yet when he, the manufacturer, enquires of a retailer's customer he learns frequently that the latter could use this class of stock to good advantage. The manufacturer must get rid of this stock in some way and it is natural that, if the conditions complained of continued, he would have to seek his market more directly than through the retailer who would not assist him.

There is nothing more demoralizing to the whole trade than to have its members trying to cut one another's throats, or even neglecting to assist one another, when a little brotherly interest in the other fellow will show that assistance can be profitably given. The manufacturer who writes us about this matter does not base his argument upon any plea for charity, but proceeds to show how the retailer can dispose of No. 2 hemlock at a profit, if he will only cultivate his market closely.

We have no brief for this manufacturer, nor for any manufacturer, against the retailers, or vice versa, but we have a brief for all of them and wish to see things worked out to their mutual advantage. In the present case it looks to us as though there are faults to be found with both parties, and lack of co-operation between manufacturers and retailers, and between manufacturers and other manufacturers, that furnish an important cause of difficulty. There are no doubt manufacturers who, feeling that the difficulty in selling No. 2 hemlock entitles them to try to put some of it into their No. 1, are making an attempt to do so. There are no doubt, also, retailers who are not making much of an effort to help the manufacturers by educating consumers so that they will take more of the No. 2.

The best way in which to improve matters, we believe, would be to work up organizations of retailers covering certain definite localities, and to draw the manufacturers more closely together and induce them to act more uniformly in regard to the matter of grades. There

has been a hemlock manufacturers' association in Ontario and no doubt they could be brought together again to discuss this matter. We believe also that it would be possible to get a representative gathering of retailers together to talk over this question, among others, and finally both parties might be persuaded to hold a joint meeting of representatives to plan a way of improving the marketing of the output of the hemlock mills. We would like very much to hear from manufacturers and retailers regarding their views on this point.

Labor Shortage Serious in Northern Ontario

Lumber manufacturers in Northern Ontario, and in many other parts of Canada, are experiencing great difficulty in connection with procuring capable labor for their mills and are looking forward anxiously to the logging season which will start early in the fall. There has been a great drain on the supply of labor during the past two years. For several years the quality of labor available has been deteriorating and, since the war, a large proportion of the best men who could formerly be secured for the sawmills and camps have either enlisted or taken employment in other more remunerative occupations.

A mill manager from Northern Ontario, speaking of the situation a few days ago, gave it as his opinion that there will be a great reduction in the output of logs next winter, as the men will simply not be available for the camps. He finds that the class of labor available to-day is far below the normal average of late years in regard to efficiency. Men who are sent up to the woods and the mills by employment agencies are, in many cases, utterly unfit for the work, and in nearly every case are scarcely half as efficient as the woodsmen of a few years ago. This particular mill manager cited a case, not an isolated one either, in which a man of 60 or 70 years of age was sent all the way from Ottawa. Not only was he too old for the work, but he was bent nearly double and had to use a stick to help him walk. This man was expected to work in the woods at the strenuous labor of logging. It was quite impossible that he could even earn a single cent at such work and the sawmill manager had to pay his fare from and to Ottawa without even getting from him enough work to pay for his transportation.

While there is no disposition among the lumber manufacturers to complain about this situation in so far as it is the result of employees enlisting to serve their country either at the front or in the munition factories, it is a situation which should be studied thoroughly by the manufacturers and by the Government in order to minimize the disturbance which it will produce in logging operations next winter. At the present time, with lumber prices showing a tendency to improve, it will be a pity if the labor situation is not handled so as to encourage production next winter, if this can possibly be done. We have had two winters of heavily curtailed production and during the coming winter it would be possible to do more cutting than during the past two, if the men are available.

Whether it will be possible for the Government to effect any improvement is open to question, but the least they can do is to make an effort. These is no question that it is their duty to consider the matter thoroughly and enquire into any available sources of labor supply for such an important industry, so that it may not be crippled at a time when its activity is of so great importance to the welfare of the country, and even to the welfare of the allied armies. The Government is a great employer of labor and it is possible that some of the ways in which it gives employment may not be as advantageous to the country at present as the use of labor would be if applied to the taking out of timber during the next fall and winter. Take the matter of road construction, for instance. We understand that the Government of Ontario are to-day spending a large amount of money in Algonquin Park in the construction of roads, which, so far as we have been informed, may be considered, in such times as the present, as more or less of a luxury. The men who are working on these roads are probably of a class that would be pretty good for the lumber camps, and we believe, if the circumstances are such as they have been represented to us, that the Government ought to release them and direct them towards the northern timber districts.

The recruiting situation is also one which ought to be given a great deal more study in regard to its relation to the supply of labor. Ontario has suffered heavily from the depletion of its skilled labor ranks in order that Canadian battalions may be filled. It seems a great mistake to allow the recruiting to go on in such a haphazard manner as has prevailed up to date. It has resulted in large numbers of men, fine soldiers it is true, but fine laborers also, being taken away from the northern districts of Ontario, while splendid men for military service are being allowed to remain at home, largely because the right kind and proper amount of pressure have not been brought to bear upon them by the Dominion Government. If the Government had taken charge of the recruiting business in the way that most people in Canada think it should have, from the first days of the war, there would have been far less interference with labor, and unquestionably there would have been a larger and more efficient force recruited in Canada. Nothing would please the lumber manufacturing interests in Canada better than to learn that the Government, even at this late date, was taking hold of the recruiting problem and intended to handle it upon businesslike lines.

There has been so great an interference with the supply of labor for Northern Ontario, indeed, that we hear many lumbermen expressing a conviction that the Government would be justified, and in fact, that it will be its duty, to work out a plan during the coming winter for setting interned Germans, Austrians, Bulgarians, and Turks at work in the logging camps. This matter was mooted to some extent last winter, but nothing came of it. We do not put it forward as a recommendation, but as a suggestion, as the necessity for men is certain to be great, and anything the Government can do to assist the lumbering industry will be very welcome.

Selling Lumber in Department Stores

Leading department stores in thirty-eight cities of the United States are now selling Douglas fir lumber. It is the first time that lumber has been sold that way. The innovation is so popular in the East that it has now become necessary to warehouse stocks in most of the principal cities.

The Miniature Lumber Company, of Portland, is the promoter of this new idea in the modern merchandising of lumber and the first installation of a "department store lumber yard" was at the famous Meier & Frank store of that city. The second installation was at the Bon Marche, in Seattle.

Now the idea has spread to Spokane, Boston, New York, Chicago, Philadelphia, Pittsburg, Washington, D.C., Cleveland, Buffalo, Syracuse, Hartford, Conn.; St. Louis, St. Paul, Minneapolis, Sioux City, Cincinnati, Rochester, N.Y.; Troy, Newark, Brooklyn, Des Moines, Providence, Worcester, Mass.; Baltimore, Dayton, Indianapolis, Toledo, Detroit, Reading, and Trenton.

The material furnished in the department store lumber yards is suitable for any ordinary household repairs, but especially adapted to manual training school purposes. Any person having a desire to build a library table, for instance, will not only find the lumber for that purpose quickly available, but also diagrams telling how to construct the table and a material list of just what is required. The amateur builder can make no mistakes.

The same thing applies in case the amateur builder decides to try his handicraft on a cellarette, bird house, arm chair, sewing cabinet, tabouret, bedroom chest-seat, ironing board, baby crib, window box, trellis for tamato vines, shaving stand, fern stand, foot rest, dressing table, wall cabinet, screen, hall tree, magazine rack, telephone stand, porch swing, umbrella stand, sewing stand, serving table, shirt waist box, book shelf, step ladder, desk, clothes rack, smoking stand, phonograph record cabinet, window seat, piano bench, and scores of other similar articles.

No. 2 Hemlock—A Problem in Selling

Retailers Turn it Down—Manufacturers Push it—Co-operation Needed to Enlarge the Market

By Manufacturer

The complaint of a retail lumber dealer which was sent recently to the Editor of the Canada Lumberman regarding the grading of hemlock by manufacturers, brings up a very important question. It is rather fortunate that the complaint has been made at the present time as the matter is one of which it will be a good thing to have a discussion, so as to bring out ideas that will be of benefit to the trade.

During the past two and a half years the manufacturer of hemlock in Ontario has had much difficulty in disposing of his No. 2 hemlock. As a result no doubt, of this difficulty, some of them have offered a merchantable grade and tried many ways of working off at least a small percentage of their unsaleable stock. When a manufacturer tries to discuss the situation with retailers, most of the retailers will not even give him a hearing on the No. 2 hemlock subject. Yet if he makes enquiry of their trade he often finds quite a number who will use No. 2 hemlock and be glad to obtain it at its proper value. It has been noticeable recently that some of the manufacturers have almost decided to sell to contractors or to anyone who can pay for the material. It seems to us that some manufacturers will follow this plan in the near future if the retailers refuse to assist in placing on the the market the product of the mills when it is put up in a proper manner. This situation has been canvassed so thoroughly by manufacturers of late, that some improvement is being brought about and we now find a number of the retail trade have discovered that it is profitable to handle the No. 2 stock, some even working out ways in which to make a good profit out of it.

Here are some of the points in favor of No. 2 hemlock. In the first place hemlock itself is the second best wood for durability that can be obtained in sufficient quantity to be considered as a factor on the Canadian market. White and red pine are first on the list, then comes hemlock, wobbling along, being cuffed from one side of the road to the other, but never stopping, ungainly and rough in appearance, but "there with the goods" and there to stay. Its price is moderate and its lasting qualities stand second among Canadian or United States products, tamarac and cedar not being considered, as they cannot be obtained in sufficient quantities. Its grip of the nail is very firm, holding it in place and everything attached to it. The trade cannot get away from recognizing the good qualities of this wood.

One inch No. 2 hemlock is the most economical wood for sheeting, but a retailer should not sell a customer all the widths that are made or there will be trouble in putting them on a roof. If a retailer stocked just two widths of inch No. 2 hemlock, say 1 x 4 in., and 1 x 6 in., charging $1 per thousand more for the 1 x 6 in., he ought to be able to do a good business. These sizes are the easiest to obtain. The retailer would have no trouble in buying them. 1 x 4 in. is really the best size, as it goes farthest in sheeting a roof. With 1 x 4 in. there is no waste. A space of half an inch or even more can be left between each board. This is necessary in order to obtain the best results from the shingles, as well as from the sheeting. Then 1 x 6 in. could be sold to parties who are prejudiced against the narrow width 1 x 4 in., and they could be charged $1 per thousand feet extra for satisfying their whim. Other yards could stock 1 x 5 in. and 1 x 8 in., staying strictly by these sizes. The prices of the different widths would regulate the consumption. In the 2 in. stock, 2 x 4 in., No. 2 quality, is nearly as useful as No. 1, because it has, in the case of studding, sufficient strength for the job. Often it will not do for rafters, but a percentage of the stock will answer for this purpose also. For instance, wane that would not be allowed in No. 1 grade on account of the appearance would indicate in No. 2 stock that the piece came from the outside of the log and consequently was the tuoghest timber, being stronger than the heart piece with square edges. Then 2 x 6 in. and wider with slight defects can be used for joisting and will often answer the purpose quite as well as No. 1.

Any grade poorer than those referred to could be sold at a price that will find a market for it. Retailers may ask who can sell goods of the above description. If they will put this question to the traveller when he comes around they will be able to get much of the information they require. Co-operation between the retailer and the manufacturer is the one thing that is required in this whole question. We know that the retailer has his troubles and so have we all, but by working more completely in harmony much good can be accomplished and business will be more of a pleasure than it is at present.

An intimation of the way in which the advertising of a definite standard grade of wood product produces results is afforded by the fact that during the week preceding June 22nd, the West Coast Lumbermen's Association received enquiries for "Rite-Grade" red cedar shingles from Russia, China, Japan, and the Society Islands. All enquiries contained the suggestion that markets could be developed with a little practical promotion work on the part of the shingle manufacturers.

Lumber to Benefit When Peace is Declared

Captain Robert Dollar, of San Francisco, in a recent interview published by the West Coast Lumberman, said: "I think the lumber trade is one of the few industries that will immediately be benefited by the declaration of peace. My reason for thinking this is that the excessive freight rates have caused all foreign lumber dealers to buy from hand to mouth, and I am safe in saying that every yard is short of stock. I know of several yards whose stock is less than 10 per cent. of normal, in fact, some are completely sold out. Unfortunately different kinds of wood are being substituted for Douglas fir and it will require considerable effort to regain our lost trade when freights get down to normal. At present they are about 400 per cent. above normal. I think that in a very few months after peace is declared, freights will tumble down to normal or very near it. I know that many ship owners take a different view of it, and think that for two or three years we are to have abnormally high freights. If they are correct then my view of the situation would just be reversed, and the declaration of peace would not help the lumber trade for many months, perhaps years.

"Nevertheless, after much thought on the subject, I cannot change my views, and cannot help but predict better times for an industry that has suffered more than any other in the United States; therefore, no manufactures deserve a change for the ebtter more than the lumbermen.

"Many industries that have sprung up to manufacture munitions of war will come to a sudden stop when the war ends and a multitude of men will be thrown out of employment. How this will affect the general business of the country remains to be seen, as it will take considerable time to readjust themselves to the ordinary manufacture of commercial commodities, and in the meantime their employes will to a great extent be out of employment."

Canadian Mills Favored

The traffic manager of the Pacific Coast Shippers' Association has recently been investigating relative freight rates on lumber from Washington, Oregon and British Columbia mills to eastern points and finds that the mills across the border are enjoying lower carrying charges that are as much as fifteen cents per hundred pounds in some instances, says the Mississippi Valley Lumberman.

The rate from Vancouver, B.C., to Montreal by way of the Canadian roads, is seventy cents on double loads of fir, while the Bellingham mills just this side of the border pay eighty-five cents to the same destination. American shippers have found that by paying the local freight across the border, they can save money by shipping over Canadian lines.

Another case of disadvantage is in the matter of "moisture allowance." The Canadian roads give an allowance of five hundred pounds on every carload of lumber or shingles originating in Canada and destined to eastern Canadian points and many stations in New England. Even though a car travels only a few miles in Canada and then traverses almost the entire width of the United States, the Canadian shipper gets this advantage which the American mills are not allowed.

Still another handicap suffered by the American mills is that the minimum carload on Canadian lumber is from thirty to forty thousand pounds, while the American lines' minimum is from thirty to sixty thousand pounds. Canadian shippers can ship over Canadian lines to Windsor, Ontario, and trans-ship by ferry to Detroit, and deliver lumber at lower rates than are charged American shippers to Detroit on American lines.

With a view to pushing the sales of B. C. lumber, the Knox Bros. Lumber Company recently opened an office at 286 St. James Street, Montreal. They represent the Victoria Lumber and Manufacturing Company, Ltd., of Chemainus, B.C., and report that sales of B. C. lumber, especially of fir, are increasing at a rate beyond expectation. Mr. J. B. Knox is the resident Montreal representative.

How Many Lath to a Thousand Feet?

Toronto, July 4, 1916.

Editor Canada Lumberman:—

Have you any statistics showing the number of pieces of 4 ft. lath, 1½ in. wide, that a mill will turn out in connection with the production of a thousand feet of lumber? Some mills we have visited recently seem not to have sufficient lath producing equipment for handling all their slabs, etc., and others are able to turn all their slabs, etc., into lath. We have figured that we get 600 pieces of lath out of the slabs, etc., from 1,000 ft. of lumber. We would be interested in knowing what some of the other mills get.

Yours very truly,

Ontario Manufacturer.

In the Public Eye

A budget of comment presented in the interest of public welfare, independent of party politics and with malice toward no one.

"Defective" Ammunition Traffic

In the House of Commons, May 13, 1916, Mr. D. D. McKenzie, M.P., charged Sir Sam Hughes with the following transaction:—

"That it appears from official papers laid on the table of this House, that the Minister of Militia, since the beginning of the war, illegally sold and without any power or authority, sold a quantity of small ammunition exceeding 3,000,000 rounds, to J. Wesley Allison, who represented himself as acting for Vickers, Maxim, Ltd., at a price of $20 per thousand rounds. That the quantity first intended to be sold was 5,000,000 rounds, and that over 3,000,000 rounds was actually delivered."

According to the Hansard report, Sir Robert Borden, on the same day, defending the transaction, stated that:—

"The only ammunition sold is Mark VI., two million rounds of which had been condemned as absolutely unserviceable."

It has since developed in the evidence given before the commission of inquiry presided over by Sir Charles Davidson, that this "absolutely unserviceable" ammunition was sold, through the agency of Mr. J. Wesley Allison, to the British Admiralty.

When the Auditor-General in the first instance drew the attention of Sir Thomas White to the transaction by asking for an Order-in-Council after vainly asking for one from the Department of Militia, he made the following statement in the letter to the Minister of Finance:—

"I have reason to believe that the ammunition was resold at an advance of about 25 per cent., and that its destination was not Vickers, Limited. I may be mistaken in this, but Colonel Allison's connection with the transaction does not tend to allay suspicion."

Sir Sam Hughes, following the lead of Sir Robert Borden in defending the transaction, according to the Hansard report, denounced and threatened the Auditor-General in the following terms:—

"But when the Auditor-General undertakes to say what he has said in the document which has been read; when he makes reflection upon a gentleman who has more honor in his little finger than the Auditor-General has in his whole carcass, I want to tell him that I will find some means of reaching the Auditor-General."

In the same Hansard report the Dominion Minister of Militia said:—

"The statement was made that it was not known where the ammunition was going. The correspondence brought down clearly shows that it was ordered by the firm of Vickers-Maxim, one of the most reputable firms in the world, and was shipped to them, and that the money was paid by them to the Bank of Montreal in England. The statement was made that the ammunition was resold. That statement is absolutely untrue. The ammunition was sold to Vickers-Maxim and the address given of one of their officers."

Before the Davidson Commission on May 25, a few days after Sir Sam Hughes' assertion in the House of Commons, Mr. F. Orr Lewis, president of Canadian Vickers, Limited, gave the following evidence:—

"May I state that Canadian Vickers had no interest in the matter, and the English firm of Vickers had no interest in it."

Furthermore, with regard to the charge that the ammunition had been resold at an increase of 25 per cent., Sir Sam Hughes stated in the House of Commons (Hansard report, May 13, 1916):—

"There was no commission paid, offered, or asked for, by anyone in the transaction. That was brought out this morning before the Davidson Commission. We got $20, and that was all that was paid for the ammunition, so that there could not be any commission."

Before the Davidson Commission it has since been brought out that the ammunition was actually sold to the British Admiralty; and on June 13, Auditor-General Fraser produced a cable from the Colonial Secretary stating that the price paid by the Admiralty for the ammunition was $25 per thousand, f.o.b. Canada, plus freight and insurance. The communication was sent and the reply received through H.R.H. the Governor-General.

Thus the evidence of June 13; and the following is from Sir Sam Hughes' statement as printed in Hansard of May 13:—

"This ammunition was first ordered, I say, by the members of the Vickers firm. Finally it was ordered by Col. J. Wesley Allison, who has the honor of being the Vickers representative, and who had, and still has, the honor of having been seelcted by the special representative of the British Government as agent in the United States of America in respect of very large matters of international concern. He is a gentleman who to-day stands high in the estimation of the people of the country, not from fear—"

Protests at this point interrupted the Dominion Minister in the House of Commons. A heavy national and Imperial responsibility is plainly developing upon Sir Charles Davidson, as Commissioner inquiring into the sale of Canadian Government ammunition, "absolutely unserviceable" and "defective," to the British Admiralty.—Ottawa Citizen (Independent Conservative).

Prairie Demand Still Active

Mr. W. R. Lanigan, chief of the C.P.R. freight department, with headquarters at Winnipeg, visited Vancouver recently, and in the course of an interview, said: "Things are running along in a way which no one should object to in the least. Business is brightening all of the time. On the prairies there is a tremendous demand for lumber springing up and that lumber will have to come from British Columbia. The farmers last year made a tremendous fortune from their wheat, and the result is that they want to build better barns and houses. Throughout the country there is a spirit of optimism prevailing. There is really just as much prosperity here as there ever was in the days of the boom. That wasn't real money that we used to hear about then. It was only paper money. Lots changed hands for sums of money which never existed at all. The real amount invested in a lot was very small, while its actual price on paper kept on climbing higher all the time. The real business of the community hasn't been hurt any by the boom. Not a bit of it."

Wood Waste Used for Pulp

The use of a steadily increasing amount of wood waste in the manufacture of pulp is indicated by figures compiled by the United States Forest Service. Although the pulp industry showed a decline in the last year for which complete figures are available (1914), on account of the increasing cost of raw material and general business conditions, more wood waste was used than in any previous year.

Approximately 330,000 cords of waste with a value of $1,400,000, were utilized by 35 of the 200 pulp and paper mills of the United States. It is thought that as the price of cord wood goes up, the amount of wood waste used will become greater.

The Canadian pulp industry, the report says, had a vigorous growth during the last few years and the greater portion of its product is marketed in the United States. An average cost of about $6.50 per cord, as compared with the $10 to $16 per cord which many manufacturers in this country are paying for pulpwood, is the reason given for the growth.

It is pointed out that the development of the supplies of spruce in the national forest of the west and Alaska, together with the abundance of cheap water power, will eventually attract the paper industry to locate in these regions. Suitable pulp timber can be delivered to desirable mill sites for the next twenty to forty years, it is said, at prices of about $2.50 to $4 per cord. It is thought that the low price of material and power will more than offset the higher freight rates on the product to the eastern markets.

James L. Grant, who for many years was engaged in the lumbering business in Goderich, Ont., owning and operating a sawmill, and for the last decade was deputy customs officer, died at his home on July 9th, from an attack of grippe.

The Annual of the Canada Lumberman

It is always a pleasure to commend the enterprise of a contemporary and to note the progress which a fellow journalist or a group of fellow journalists are making in the conduct of a publication. We are prompted to these remarks on turning over the pages of the annual number of the Canada Lumberman and Wood Worker, published by Hugh C. MacLean, Ltd., Toronto, Canada. This is certainly a wonderful issue of this fine Canadian publication. Some idea of its bulk may be obtained from a statement of the fact that it contains 172 pages, in which the reading matter and the advertising are quite fairly divided. It is also due to say that the contents of this number are well worthy of the country which it so ably represents. The articles are as varied as they are valuable, and their views of the lumbering and logging industry in Canada are presented by a master hand in each instance.

Where there is such an embarrassment of riches it is difficult to single out features for special mention, and we will therefore content ourselves with congratulating the editorial staff and the publishers of the Canada Lumberman upon this splendid evidence of progress and prosperity. We extend to them our best wishes for a continuance of the same energy and intelligence which they have at all times manifested in the conduct of this publication and invoke for them a financial support which will be fully commensurate with their just deserts.—St. Louis Lumberman, St. Louis, Mo.

The Fibre Structure of Canadian Woods

A Study of Their Characteristics Under the Microscope, With Special Reference to Paper Making

By H. N. Lee, A. M*

ALTHOUGH many other factors must be considered in the manufacture of paper, one of the principal things desirable to know is the nature of the fiber from which the paper is to be made. By means of careful examination with the microscope it is possible to determine the identity of the plant from which the fiber is obtained, to measure accurately the dimensions of the fiber and in the case of pulp to obtain considerable data concerning the method of manufacture, together with the effect of the treatment on the fiber itself. It is the purpose of this paper to give a brief discussion of the following points: (1) the microscopic structure of wood, with a short description of other plants yielding fiber; (2) a comparison of some of the fibers commonly used; (3) the dimensions of some of the fibers commonly used; (3) the dimensions of fibers in the tops, main trunk, branches and roots of trees; (4) identification of fibers.

From the structural point of view vegetable fibers may be classified as follows:—

(a) Bast fibers from the inner bark of ordinary trees shrubs and smaller plants;

(b) Woody fibers from the stems, branches or roots;

(c) Fibers from the so-called veins of the leaves or from the stems of the palms, sugar-cane, Indian corn and similar plants;

(d) Surface fibers connected with the seeds, stems or leaves, etc., for example, cotton.

Canadian products are largely those of the woody stem, though flax or hemp, belonging to the bast group, may develop products of warmer or even tropical countries,, for example, cotton and the hemps secured from the Agaves. It is our purpose to consider briefly that class of fiber included under the heading of woody fibers from the stem, that is, from the main trunk of trees.

Beginning with the structure of coniferous woods we may take spruce as a typical example. Figure 1 shows the appearance of the separated spruce fibers, or tracheids, as they are technically known. Each tracheid consists of a hollow tube, actually about 3 mm. or 1/8th of an inch long, with closed and more or less pointed ends. If we consider a great number of these fibers placed parallel to each other and tightly connected by means of a cementing substance, we have the condition in which the fibers actually exist in the wood. Taking then, a piece of spruce wood and cutting it at right angles to the axis of the fibers we see (Fig. 2) the appearance of the transverse section of the wood, showing the hollow spaces representing the hollow tubes, or fibers. The figure shows one complete year's growth or annual ring, in which the larger, thinner-walled tracheids are those which were formed during the early part of the season, while the smaller, thicker-walled fibers are those formed during the latter part of the growing season. The dark lines extending in a parallel manner across the figure are the medullary rays, which are composed of much shorter cells, placed with their axes running horizontally in the growing tree. Several resin canals show scattered through the section, appearing as little open spots surrounded by a rim of darker cells, these latter being the elements which actually secrete the resin. Looking at a section cut longitudinally along the plane of the rays we get a view as seen in figure 3. The fibers, of course, extend lengthwise, and since the slice of wood is very thin, the tracheids are mostly seen only in longitudinal section. In some places the face walls of the fiber occur and then little circular marks known as the bordered pits appear. These marks are very characteristic of coniferous fibers. In this view the rays appear as collections of cells, perhaps somewhat resembling a brick wall, running in the direction perpendicular to the tracheids. A resin canal also shows in the lower left hand part of the figure, extending in the direction parallel to the fibers. The thin walls and wide openings of the early formed tracheids show here, as in the previous view, in contrast to the thick walls and narrow openings in the summer fibers. In the longitudinal section cut tagentially, that is, at right angles to the rays (Fig. 4) the fibers are seen extending lengthwise. The dark part of the figure is late wood, the lighter part is early wood, the section having been cut slightly obliquely so as to include both. In this view we also see little bead-like rows of cells which show the appearance of the rays when they are cut at right angles to the horizontal direction in which they run. One can easily see that they do not occupy more than 10 per cent. of the total volume of the wood.

Functions of Fibres

In function the fibers both transport sap up and down and mechanically support the tree as a whole, while the rays serve to conduct the sap horizontally and to store up food substances. In structure and function other coniferous woods are, in a general way, very similar to the spruce, but all the woods of this class differ greatly from those of the broad-leaved class.

The fibers of this latter class of wood on the same scale of magnification as those of the spruce, are seen (Fig. 5) to be much shorter, though in some cases broader than the spruce tracheids. The narrower ones are true fibers, the broader ones being the vessels or pores. In the wood (Fig. 6) the vessels and fibers are arranged in a manner exactly comparable to that in spruce wood. In this figure we see the vessels, the larger openings, scattered more or less evenly throughout, while the fibers fill the space between, except where the rays extend in more or less wavy lines. The fibers, unlike those of the spruce, do not conduct sap, but serve only to support the stem—the function of transportation of sap being lodged entirely in the vessels. The rays perform the same function as in the spruce.

Figure 7, of balsam fir, illustrates how much the fiber from this wood resembles that of spruce, as already seen in figure 1, and should we show illustrations of hemlock, the pines, Douglas fir and other coniferous fibers, they would all appear very much the same, i.e., showing uniform, comparatively long and narrow elements. Figure 8, of birch, illustrates the more heterogeneous nature of the elements from the wood of the broad-leaved trees, such as the poplar (Fig. 5), chestnut, basswood, maple, etc. In all of these woods the fibers reach not more than one-third the length of the elements of the coniferous

* Microscopist Forest Products Laboratory of Canada.

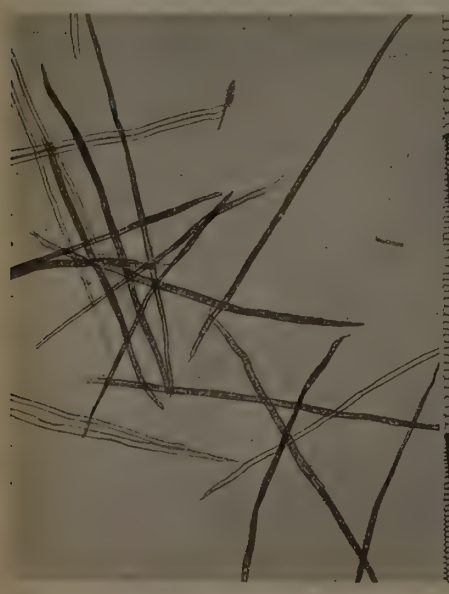


Fig. 1—Spruce Fibre from the 30th Annual ring x 25.

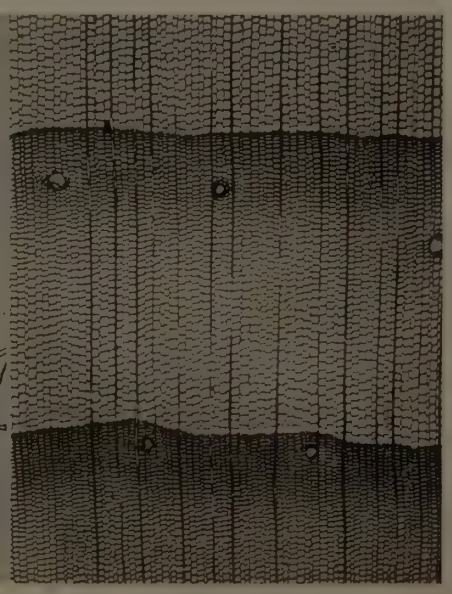


Fig. 2—Spruce Wood, Transverse section x 30.

Fig. 3—Spruce Wood. Radial section x 30.

Fig. 4—Spruce Wood, Tangential section x 30.

woods, and are, of course, still shorter in comparison with the fibers of the cotton and linen types. Moreover, it is only in the fiber from the hardwoods that the short, wide vessels or pores occur.

Variations in Size of Fibres

As well as the great difference in the dimensions of different classes of fibers, as has already been shown, there is much variation in the size of the fibers from the different parts of the plant. Considering only wood we find that the first formed wood, that is, the growth of the first few years, shows very short fibers, as compared with later growth. Thus, in Douglas fir the length of the tracheids in the first annual ring averages not more than 1 mm. or 1/25th of an inch, while in the rings up to fifty years old the length gradually increases to about 5 mm. or 1/5th of an inch, which length occurs with slight variation in the rings over fifty years from the pith. Comparison of figure 1, from an annual ring thirty years from the pith, and figure 7 from older wood, illustrates graphically the variation in fiber length according to age. The tops of trees, therefore, have shorter fibers than the older trunk below. The branches, also, as compared with the main stem in the tree have short fibers, while the roots produce fibers, which are often longer than those of the trunk of the same plant. The elements of the root, however, have much thinner walls, and as a result do not produce as much pulp as the same volume of stem wood. In some trees it is said that the tracheids of the early growth of each annual ring are longer than those of the late growth of the same year. In our measurements in Douglas fir we have found the reverse to be the case, i.e., the later formed tracheids are slightly longer than the early formed ones.

Groundwood and sulphite pulp are by all means the most valuable of paper-making materials produced in Canada. In Canada for 1914 the following figures are given for pulp production.

Wood consumed	1,224,376 cords	
	Cords	Value per cord
Mechanical	644,924	$6.86
Sulphite	367,101	6.76
Sulphate	136,569	4.96
Soda	3,785	7.00
Kinds of wood used:		
Spruce	836,387	6.70
Balsam Fir	314,183	6.58
Hemlock	45,246	5.63
Jack Pine	24,715	5.49
Poplar	3,845	6.81

A little more than one-half of the pulpwood cut was manufactured into pulp in Canada. The total cut was 2,196,884 cords. Of the manufactured pulp 424,833 tons were exported at an average price of $20.87 per ton. The total pulp produced was 934,700 tons.

Methods of Treatment

Groundwood is manufactured by grinding coniferous woods on natural or artificial stone. In this process the fibers are rubbed off and finally appear, as figure 9 shows, in short ragged bundles, as very fine meal, or as more or less single whole tracheids. The larger the proportion of single, whole fibers, the better is the product. In this process the chemical nature of the elements is practically unaffected. In sulphite (Fig. 10) or other chemical pulp, on the other hand, the wood is subjected to cooking under pressure with certain solutions and as a result the fibers become separated, and furthermore, have part of their substance dissolved out. The resulting product consists of much more pure cellulose than is the case in groundwood and the paper made from sulphite is much stronger and more durable. As a result of the cooking process the fibers are often much twisted and flattened, but their more or less pointed ends

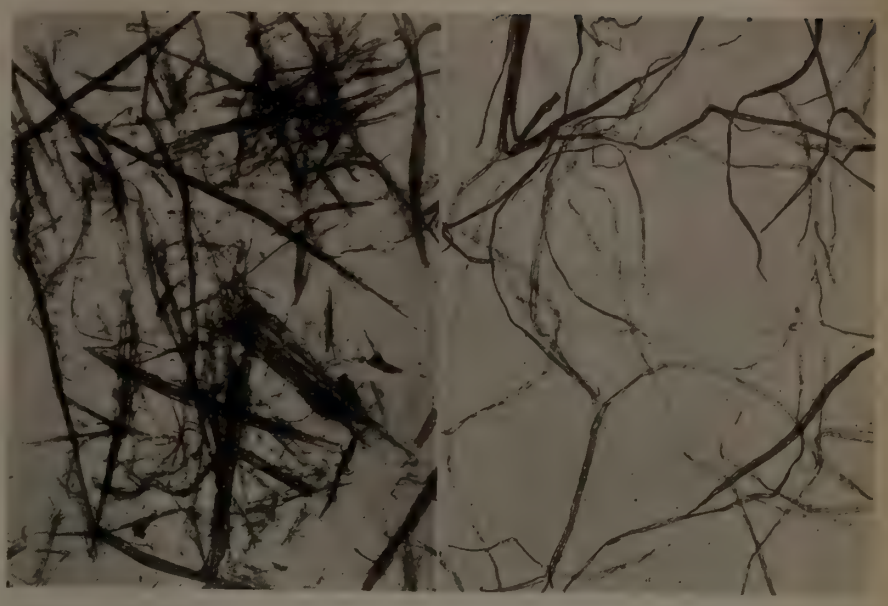


Fig. 9—Ground Wood (Spruce) x 30. Fig. 10—Sulphite Pulp (Spruce) x 25.

and bordered pits in the case of coniferous woods make it easy to distinguish them from other somewhat similar fibers.

For examination the paper is broken up into pulp by boiling with a weak solution of caustic soda, is then thoroughly washed and the fibers carefully separated out on a glass slide with needles. Before treating with the re-agent it is desirable to remove as much water from the fibers as is possible, and in estimating it is best to examine several mounts to get an average. The reagent most easily used is chlorzinciodide. The colorations produced by the more important paper-making fibers are shown in figure 11.

It is sometimes desirable to distinguish positively between the wood of spruce and that of balsam fir. A simple method is as follows: wet the piece of wood and cut a transverse section, not too thin, with a sharp pocket knife. Hold this up to the light and examine, preferably with a magnifying glass, giving a few diameters enlargement. If the wood is spruce, resin canals will show as little darker spots. In figure 2 they are seen as somewhat circular open spaces surrounded by darker rims—it is the darker rims that give the shaded appearance seen in the slices cut with an ordinary knife, as described above. In balsam fir there is no such appearance as this, so the wood may be positively distinguished. After a little practice one will have little difficulty in telling the difference between these two woods, especially if the color, weight and grain are taken into consideration.

How to Distinguish Wood Fibres

Single fibers from coniferous trees may be distinguished from those of the broad-leaved trees by means of the marks made by the openings through which the sap passes from tracheid to tracheid—these marks being the bordered pits already referred to. Moreover, the fibers of the conifers are, in general, much longer, and have more blunt points and the vessels which are seen in the pulp from the hardwoods never appear in the conifers. (Compare Figs. 5 and 7).

Among the coniferous fibers themselves it is somewhat more difficult to distinguish the fibers of different woods, though this is possible in many cases. The variations in size, particularly in length, afford a means of detecting some, but in the case of the more commonly used fibers the general shape is much the same. However, where the tracheids come in contact with the ray cells certain open-

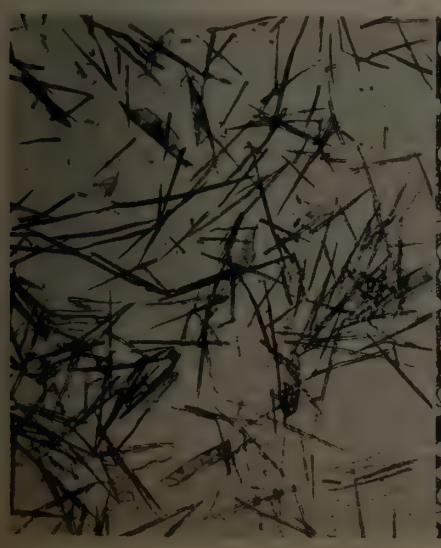


Fig 5—Poplar Fibre x 20.

Fig. 6—Poplar Wood, Transverse section x 25.

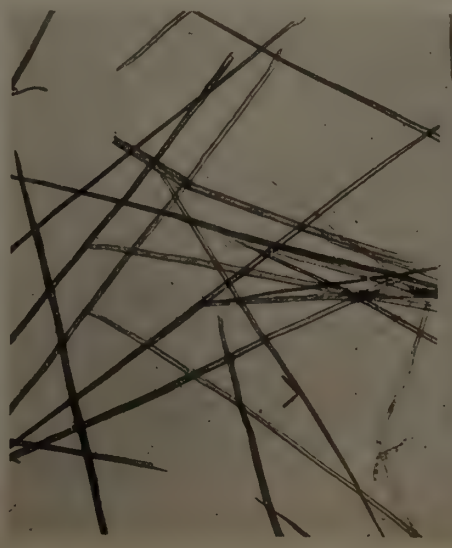


Fig. 7—Balsam Fir Fibre x 20.

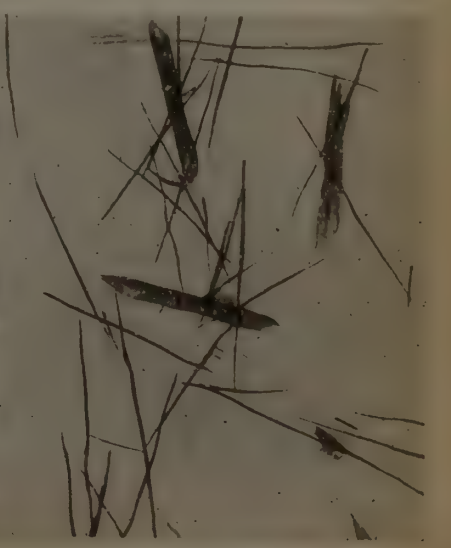


Fig. 8—Birch Fibre x 20.

ings occur which vary to a greater or less extent in the various woods and these openings, appearing as differently shaped marks in the case of fibers from different kinds of wood, afford a means of separating such fibers as those from pine, spruce, balsam fir, Douglas fir, etc. In an analagous manner the fibrous products of the various broad-leaved trees may be distinguished from one another, but such identifications can only be made after a careful examination by an expert.

Co-operation With Distributors and Consumers

By M. B. Nelson*

There is no other manufactured commodity, I believe, produced anywhere in the world to which as little thought and study is given to the merits of its uses or promotion by the manufacturers and distributors as is given to lumber. What does the average lumberman engaged in the manufacture or sale of lumber know about its merits? The measure of success in any line of business or industry is the knowledge applied by those interested. A comparison of what the average lumberman actually knows about the merits of lumber with the knowledge of those interested in most any other line of business, and a comparison of the energy that is expended by the lumbermen in promoting an increase in the consumption of lumber products, is all that is necessary to consider to realize our deficiencies.

I consider the sales organization more to blame than any other department of the business. (The average young man who starts out to learn the lumber business spends a short period at the mills, in the retail yard or in a lumber office somewhere; familiarizes himself with lumber terms and grades and the rates of freight so he can quote on whatever item of stock is listed on the price sheet without making too many mistakes, and, when this has been accomplished, feels that he has graduated and all that is then needed to make him a full-fledged lumber salesman is expense money, an order book, and a vocabulary that enables him to make convincing argument out of information picked up from the retailers about the low prices which are being made by his competitors. Apparently no thought is ever given to doing something that will increase the use of lumber in his territory. The average sales office measures the worth of a salesman by the number of orders he sends in. Some few measure his worth by the value of his orders as compared with the general run of business they receive.

Have Turned to the Education of Their Salesmen

In the most successful industries which have, within a quarter of a century, introduced and created a demand for their products, not only in the United States, but throughout the entire world, they have educated their salesmen as to the merits of what they have for sale, and have spent a great deal of time and money becoming familiar with the arguments in opposition to the use of their products and securing arguments to combat or overcome such opposition. This has been most effectually accomplished through systematic organization where the manufacture has been by one interest or where but a small number have been interested.

I think the reason the lumbermen have neglected this very important feature is the large number interested in the manufacture and distribution of the product, and, further, the fact that the benefits resulting from any energy expended in creating a new demand or combating the inroads of substitutes accrue to the industry as a whole and in but a slight degree to the individual. It is but human to expend energy only where the greatest individual results can be accomplished. Lack of the proper organization all the way down the line is another and probably the greatest cause of our neglect.

First, let us educate ourselves as to the true merits of our product in its different uses, and as to the uses wherein it is equal to or superior to any other known material, by informing ourselves in so far as possible through the limited store of literature; let us find out how long sapwood will last when exposed to the element that causes decay; what known treatments will prevent decay, and what the cost of the same is; how long heart wood will last when exposed to the elements; let us investigate at every opportunity the practices of and methods pursued by the retailers, distributors and consumers of our product in every section, and if their policies are along lines which will not promote the general interest of the lumber business take the matter up with the retailers, buyers or distributors and make sure they understand that they are doing our industry an injustice.

Disseminating Information to the Retailer and Others

After we have gained a better knowledge ourselves of lumber with respect to its real merits and uses, let us take advantage of every opportunity to disseminate information to the retail distributor, engineer, architect and consumer by constant, systematic effort until we have educated everybody who has anything to do with the handling of wood to a point where they will be able to defend its merits and prevent the unscrupulous substitutes from entering our ranks and defrauding the public to the detriment of our business. I do not mean by this that we shall not give due consideration to the merit of any substitute, or that we should recommend the use of lumber where we know it is not equal to something else, because, I figure, such practice would result to our detriment. Our programme must be based upon merit, otherwise our efforts will eventually fail.

Up to this time only a limited supply of educational information is available with regard to the merits of our product, and it is therefore very important that effort be made by all of us to secure further necessary information as rapidly as possible.

Let the salesmen in the different sections of the country organize in small groups and meet as often as convenient, and devise means whereby the retailer, architect, engineer and large consumers of lumber can be properly informed. This can be accomplished by the salesman devoting his spare time with his customer in discussing the subject, in suggesting to the retailer the many uses which could be made of a particular line of lumber in his territory if the proper effort were put forth by him, and that his business would grow as a result. Not only that, but go out with him to the prospective consumer and see that the proper arguments are presented. If he encounters any questions or problems which he cannot answer satisfactorily, let him report the facts to his general office.

Organize with Architect, Engineers and Builders

In the cities and large towns where the consumption of lumber is governed largely by the architect, engineer or builder, I would suggest that the salesmen organize with the retail dealers and call a general meeting of all architects, large contractors, engineers and builders in that particular section; invite them to dinner some Saturday evening, and arrange for a speaker to address them. And be sure the speaker is requested to give strong emphasis to those points which are considered most important to be driven home. Get acquainted with the master mechanic or master car builder in charge of any car shops in your territory, investigate, and make sure that they know all you do about lumber in so far as it affects their line of work. Keep in touch with every kind of construction contemplated in your territory; go to the architect, engineer, or builder with your customer and try to get as much lumber used in the construction work throughout the building as the merits of the wood will justify. You will find that if the architects and engineers are properly approached, they will be more than willing to give consideration to most anything you have to present. It goes without saying, however, that all technical men of this nature are very difficult of approach and are more or less prejudiced in their views, and unless the proper diplomacy is used your efforts will not meet with success.

Every salesman should be familiar with the building code of every city in his territory, and if there is anything in the code that is detrimental to the interest of lumbermen, the salesmen located in that section should get together and organize for the purpose of seeing that the discrimination is corrected at once. We are losing out in many territories to substitutes because these promoters are organized and working along more intelligent lines, not only taking advantage of but creating the opportunities. The consumption of our lumber is decreasing through the development of the substitutes, many of which have not the merit claimed. Keep close watch on every substitute being used for wood and wherever they fail be sure you are on the job and secure the information and report it through your general office so that it can be passed on and distributed. Have photographs made wherever it is possible.

Avoid Waste of Time

How much of the average salesman's time is wasted? I mean by this, how much of his time is expended in a direction which does not result in profit to him, his company, his trade, or to the lumber industry in general? Think how much of this would be converted into an asset if he should take advantage of all the opportunities which present themselves—no day would be long enough. Let us endeavor to utilize our time and energy in creating something. In the selling of lumber we have travelled along the same old road our great-grandfathers blazed for us, with the result that our live, up-to-date competitors have introduced substitutes. They had to do something to introduce their product, they had to create a demand for it, and it has made them more resourceful in this direction, and they are crowding us off the map, so to speak. They all know what their product is good for and what it will do under all conditions—we don't. Some one of the substitutes knocks lumber, saying it is not fit for anything, and we cannot refute the statement because we have never made a study of the merits of our product—we let it go, and they take our buisness away from us.

We have left our selling interests almost entirely to the retail merchant. The average retailer is not interested in timber any more than in anything else. He is interested, however, in selling any product which will net him the greatest profit. Many of the lumbermen are selling substitutes to take the place of lumber when lumber would answer the purpose to better advantage. We cannot blame the retailer—he is working for himself; if he can get more profit out of the substitute he is going to do it. The representatives of the manufacturers—the travelliug salesman—are the proper ones to see that

* Extracts from an address delivered before the School of Salesmanship.

lumber is sold to the best advantage, even though it becomes necessary for us to assist the retailer in selling our lumber at our own expense; we cannot expect them to work for us unless we make it an object for them to do so. The lack of co-operation among competitive salesmen, and as between the salesmen and the retailers, in an effort to promote the general interest of the lumber business is hurting us badly. I believe in co-operation in all things. I compare in my own mind, the struggle of the lumber industry up the hill of success to a loaded wagon being drawn by a string of mules. If we all pull together it will be much easier to reach the summit than if a few pull at a time while the others lay back. Systematic organization is just as essential to the success of our business as to success in battle or in conducting the peaceful affairs of nations.

How the Public Got the Wrong Idea About Associations

Co-operation produces power. This power can be used to build up or to destroy individually or collectively. Some associations misused the power they created, and, as a result, the public, not being familiar with the workings of all the associations, came to the conclusion that many or all of them were detrimental to the general pubic interest. But within the last year or two sentiment has been fast changing. The public is finding out that not all associations in industries are used to its detriment, but that when conducted sanely they are of great benefit not only to the individual interested in the industry but to the people as a whole. We are not created equal in ability in any direction. There are people in all lines of business who are not capable of conducting their own business successfully. They are constantly destroying what someone else produced, and, hence, their operations are detrimental to the general interest, and business failures are the final outcome. A business failure has the same effect as the death of an individual in a community. If the individual was a benefit to the world, then the world sustains a loss by reason of his death. Failure in business is not a benefit to the people as a whole because those interested in the industry are not the only ones who suffer as a result—the general public comes in for its share. Civilization is built on co-operation.

Through our trade organizations it is possible to gather in and disseminate knowledge and information regarding our business which could not be secured and distributed otherwise, and put into effect many economical methods, thus benefiting the people as a whole.

Through Associations Business Failures Can be Reduced

While through co-operation we cannot make all people equal, we can make them stronger, and prevent many business failures. Think what an ideal country we would have if there were no business failures. Through association work we can reduce business failures to a minimum. In some industries, I understand that their associations go so far as to advance money to their members to assist them in tiding over critical periods. The Federal Trades Commission have strongly urged that individual concerns interested in the same industry co-operate toward their own up-building. If we work intelligently for the benefit of the people we will profit by it, but if we work to their detriment eventually we will suffer for it.

The salesmen have a greater opportunity to advance this movement than anyone else because they are constantly calling on the trade, the buyer and consumer. All of us are failing to a greater or less extent to make use of the knowledge we possess, many of us because we are not directly interested at the time. We overlook many opportunities to promote the general interest of the lumber business, whereas if all of us would look at it from a broader viewpoint we would profit by it. For instance, we all know that the creosote treatment has been successful for a number of years, yet the owners and manufacturers of timber are doing but little toward introducing the treated material, seemingly waiting for the people to find out what it is and then call for it. And, as a rule, they are standing ready with a wet blanket, so to speak, to smother any ambitious user who comes to them with a little difficult speculation. Until recently but little or no effort was made by the lumbermen through association to promote in any way the use of creosoted material, but some effort is being made along this line, though nothing to compare with what it should be.

I do not believe the industry as a whole has considered as seriously as it should the giving to the consumer his money's worth. We have given too much consideration to getting all we could for our lumber without giving enough consideration to the consumer. Now that we find that we are failing to accomplish what we have been striving for through the policies we have been pursuing, let us try giving the consumer as much for his money as it is possible for us to do. We cannot do this so long as we are ignorant of what our lumber is good for, and we cannot expect the retailer, or any body else who is not interested in our stumpage, to figure this out for us.

A considerable amount of damage has already been caused this year in the vicinity of Prince George, B. C., by forest fires. Fire has also been reported in the vicinity of Mount Robson. Recent rains, however, have improved the situation greatly.

From the Canada Lumberman of Thirty-five Years Ago

Lumber Trade Booming:—Messrs. McAllister & McLean have sold their Pettawawa limits to James McLean & Co. The figure received, we believe, was something over $130,000, a very handsome and no doubt satisfactory one to the sellers, who purchased the same limits something over a year ago for only $40,000. This sale demonstrates better than anything we have yet heard how the lumber trade is "booming."—Pembroke Observer.

A New and Valuable Invention:—Mr. Finlay Ross, of Byng Inlet, has invented and patented a gang of circular saws, which will probably supersede the ordinary stock gangs of upright saws. Mr. Ross can, by a simple contrivance, arrange on one mandril any required number of saws, which may be taken off at pleasure, as easily as the ordinary gang, by shifting a key and coupling, placed near a pulley at each end of the mandril. The inventor claims that his gang of circulars will cut a much larger quantity of lumber than the usual gang, and that the face will be smoother. Another advantage claimed by Mr. Ross is, that as the saws are arranged so as to run with the grain of the timber they will cut easier and make smoother work than the ordinary circular saw revolving against the grain of a log. The logs are fed with press rollers in the ordinary way. There seems to be a mine of wealth in this simple invention, when fairly introduced.

Muskoka Improvement Company:—A company has recently been organized amongst the lumbermen of Muskoka and Georgian Bay, for the purpose of regulating the driving and sorting of saw logs, constructing slides, booms, piers, dams, etc., on the Muskoka rivers, the Severn, Musquash, etc. At a meeting which was held at Gravenhurst, the company was formed, and $50,000 capital subscribed. Messrs. H. H. Cook, Richard Power, A. P. Cockburn, M.P.; G. W. Taylor, and Hon. Alexander Mackenzie were elected directors. The directors at a subsequent meeting, after electing Hon. Alex. Mackenzie president, prepared estimates of the proposed works and made arrangements for immediately commencing work upon the most urgent of these. A similar company, namely "The Upper Ottawa Improvement Co.," has been in existence for some years, with a capital of $150,000. The directors are Messrs. Bronson, Perley, Eddy, Gordon and H. Hobinson; H. Robinson, president; J. R. Booth, secretary; G. B. Green, acting secretary. The operations of this company extend from the Des Joachim to the foot of Hull Slide. The organization has been found of great service to all parties engaging in lumbering on the Ottawa. The Muskoka Company will doubtless prove equally serviceable.

Lacing Belts on the Pulleys

The modern way to adjust a belt is to do it "right on the pulleys." It's the quickest way, the safest way, the most economical way; that's why it is the modern way.

About twenty years ago it was thought that belts and pulleys had reached their maximum of efficiency. We thought that there was no more to know—leather was "king" of belt materials, rawhide lacing was IT, almost "any old pulley" would do the trick, better bearings were undreamed of, unheard of, and so forth.

To-day there are many belt men who will therefore look upon the "modern" method of adjusting belts with contempt. They will say, "It's a useless extravagance," without looking into the matter thoroughly. For, just as we did twenty years ago, belt men to-day are prone to think that we have reached the maximum of efficiency and that there is "nothing new under the sun."

Well, lacing a belt while on the pulley is a new stunt, and it's a good one. It has every argument in its favor.

To do this lacing properly requires a machine—a couple of clamps, one on each belt end—and a rack arrangement for cranking the two ends together right where you want them. The machine holds the two ends in correct position for lacing and leaves your hands free to do the work most efficiently.

Even where the belt is to run fairly slack, or easy, it is plain that a device like this will prove beneficial. It takes the belt's measure, helps do the work, and leaves the belt right where you want it—all at once.—N. G. Near.

Recent reports from Vancouver state that all the loggers on the Pacific Coast, north of the Columbia River, may close down for a period of 30 days beginning some time next week. The reason given is that the log market is rapidly becoming flooded with a surplus, owing to the rush that took place when the business outlook appeared good. Another cause is the scarcity of labor and the high wages that prevail.

Grading B. C. Lumber for Export

In view of the probability of a strong demand arising for British Columbia forest products in overseas markets following the close of the war, the Hon. W. R. Ross, Minister of Lands, and officials of the Forest Branch, have been devoting a lot of attention to various factors likely to have some influence in determining the volume of business to be done. It is known that the matter of grading has been given considerable attention, and according to the opinion of men in our midst who are familiar with the British timber industry, and who understand thoroughly the methods followed in that important market, it is essential that our export lumbermen should grasp the fact that while it probably will not prove difficult to secure an initial order, the desirable thing is to hold the trade by giving the customer absolutely satisfactory grades, keeping in mind that the market he is endeavoring to serve is open to the world and takes only the best of everything.

The advisability of the B. C. Government establishing its own Inspection Bureau, appointing its own graders, and giving to our lumber the full prestige of the province which produces it, are also matters which have engaged the attention of Hon. W. R. Ross and colleagues. It scarcely is in keeping with the dignity and growing importance of an industry in which the government is a partner to continue indefinitely to do business under the aegis of a foreign corporation, no matter how satisfactory the relationship has been up to the present. Under B. C. inspection and marking there would be little danger of our forest products losing their identity, as has occurred in the past, and every shipment would help put our province on the map of the lumber markets of the world.

Some time ago the editor of the Canada Lumberman asked a well-known manufacturer and exporter for an expression of his views on the subject of grading for the English market, inspection, etc. His letter appears below:

"To explain the grading situation in British Columbia would entail a long discussion and be subject to many conditions which could only be decided by a committee of regular graders. The essential requirement in grading lumber is knowing the purpose for which the lumber is required.

"We understand you would like our opinion as how best to compete with Washington export mills in grading, etc. In the first place, it is necessary to consider the fir timber stands in British Columbia as compared with Washington. Generally speaking the land on which the timber grows in British Columbia is more broken and rocky than in Washington, therefore our percentage of clear lumber is lower, but our percentage of merchantable (barring black knotted timber) is about the same, and our percentage of common, where the land is logged clean, is higher. In other words, the Washington mills have better clears as a rule and more of them, while in British Columbia we have better grades of merchantable export timbers suitable for construction purposes, as it does not pay us to go after the clears so hard on sawing rougher logs. This is preliminary to our remarks on grading.

"In the English market, as before stated, lumber is re-graded for everything there is in it, and purchased with this object in view. If an English buyer can buy clears on a specification of 3 in. and up by 7 in. and up, with average length of say 26 feet, and knows that he will get a uniform parcel of soft fir, he will pay more than if it is all red or hard fir, as it will be used for totally different purposes. And again, if it is just a mixed bunch of clears he gets that is strictly within the grade of clears on one face and two edges, according to the specific Inspection Bureau grade, he will be forced to pay the bill, but will confine his future purchases to mills which supply the lumber on which he can make the most money.

"A great deal of the lumber sold here under such specifications would be suitable in smaller sizes, as it is nearly all used for re-manufacture, some of it even turned into spindles for the cotton trade. Thus the English lumber importer gets the alvantage of us on re-grade.

In Washington the percentage of soft fir, or fir of medium hardness, is high compared with British Columbia, and we should grade out lumber with the express object of competing with a trade they have established. Nearly all of our exported lumber is re-manufactured and we should get the advantage of a reliable grade instead of taking pot luck in mixing red fir, hard, coarse grained stock grown on rough ground or exposed position, and good clears which are uniform and suitable for re-manufacture without undue waste. Each should be marketed separately.

"The Pacific Inspection Bureau does not take the trouble to grade this way, but the individual mill or exporter on the other side is alive to the problem of putting uniform stock into export cargoes or parcels, and cuts a camp run of logs of the same stand of timber, insuring uniformity, while in British Columbia most of the mills buy their logs in booms from different camps. The mills on the Sound are using the public lumber dock in Seattle to advantage, but most of the mills there are not as dependent on it, as they have, as a rule, large piling ground and wharfage of their own. In British Columbia most of the lumber companies' piling ground or wharfage is very limited, owing to the policy of the railway companies, when opening up the country, in getting control of the waterfront by laying their tracks on the foreshore or close to it. The mills have generally fair frontage but no depth. This lends itself to loading scows cheaply and would work to the advantage of a storage dock.

"The certificates of the Pacific Inspection Bureau are used chiefly for financial purposes, so that advances can be given against consignments by banks and lumber brokers, and provided the lumber will stand up to the strict letter of the grade as regards commons, merchantable and clears, the rest is up to the reputation of the shipping mill. British Columbia mills, as a rule, are not equipped for export business, and unless some encouragement is offered them, such as assembling what stock they have suitable for export, they will continue to market their stock in the manner in which they can get real money the quickest. It costs, it is estimated, about 17 per cent. per annum to carry lumber in Vancouver after it is cut, so that the mill is forced to sell quickly or the profit is gone. This shows how important a storage dock is, where uniform shipments can be assembled.

"Salesmanship is also essential, and as in many cases shorts of 12 to 20 feet would be just as suitable for the market as lumber sold on specifications of an average length of 30 feet. One thing that has tended to make export frieght rates high is the long average lengths in the specifications, which takes up space and makes stowing tedious and expensive. The want of shorts and short stowage has prejudiced ship owners and captains against lumber.

"In conclusion, we think the present Pacific Inspection Bureau answers its purpose and is established, but the British Columbia Government might lend a hand in supervising or franking shipments from a storage dock or mills having their own wharf, in seeing that shipments are as invoiced or described and suitable for the market to which they are sent."

Requisites of the Successful Lumber Salesmen of Today

By Alfred Klass, Oconto, Wis.

The secret of nearly every business success is a perfect organization.

A salesman may have good ideas, understand the product he is selling, and have the force to get the business, but make a failure because of a poor organization back of him.

A concern of any magnitude needs more than the general in command to keep it on the road to success. A perfect organization means a place for every one and every one in his place, and the general manager who knows how to pick his lieutenants is the one who has a successful business.

The sales manager and the traveling salesmen are lieutenants and the better they are the more successful that branch of the business will be.

It has been said that a good salesman is one who can sell a man something he does not want and yet satisfy the customer. This may be true; but the salesman who does it is one who knows his product well and for that reason is able to prove to his customer that he really wants what he is not asking for. In this connection I might cite an experience I had when I was handling the retail end of the business. A customer called and asked me for a certain amount of 2 x 6-16. It so happened that we were short of this item and I mentioned it to the customer, whereupon he said, "Well, I can use 12-foot just as well, because I am going to cut them to 4-foot lengths and use them in a sidewalk around the house." Now it was easy in that case to sell the man something he did not ask for and yet give him exactly what he wanted. There are any number of people in the consuming world today who are constantly using material that costs them more than they should pay if they only knew that there were cheaper items in lumber that would answer their purpose just as well and at the same time move something for the manufacturer that he is anxious to sell.

But here again we have brought to mind the successful salesman, the one who has a thorough knowledge of the product he is selling, has a knowledge of his customer's needs and ability to make suggestions that will be adopted.

Practical Knowledge is Essential

To my mind a thorough knowledge of the product we sell embodies a practical knowledge of how the product is manufactured, some knowledge of how the product is manufactured, some knowledge of competitive woods and substitutes and their availability and at least a general knowledge of grades.

The salesman who has a knowledge of grades can talk with a customer about his needs, learn from him what uses his stock is put to and then help him to decide on the quality he should use. This is especially true of the manufacturer who uses stock that enters into the manufacture of various articles, although to some extent it can also be applied to the retail lumberman.

We all know that there are a great many factories using lumber

that they are pleased to buy, not because it is No. 1, No. 2 or No. 3, but because it suits their peculiar needs; and here again is evidenced the need of a thorough knowledge of the product he sells if the salesman wants to meet with the fullest success.

I will not venture a guess as to what percentage of the lumber salesmen on the road today have a practical knowledge of how lumber is manufactured. I believe, however, that there are a great many who have never had much education along that line, and I know both they and their employers would profit if they took some time off and visited the big, red sawmill. I believe it is a fact that the average salesman today has a very meager knowledge of the different grades, which fact causes both him and his employer considerable trouble at times, because he is sure to go wrong some time or other in his eagerness to get an order. He will make promises for a grade that cannot hold out, just because the promises line up with what the customer wants and the price is attractive; but the day of reckoning comes when the customer gets the stock and finds that No. 3 is not sound knotted, or No. 4 has a percentage of soft rot.

The early part of last year I had a letter from a member of a large wholesale lumber company at Pittsburgh and he told me he had a brother whom he was planning to send out on the road to sell lumber. He said that the brother had had some experience in a retail yard, but he wanted him to get some knowledge of manufacturing and grading before he assumed the duties of a lumber salesman and wanted us to take him on at the mill, where he could get some knowledge of manufacturing and grading. He spent about six months with us at hard labor around the mill and yards, with different inspectors, and I dare say he left there with a better knowledge of manufacture and grades than most of our traveling lumber salesmen have.

The Ideal Organization

To my mind the perfect organization is the one that is made up of men who have been trained at the mill and spent not only six months, but a year, or two years, if necessary, getting the practical knowledge needed before taking up the selling end of the business.

Lumber is not such a simple proposition that any one who is jolly and good-natured and can approach the buyer with a smile and a pocket full of cigars is able to sell it successfully. It is true, of course, that to sell lumber one must be qualified as a salesman, know something of human nature and have a good appearance; but the really successful salesman must first be a lumberman in order to handle the product intelligently.

We have all heard at one time or another this or that salesman tell how he succeeded in "putting one over," and as we believe that practical knowledge is the fundamental basis of successful salesmanship, we can also see that such an education will preclude as impractical the substitution in sale of illogical items.

To "put one over" is merely to destroy a future prospect, and the man who refuses an order because he is aware that the stock will not satisfy, or that shipment cannot be made in proper time to prevent dissatisfaction, is the salesman who is building a foundation for the future.

Without doubt there are salesmen and their companies who are "putting things over." They are probably working on the plan that there is a sucker born every minute and they want their share of them; but the continuance of this practice is sure to bring grief sooner or later. However, the force of salesmanship that comes with self-confidence born of practical experience enables a salesman to offer substitutes that may be entirely acceptable, both as a matter of practicability and economy to the dealer and builder, as well as for the best interests of his employer.

Edward Hines said in an article on salesmanship, that specialization in salesmanship is indispensable today, not because he was quixotic and enjoyed the selection of an arduous road, but for the cold matter-of-fact reason that in modern business there is no other road.

Some Requisite Qualifications

There was a time when lumber was in a class by itself—it had no competitor, and in that day salesmen had nothing much to do but go out and take orders. The situation today, however, is entirely different; the country is full of substitutes and the owners of these substitutes are spending hundreds of thousands of dollars every year in the way of advertising to bring them before the public. That is why I believe that men who are selling lumber should be lumbermen, and not boot and shoe men; that is why I believe it is high time to spend some money advertising, and if we cannot be the "bell cow" let us follow behind and at least keep pace with the substitutes. Some day we may be able to get the lead.

A knowledge of freight rates and a sound sense of values is essential in the education of the successful salesman. Offhand quotations are necessary at times and this knowledge is helpful at such a time, as well as being an important factor in nearly every transaction made.

Enthusiasm in the work is indispensable. The salesman who is not wrapped up in his work cannot possibly get in the same class with the really successful salesman. This is just as true in the business of selling lumber as in any other business. The man who attempts to work in any position without a real liking for the job will not meet with the greatest success. So it is absolutely necessary for the man who wants to win to put his whole ambition and energy into the job at hand and do it better, if possible, than any one else and at least better than he would do it if he were working at it in an indifferent manner. This is true of any job, from piling slabs up the line to general manager; and that kind of enthusiasm spells efficiency. The salesman who has it is sure to dispose of his product to much better advantage than the one without it, and the sales manager who has it is sure to get his product manufactured in better shape, keep his stock in better assortment and close better deals than the one who is without it. It is also essential that the salesman who wishes to be successful should be of good report, cultivate personality, be courteous, patient and accommodating to a degree.

There always comes a time when the manufacturer finds it necessary to call in his salesmen for one reason or another, and just as a sawmill man would be foolish to let a good sawyer, filer or yard foreman go just because the mill is to be closed down for a short time, so would he make a mistake to turn loose salesmen who know the trade and who know lumber. It is not always possible to pick up equally good ones when business revives. Salesmen who are lumbermen are hard to get.

Logging in India—The Elephant's Work

In a report upon the logging industry in Burma, sent by Mr. H. R. MacMillan, and published in the Weekly Bulletin of the Departcent of Trade and Commerce, a description of the teak logging industry is included. "The average out-turn of teak is about 300,000 tons, or 180,000,000 board feet per year, worth about $12,000,000 in the log in Rangoon in normal times. Teak grows scattered in the forest, and the logs averaging one ton in weight, reaching a maximum of three tons, must be dragged on the average three miles to streams. The dragging has up to the present been done by elephants. The supply of elephants is already giving rise to difficulties, the price having risen in a decade from $1,300 to $2,600 each. The elephants require great care and attention; cannot be worked in the heat of the day, can only be worked eight months in the year and where they are congregated in any numbers are subject to anthrax and other diseases. The average year's work for an elephant is the skidding of 120 logs a distance of two miles. The working life of an elephant in logging is ten to fifteen years. The large companies operating in teak and the Government of Burma, which works departmentally, large areas of teak forest, netting a profit of $40 per thousand feet board measure of timber cut, are desirous of introducing machinery to supplement or replace the elephant."

Douglas Fir Ties Popular in England

Douglas fir railroad ties, as a result of recent tests by leading railways of England, have now become so popular in the United Kingdom that the British Admiralty is diverting steamers of large capacity to North Pacific waters in order to secure a supply of fir for British railroad purposes.

The British steamer Photinia recently cleared from the Columbia river with 4,019,965 feet of ties for Queenston for orders, and now the British steamer Breconia, after loading about 1,800,000 feet of ties in British Columbia, is on the Columbia river completing a cargo which is expected to equal that of the Photinia.

Prior to the European war North Pacific lumber cargoes of 4,000,000 feet and over were not uncommon, but since the war the only large capacity steamers that have been dispatched there for lumber, aside from one Japanese vessel, have been Admiralty vessels sent specially to transport Douglas fir ties. The first of these Admiralty vessels was the St. Veronica, which cleared from the Columbia river in March with 3,800,000 feet.

Proper Attention Increases Usefulness of Belts

If manufacturers and dealers in belting could be assured that the belting would receive proper attention and care while in the hands of the buyer they could often sell at a much lower figure.

I know of a manufacturer, for instance, who generally uses a "factor of safety of two" in selling his belting, because he fears the belting will be expected to "take care of itself."

The rule this manufacturer of rubber belting uses is: "Each inch in width, running 1000 feet per min., will transmit one horse power."

With proper care this man states that the figure of 500 could be used just as well, just as safely, just as durably, but he won't risk it.

In buying belts, then, it is well to tell the dealer or mannfacturer just what kind of care you expect to give the belts.—N. G. Near.

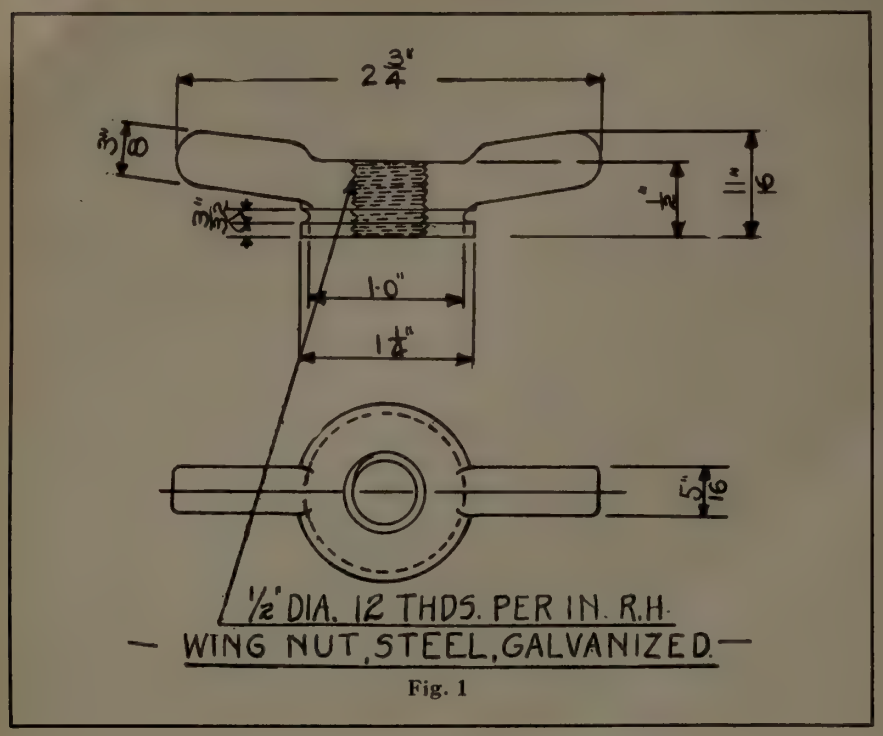


Fig. 1

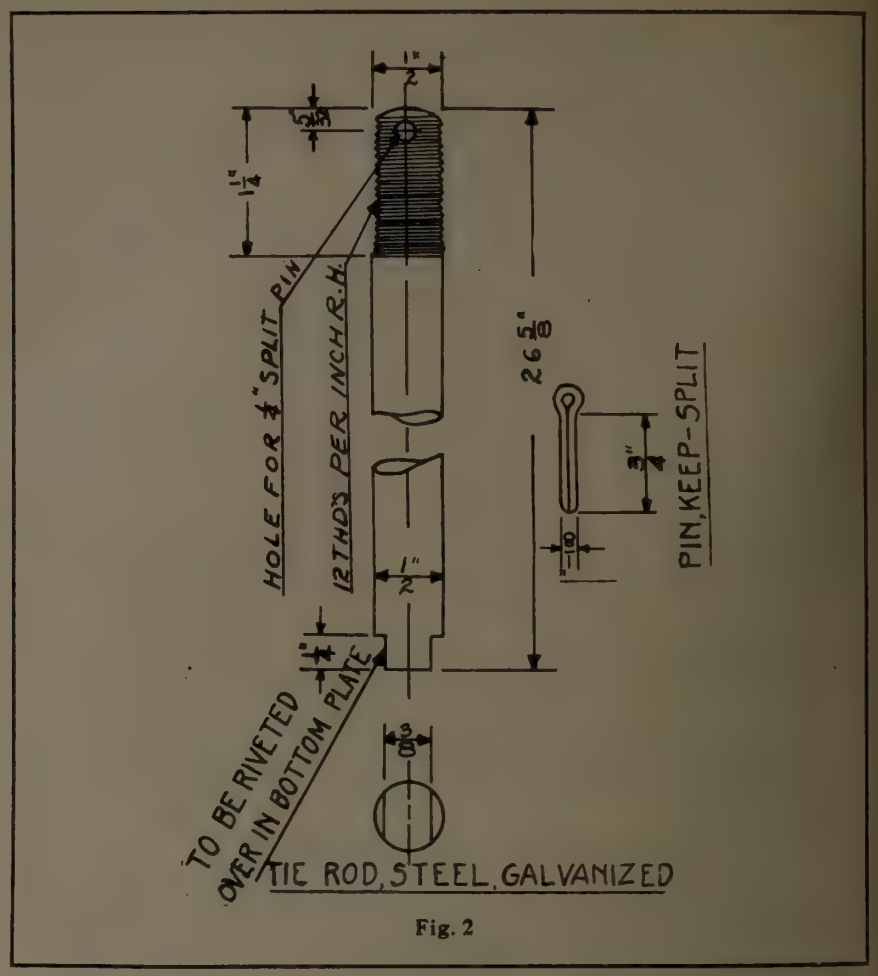


Fig. 2

The New "Bethlehem" Shell Box

The Imperial Munitions Board have issued plans and specifications of a box to be made for the new 18-pounder "Bethlehem" shell. The outside over all dimensions of the box are 27¼ ins. x 10⅜ ins. x 10⅜ ins. It will hold four complete rounds, including fuses and fuse covers. The kinds of wood to be used are spruce, pine or basswood for the top, bottom, sides and ends, and birch, beech and maple for the top and bottom battens and diaphragms. All metal fittings are to be of mild steel galvanized.

The construction of the box is somewhat different from the other boxes that manufacturers are acquainted with. It has a removable end which is held in place by a central spindle that passes through the centre of the box from end to end, fastened with a wing nut. Two small galvanized steel plates are screwed to the bottom and top of the box to keep the head of the bolt and wing nut from cutting into the wood.

Fig. 3 shows a side elevation and end elevation of the box and on the side elevation can be seen the central spindle, wing nut and small steel plates in dotted lines. It will be noticed that the wing nut and head of the bolt do not project past the ends of the box. This is to allow of the boxes being piled on top of each other. The battens that go on the ends are mitred and project ⅞ of an inch over the end pieces, thus forming a rebate for the end to fit into the box.

The three diaphragms or divisions that go inside the box are made of 3-ply hardwood glued up. The centre ply is ¼ of an inch thick and the two outside plys are 5/16 inches, making a total thickness of ⅞ of an inch. The specifications state that these thicknesses are nominal, which we take to mean that the total thickness of the diaphragms may vary slightly from the measurements given. The diaphragms are for the purpose of holding the shells in place. Each one has five holes bored in it, the centre one being a ⅝ inch hole for the central spindle to pass through. The other four holes are for the shells and are a different size in each diaphragm. Those in the diaphragm nearest the removable end are 3 13/16 inches in diameter, those in the centre diaphragm are 3 13/32 inches in diameter, while those in the diaphragm nearest the closed end are 3⅛ inches tapered down to 2 15/16 inches.

A piece of soft grey felt ¼ inch thick is fastened to the inner side of the removable end as shown in Fig. 4 to keep the shells in place and to keep the ends from coming in contact with the wood. The felt is fastened to the lid by means of tacks at each corner. The box has two hand holes for lifting purposes, the shape and depth of which are shown in Fig. 4. The width and angle at which they are cut is shown in Fig. 3.

The wing nut that holds the removable end in place has a ring and chain attached to it to keep it from getting mislaid. The ring has an opening 1 inch in diameter and is made of ring steel No. 13 S.W.G. .092 of an inch wide. One end of the chain is attached to the ring and the other end secured under the lid plate by a small staple. The dimensions and shape of the wing nut are shown in Fig. 1 and the ring and chain in Fig. 8.

The size and location of the holes in the lid and bottom plates are shown in Figs. 6 and 7 and the dimensions of the central spindle

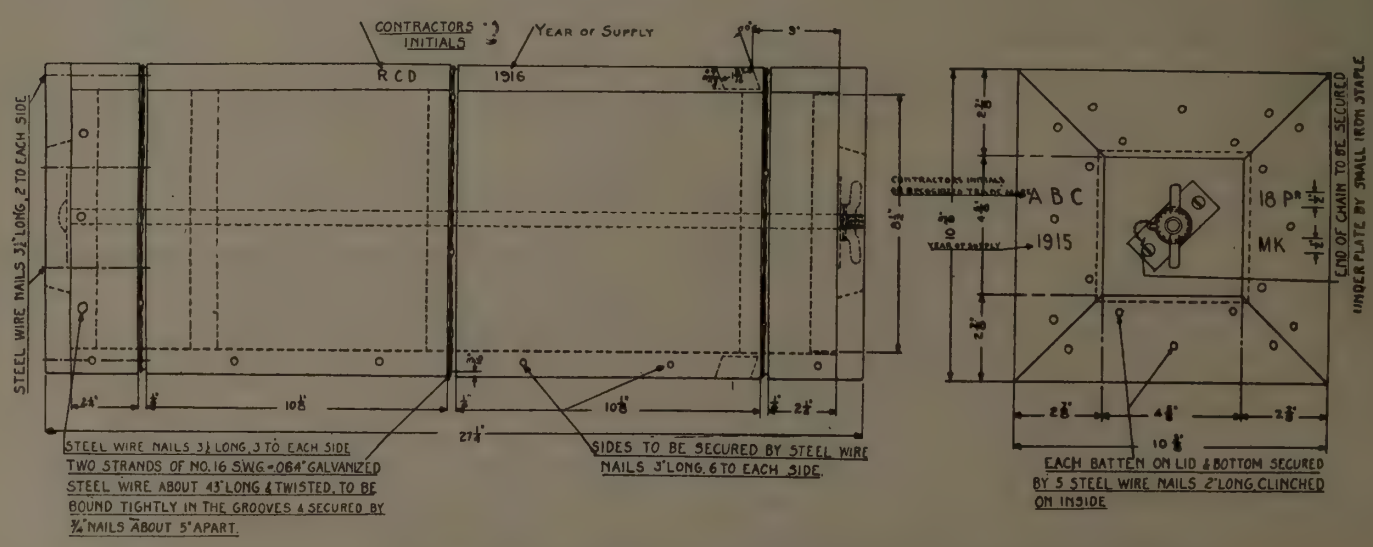

CONTRACTORS INITIALS
YEAR OF SUPPLY
R C D
1916
STEEL WIRE NAILS 3½ LONG, 2 TO EACH SIDE
STEEL WIRE NAILS 3½ LONG, 3 TO EACH SIDE
TWO STRANDS OF NO. 16 S.W.G. = .064" GALVANIZED STEEL WIRE ABOUT 43" LONG & TWISTED, TO BE BOUND TIGHTLY IN THE GROOVES & SECURED BY ¾" NAILS ABOUT 5" APART.
SIDES TO BE SECURED BY STEEL WIRE NAILS 3" LONG, 6 TO EACH SIDE.
A B C
1915
18 Pr
MK
EACH BATTEN ON LID & BOTTOM SECURED BY 5 STEEL WIRE NAILS 2" LONG, CLINCHED ON INSIDE
END OF CHAIN TO BE SECURED UNDER PLATE BY SMALL IRON STAPLE

Fig. 3—Side and End Elevation of "Bethlehem" Shell Box, Showing Central Spindle (in dotted lines) that Holds Removable End in Place.

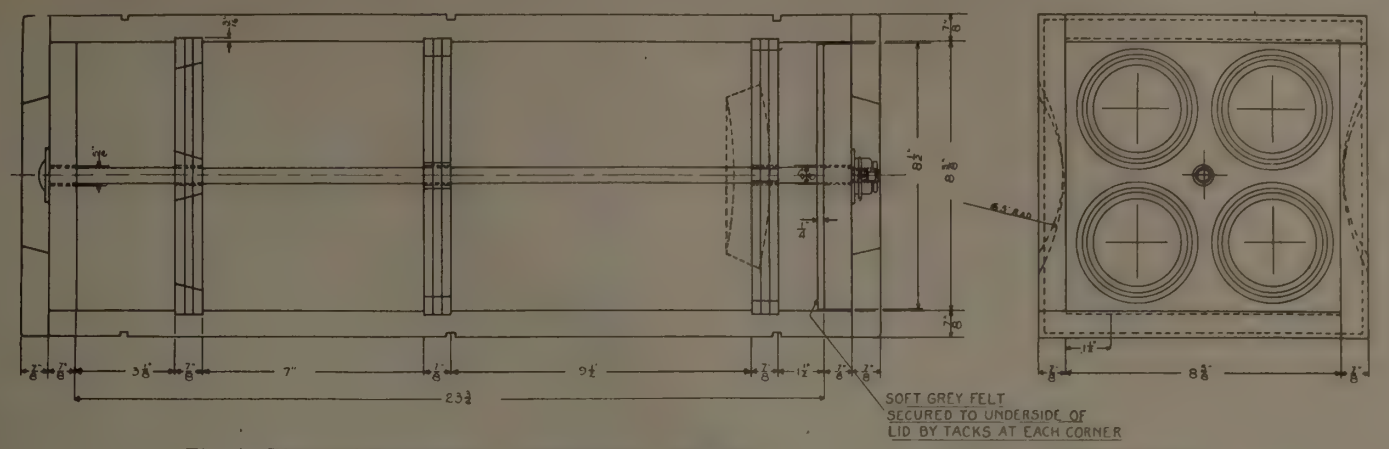


Fig. 4—Plan and End View of "Bethlehem" Shell Box. Note the Hand Holes in Dotted Lines.

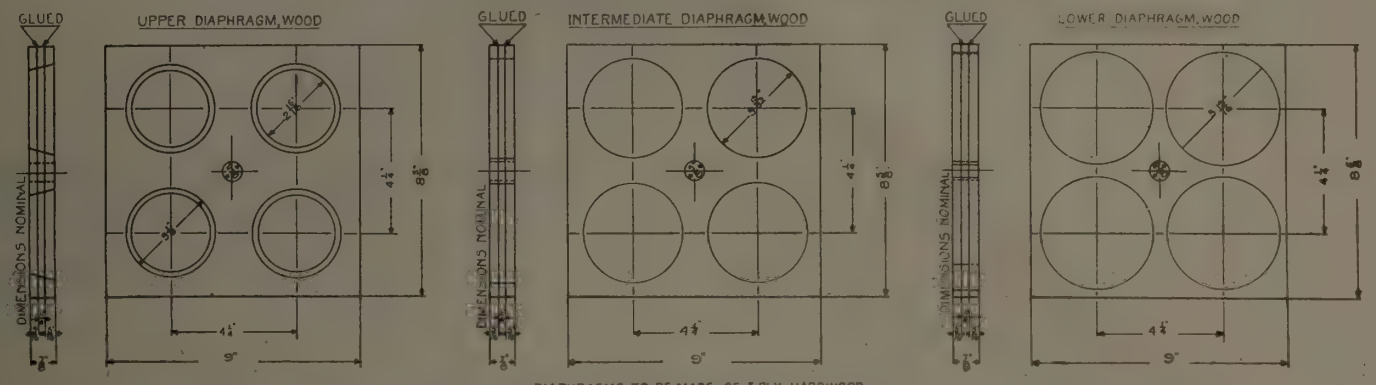


Fig. 5—Three Diaphragms or Divisions that Hold Shells in place. They are made Three-ply.

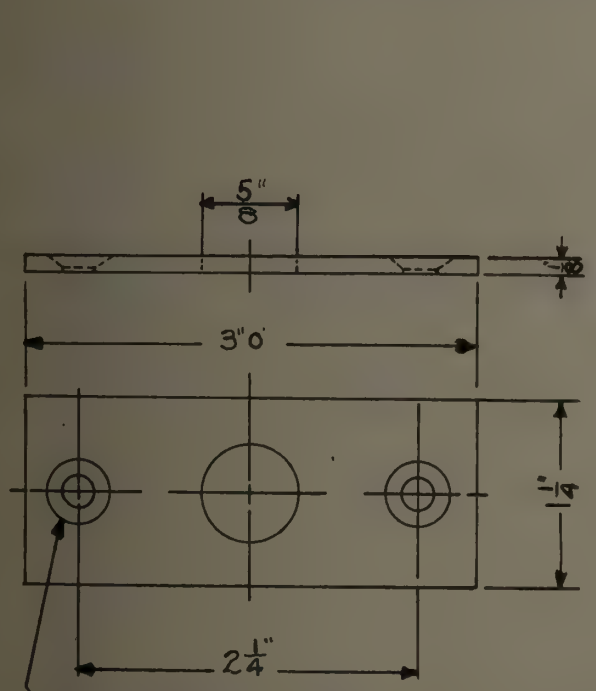


Fig. 6

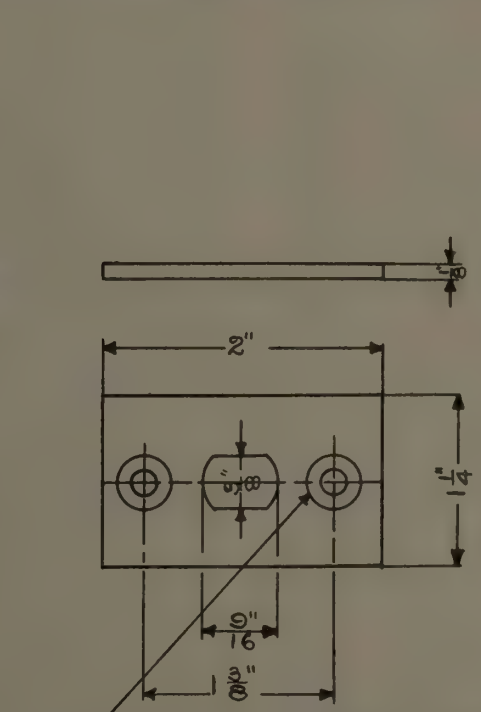


Fig. 7

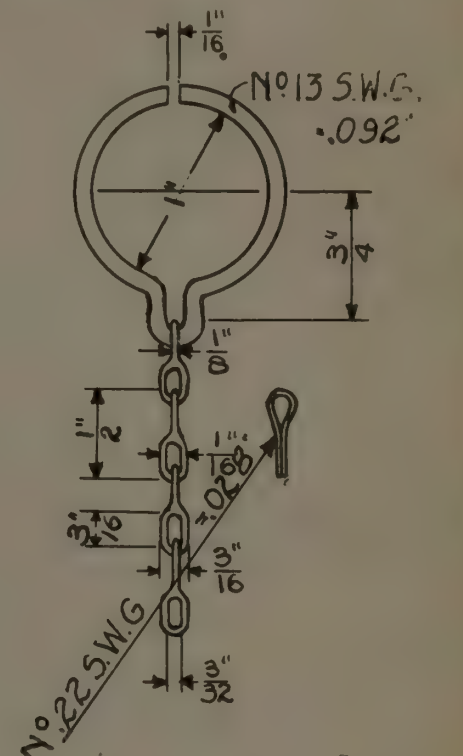


Fig. 8

and the split pin that goes in the end of the spindle are given in Fig. 2. The box has three banding wires of two strand galvanized steel wire, No. 16 S. W. G., .064 of an inch tightly bound around the four sides in grooves provided for the purpose and secured by ¾ inch wire nails about 5 inches apart. After the box is assembled and wired, it is marked in two places (as indicated in Fig. 3), with the contractor's initials and the year of supply.

The Canadian Government Railways

The Canadian Government Railways have published a fine set of illustrated folders, describing the great variety of trips that can be made over these splendid lines. One of the best of these is a folder entiled "Summer Excursion Fares, 1916," which contains detailed information regarding the fares for all trips on the Canadian Government Railways Lines in New Brunswick, Nova Scotia, Prince Edward Island, Quebec and Ontario, and to the chief points in Newfoundland. All the publications issued are attractively illustrated and enclosed in handsome colored covers. It is often such a perplexing problem to settle the details of a summer outing that these folders will be of much use to intending travellers. In such an extensive territory as is covered by these railways there is a great diversity of attractions, and they are well set forth in such publications as "Notes by the Way" (Lines Montreal and East); "Notes by the Way" (Lines Quebec and West); "Out-of-Door" (Quebec and the Maritime Provinces); "Abegweit" (Prince Edward Island); "Bras d'Or Lake," "La Baie de Chaleur," and "Storied Halifax." Complete information regarding hotel and boarding house accommodation is included in the folders.

Proper Methods for Laying Oak Flooring

By W. L. Claffey

TO-DAY by improved machinery, equipment and quantity manufacture, the cost of making flooring has been so reduced that beautiful oak floors are now within reach of everyone.

Oak flooring is generally laid by a profession commonly known as floor layers, who specialize in the laying of hardwood floors. These floor layers may be divided into two classes—good workmen and a class that are careless. The expert floor layer obtains his reputation by the high class and perfect work that he turns out. It is practically his only asset in the game. Many large and prosperous floor laying concerns have reached their prosperous condition chiefly through conscientious workmanship in their earlier days. The floor layer who is careless in his work will never succeed.

It is not necessary to be an expert to produce a good floor laying job, but it is very essential that considerable care should be exercised and all the details from the very start to the finish should be carefully studied before the floor laying work is taken in hand.

Before starting to lay oak flooring, the stock should be examined to ascertain if it has absorbed any moisture while at the lumber yard, on the wagon, or at the job, as usually during rainy weather, oak flooring will absorb considerable moisture, mostly at the ends—thereby causing it to swell as much as one-sixteenth of an inch. If this condition is not discovered before the floor is laid, unsightly crevices will appear in the floor. The sub-floor, as well as the plaster work, should be thoroughly dry before starting to lay oak floors. If in winter, the rooms should have a temperature of about 70 degrees to insure the best results, and the oak flooring bundles should be in the rooms at least ten days to thoroughly dry out, in case the stock has been subjected to any moisture, before the main work is started.

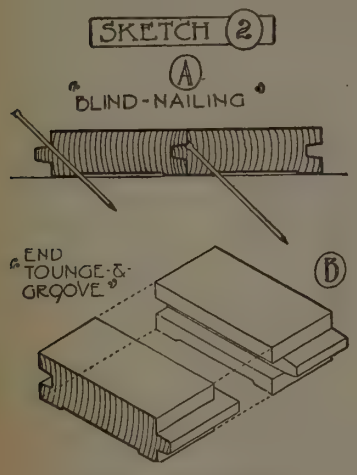
Oak flooring leaves the mill in perfect physical condition. but is very often abused by improper handling before it reaches the job. There are many lumber yards and contractors that almost treat oak flooring like rough lumber. This is a mistake.

The sub-floor should be thoroughly swept and it is well to use a damp proof paper and where sound-proof results are desired, a heavy deadening felt is recommended.

The sub-floor should be of serviceable wood, but not less than 7/8 in. thick, dressed one side to an even thickness. Sub-floors should be nailed securely to the joists, but not driven too tight together so as to permit it to swell, then bulging; four-inch to six-inch strips are preferred widths for sub-floors.

When strating with the first oak flooring strip, it is well to leave at least 3/8 in. for expansion space between the first strip and the baseboard, and likewise at the other end of the room, as there is more or less expansion and contraction in all kiln-dried oak flooring.

Oak flooring should always be laid at an angle to the sub-floor and after laying and nailing three or four pieces, use a short piece of hardwood, 2 in. x 4 in., placed against the tongue and drive it up with a heavy hammer.



OAK FLOORING

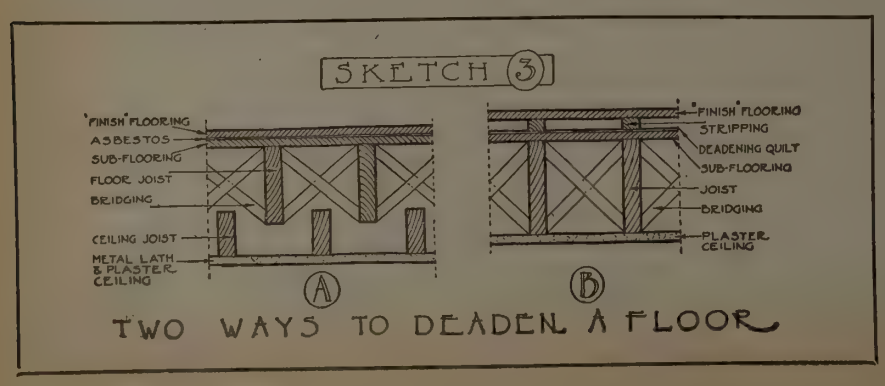
The nailing of oak flooring is very important. All tongued and grooved oak flooring should be blind nailed. The best flooring made can be spoiled by the use of improper nails. The steel cut variety is recommended for 13/16 in. stock—use 8-penny nails every sixteen inches; for 3/8-inch flooring, use 3-penny wire finishing nails every ten inches. If even better results are desired, the nails can be driven closer.

The floor layer should use discretion in regard to certain strips that do not blend in color with the majority of strips. A few badly discolored pieces in a room will mar the appearance greatly. Bad discolored pieces should always be set aside and used in closets and other out-of-the-way places. Where there is a wide variation in color, it is good policy to separate the pieces before they are nailed down. This insures a more regular run of color and blends better together than if scattered throughout all the rooms. Every floor layer should watch this feature of his work closely, as it is the appearance of the floor after laid that counts.

Oak floors, with some care, should last a lifetime, and it is for this very reason that all floor layers should be very particular when they lay oak flooring. The wood itself is practically never permitted to wear—that is, in the better grades that are used in homes. It is the wax or varnish finish that wears, which is always replenished. Honest and careful workmanship on the part of the floor layer spells success. A good job of floor laying is the best of advertising, while a poor job gets nothing but kicks and no reward.

Scraping oak floors is always done in the better grades, or in all homes where people dwell. In order to get the best results for a nicely finished surface, it is best to scrape it. This scraping process can be done by the ordinary scrapers, such as used by cabinet makers, or by one of the many types of power or hand machines that are generally used by contractors and carpenters. Always scrape lengthwise of the wood and not across the grain. A floor properly scraped looks very smooth, but it should be thoroughly gone over with No. 1½ sand paper to obtain the best results in finishing. After this the floor should be swept clean and the dust removed with a soft cloth.

The floor is then ready for the filler, which should be put on as soon as possible after the laying work is finished, as the filler fills up the pores of the wood and keeps it from shrinking.



New Methods Bring New Problems to Retailers

The business of a retail lumberman is associated largely with knots. The values of the different grades of his stock are determined by the quantity and quality of them. They enter into his relations as buyer and seller and there is scarcely a day passes but that this feature of lumber is given his thought and attention, either in ordering his stock or selling it to the consumer. His lumber is graded with reference to knots, but his customers don't always accept them with the same willingness and understanding as he does, and hence some of his difficulties in selling the stock as it has been graded out to him. But there are other features of his business also that are as knotty as his lumber and vary in relative character as they do. Some of these knotty questions he has to deal with are chronically troublesome. They bother him a good deal until he has learned to mitigate their worst features.

Probably the most knotty problem the average dealer has to contend with is his local competition, which in the whole business generally may be said to be harder to deal with than any other outside competition. I have talked with a good many dealers on this subject and with few exceptions they all have testified to being troubled with their local competition more than anything else. This is something, of course, that they won't admit to everybody and they would not like to have it known to their competitors. Some dealers have told me their relations with the other yard were pleasant and agreeable both socially and in a business way. Others have said there was a working truce between them that they had to be careful about doing anything that would break it up. So in practically every case where there are two or more yards in a town the relation between competitors is always an underlying consideration with each of them, and unconsciously their thoughts and actions are more or less influenced by it.

It would be interesting to know how much we are influenced by our competitors. None of us, I believe, has figured that out, but it would be a good thing for us if we would analyze ourselves in this respect. Some dealers pride themselves in feeling and acting independently. Nevertheless an x-ray of their mental consciousness would reveal a good deal to the contrary regarding their competitor. However much we may ignore what our competitor may feel and do towards us, we cannot escape the subconscious interest which exists as to what and how it will affect us. We can't get away from this no matter how great our don't-care attitude may be regarding him. No doubt there are many dealers who have been getting along comfortably with their competitors and wish to avoid doing anything that would have a tendency to disturb these harmonious conditions. It is this feeling, I believe, that is responsible for much of the lack of advertising among the retail lumbermen, or of any special effort to develop business.

Disturbs the Equilibrium

Where two dealers are working in harmony one of them may be of a more progressive nature and would like to put into practice some of the more modern ideas of creating more business. But his competitor is averse to doing anything different from what they have been doing, and argues, "Why not let well enough alone?" His thought, of course, is that if the other man advertises and goes out among the farmers and induces them to build better homes and make other improvements, they will naturally give the business to him, and therefore the balance of trade will be greater for the progressive competitor than it has been, and unless this man can be induced to join in and alopt the same policy, it begins the parting of the ways between them, and the old harmony has departed. This constitutes the knotty problem for the progressive and enterprising dealer who

is "hooked up" with a competitor who don't believe in such ways of doing business and is obstinate in his refusal. In such a case he knows that if he persists in carrying out his new policy he is going to stir up the antagonism of his competitor, and this means a business war where there had been a peaceful situation. It is difficult to avoid this, because through his advertising he will draw more people to him and among those who come to consult him about building will be some of his competitor's regular customers. And if he succeeds in selling them a bill of material for a building specified according to his plans, the devil will be to pay with the losing competitor, for, taking customers away from a competitor is, in a country town, a matter that is not borne with equanimity by the loser, and he is pretty apt to retaliate in some way or other that precludes the continuance of friendly terms.

Those who run yards in the large places do not realize what it means to do business in a small town and be in a state of war with the one or two competitors that you see and are apt to meet every day. Like a running sore it is a constant irritation to the feelings and takes a good deal out of the pleasure of living. The ideal state of doing business in such places is to have a friendly competition, and where this exists it is, I think, more satisfactory than to be the one dealer in a town, for no matter how fair you are to the trade, you cannot escape more or less of suspicion that you are taking undue advantage of your position. And there is this constant lurking fear with the lone dealer, also, that the volume of business he is doing will attract the attention of some one who is "snooping around" looking for a place to open up a new yard. It is this fear that acts as a restraint on some men in these single yard positions and who are content with the amount of business they are doing without making any special effort to increase it. They don't care to attract attention that will draw the bee-hunter to the honey tree.

Stating Things as They Are

You understand, of course, that I am not advocating this attitude nor way of doing, but I am stating things as they exist and the general feeling among lumber dealers in the country towns. And things as they are in this respect are facts that are difficult to change. When I put my thoughts on things pertaining to the lumber business, I don't think of them in the light of what they are in the cities where a dealer rarely meets with the consumer and deals mostly with men of some business training, but I surround myself, as it were, with the atmosphere of a country yard and its relations to and with no others than the ultimate consumers. Having been for many years a country dealer myself, I know the attitude of country men of business regarding may things which the city bred business man accepts as the regular and proper thing to do, because it is demanded by the conditions under which he does business. The radical difference between a city yard business and that of a country yard gives the city and country dealer the same divergent point of view, and in my writing I am more apt to look at things from the alleys of a country yard. So, when I read of what is being done to get the country retailers to change their policies, I naturally consider them from the viewpoint of practicability.

I often think of the mass of lumber and building literature that is being fired at the country dealer for him to read and influence him to adopt the ideas of men, some of whom have no adequate realization of what it is to run a country yard, because they haven't had the experience. Many of these ideas and projects are good and helpful, but the parable of the sower might be fitly applied to them. From what I know of the average dealer most of this stuff that is sent out is perhaps merely glanced over and laid aside. He has too many other things claiming his attention all day long to find time or be in the mood to read. Some, of course, will read what they can and profit by it, but to adopt everything that is suggested in this reading matter is another thing. Some can be profitably adopted without regarding the competitor, while others will make him pause on account of his friendly relations with the other yard. Regarding this literature, I would advise you not to throw it aside as waste matter, but rather lay aside a little of your spare time for the purpose of giving it attention. Treat it as you would a menu card at an hotel. You don't try to eat everything there is on the menu, but you look it over and pick out what you want. You can pick out a good deal in this reading matter that will not only give you a better and broader knowledge of the lumber business, but will be really helpful in your business as well. I would say this especially to lone yard managers and their "second" men, for everything you learn about the business you are engaged in will make you all the more valuable to your employers, and values are what salaries are based on.

It Will Change Old Relations

The progressive dealer who makes up his mind to make a change in his methods, or adopts some change that he believes will materially increase his volume of business without regarding what his competitor will think or do, is confronted with the necessity of cutting loose from some of the old entanglements that hitherto have kept him from exercising the freedom of action that his progressive and aggressive nature has prompted. If he is a persistent and attractive advertiser, he is bound to excite the attention of people living outside what is considered as the natural territory of his town, for it is a sure thing that people are attracted to a man who advertises to give a class of service which they are not in the habit of receiving from a lumber yard.

A man who is going to build a house is having one of the times of his life and is open for any information concerning it. And whether he lives two miles away or is a resident of a neighboring town he is going to ignore his home dealer who is not as enterprising and offers no extra inducement, and go and call on the dealer whose advertised offers of service have attracted his attention. If, perchance, he brings his wife with him and together they look over the plans and make their choice of one of them, this dealer will naturally try his hardest to make a contract to sell the bill of material for it, whether it will go out of his territory or not. He considers that the stranger coming to consult with him is the blossom of his advertising and his selling the bill the fruit of it, and, moreover, it is perfectly legitimate. But, as all of us dealers have experienced, the dealers in the town whose territory he has invaded will strongly object to his taking what they believe belongs to them. And here comes up the knotty question I have before spoken of. What is the common sense way of dealing with it? In the event that the dealers interested are members of the same association the feeling over it is liable to be intensified.

In the old free-for-all days we made no bones of selling a bill if we could to any man who asked us for an estimate and didn't care a darn where he lived. But ethical considerations have come into the business since then and as a rule dealers have given more recognition to territorial rights. It is easy to figure out the territory and lay down rules regarding it, but while the dealers may do this in order to promote friendly relations between them, the other interested party, the public, is not supposed to have any knowledge of this and would resent anything of the kind if it did. Consequently there is a constant liability of customers in one territory going over into another territory to exercise their right to buy where they please, and therefore making potential trouble between the dealers of adjacent territories.

Ordinarily where the dealers are doing business along the old lines allowing the trade to come to their yards without any particular effort to solicit it in a public way there is very little of it going from one territory to another, and whenever such a case occurs the matter can be amicably arranged with the dealer whose territory has been invaded. But with the injection into the retail lumber business of the new and aggressive methods of creating and soliciting business through advertising in the local papers, plan book systems, and all the other devices for attracting and stimulating people to do what they didn't think they wanted, and all this with a view of getting the business for the yard that goes after it in this manner, the natural result will be that it is bound to have a disturbing effect on the relations of the dealers in the same locality and neighboring towns. It will probably be more aggravated at first and continue until all the dealers have adopted the same methods. But conditions are such that this is not likely to be and the "longest pole will knock the persimmons" as it always does in business competition, whether in the form of the lowest price or the methods of modern merchanidising. The aggressive dealer with the new ways of going after business is bound to draw trade away from the non-progressive dealers in his locality, even though he gets it at his own prices, and it is not his fault if people living in the territories of other towns come and give him their business.

It Would Penalize Ability

Now, to restrict such a dealer to the narrow limits of an arbitrary territory is to penalize him for his ability and enterprise. He spends, say, $500 to $1,000 a year in advertising, and other devices for attracting trade where his competitor don't spend a quarter or a tenth of that. Now, is he not fully entitled to all the benefit that comes to him because of his legitimate enterprise? If his attractive advertising brings a customer from another town and he gives him the benefit of his office service and square deal in the sale of his bill, is it reasonable that he should be required to make a division of his profits with the dealer in that town who hadn't the enterprise to go after the trade he thinks belongs to him? Does it seem reasonable to expect a man to pay a penalty for his own enterprise?

I have been thinking a good deal the past year on this subject. I see a new order of things evolving itself in the retail business and it seems obvious to me that sooner or later we will have to reconstruct our ideas on the question of territorial limits and divisions of trade generally. It looks to me as though the trend of things is forcing the doing away with them altogether in our consideration. It looks, too, in the retail business that to him that can get shall be given, and to him without the modern enterprise shall be taken away what he hath. In other words, the non-progressive will be crowded out of the business or else he will have to be content with a minor share of the trade. Good roads, the auto truck, and the service of the modern yard will eliminate all the old imaginary lines of territory between adjacent towns and the business will be for those who best can serve their customers. But this is looking some way ahead of what the actual con-

ditions are to-day. I am simply voicing my opinion as to the tendency of the evolution that is going on in the trade.

Many of you are to-day in a state of mind favorable to the taking up with an intensive system of advertising and some of the other service stunts that modern merchandising requires. If you feel this way, I would advise you not to be deterred from doing it on account of your competitor who may not feel as you do in the matter, even though your business relations may be satisfactory. But before going into anything of the kind it would be good policy on your part to have a talk with him and inform him what you are thinking of doing and propose to him that he do likewise and work in harmony with you to create more business for both and make the town a distributing point for all those who are attracted by your advertising and modern service policy. If you can get right with him in this regard, you will find it more profitable, no doubt, than by "playing a lone hand," because if you go it alone, your competitor will, of course, in order to hold his trade, retailiate on you by cutting the price of bills you have worked to secure and otherwise demoralize the business. Team work like this will be a competition, or rather emulation of service, instead of a competition of prices. However, let nothing deter you from consenting with yourself to carry out a new departure in your business methods. If they are of the right kind and you pursue them with good judgment and sense, you are bound to win out in spite of competitive opposition. C. H. Ketridge, in the Mississippi Valley Lumberman.

Operating Costs in the Retailing of Lumber

By Julius Seidel *

The subject assigned to me, and on which I am to speak, is one that on the surface would appear, or seem to be, extremely simple. It would be easier of solution were we to discuss the matter from a local standpoint. To illustrate: when there are several lumber yards operating in one and the same town, under like conditions as to unloading and piling charges, average distance of haul, amount of stock necessary to carry on business, general expense as to help, rent and taxation, we could reach a cost that would be uniform and nearly correct.

The manufacturing or mill end of the lumber business is, in a measure and to my mind, more simple of solution; yet it, too, finds many exceptions to the adoption of fixed rules that would definitely fit all conditions of the industry. In the retailing of lumber the problem of operating cost becomes, by the very nature of things, more complex. The fact of the matter is this: Men engaged in the lumber business have never so segregated their departments as to be able to say definitely what the operating costs amount to in dollars and cents on the various class of sales.

A retail lumber yard occupies a unique position in so far as it proposes to serve the public under the slogan, "No sale too large for our capacity or too small for best attention." F.o.b. shipments to a factory under construction, a wholesale order for several cars hauled direct from the track to the building, or for factory use, the jobbing carpenter's order, or the catch-penny sale of one board, all usually go through the books under the same caption of a "lumber sale." When the year is over percentages of doing business are figured by a summing up of all classes of trade, or sales, dividing the sum total by the footage in order to arrive at a price per thousand or per cent. basis. By this method a very vague and very incorrect idea of the cost of retailing lumber is gained.

Just now the industry is confronted with the matter of service in deliveries. In the cities the hauls have become longer and the time set for the delivery, no matter what the amount, shorter. In the rural districts the demand is becoming more acute for house deliveries. Everything is leading to a specialization of effort. The farmer feels that he is better served when the lumber yard itself hauls the lumber on a lumber wagon, driven by a lumber teamster, who also unloads the material in a careful way. It is my opinion that we should cultivate and expand upon the service and thus be better able to develop a real building up of communities.

Lumber, as a whole, is not generally shipped into a point where the dealer has been sufficiently wideawake to handle his business as a business and to push it with the enthusiasm that is back of city concerns.

Computing Operating Costs

In the computing of operating costs we must arrive at two essential things: labor incurred and overhead expense. Under labor we have the piling charges, hauling into the yard and hauling out. Very few yards are entirely free from hauling in, even though they have their own switch. Hauling about your own yard should, however, more properly be considered as a piling charge.

1. Piling Charges.—Putting lumber into a pile is only part of the job. The full piling charge should be the putting into pile and again putting it on the wagon. This work is costing more every year. Lumber was formerly sold more in the random lengths and widths; it was not graded so scientifically, that is, there were less grades. To-day a retail yard must make up small piles of 4, 6, 8, 10 and 12-inch widths and also separate the lengths from ten feet up to twenty feet. That means thirty piles of No. 3 boards, thirty piles of No. 2 and thirty piles of No. 1. Stick piling is slow work, as compared with piling in bulk, and the cost to you of giving a customer just the exact width, length and grade must receive serious thought.

2. The Rent Charge.—When the lumber is in the yard and piled, that horrible landlord immediately claims a part of the pile, and if he has given you a nicely levelled or rolled lot on a good business corner he should get his compensation. Perhaps you are your own landlord. If you are and do not collect rents on your business lot, on its commercial worth under a re-valuation clause, every three to five years you are unfair to yourself and a detriment to the lumber business.

3. Employer's Liability.—Then you reach the matter of liability occasioned by accidents, and take out a policy so that you may not be wiped out by a judgment, something that may happen when you least expect it. This means paying a bill for employer's liability on your labor and teaming, and public liability as well.

4. Teaming.—The matter of service is now flashed upon you. The public wants "sudden deliveries" and you must be ready to give anybody any quantity of lumber, delivered anywhere at any hour of the day. So you line up to the horse trader, harness shop and wagonmaker, and you may even flirt with the auto truck salesman, for the purpose of getting hauling equipment. Since good service is worth good money, the buyer should either pay for delivery service at its full value or buy his own delivery outfit. Delivery of lumber is an actual labor charge and should not be donated. If the horses don't get enough exercise hauling lumber at a profit, better sell some of them and the wagons rather than commit commercial suicide by throwing in the hauling on a sale.

5. Improvements.—Of course, you want a shed to keep the finish free of stain, protect it from warping and twisting in the good old summer time, and to avoid using a pick-axe to get a board loose during the icy season. Sheds in lumber yards, also stables, warerooms, fences, driveways and roadways, and even an office with very modest furnishings, cost real money. You may get a notice to clear the place after the ten years' lease expires, so better figure on 10 per cent. depreciation on original cost per year. Lumber yard improvements are worthless when you vacate the lot.

6. Fire Insurance.—Supposing an old tramp, one of those mean kind, smoking a corn-cob pipe, should become infatuated with one of your "soft pine" boards, with just a little resin on the surface sufficient to ignite when the tobacco ashes fall upon it during the peaceful slumber of trampy dear. Of course, you took out fire insurance before that could happen, and you got a bill for it, too, and paid it promptly.

7. Advertising.—Well, when the yard is ready to open up you want to advertise the fact to the world. Should you be a bit old-fashioned, you will spend less for publicity than you would were you a pushing chap; but spend you do, and pay you must.

8. Salesman.—Do you need a salesman? Well, I just reckon yes; in fact, the best is none too good for your yard. Every retailer I ever met has the best solicitor in the "profesh" and a good man is always worth his hire; besides, you will have some collections to make, so he fills two jobs—"pushing and shoving."

9. Office Help.—And you need a mild-mannered, pleasant looker for a clerk, one who can take abuse from both customer and the boss and never hear it. He is dirt cheap at $60 per month and he is down "for keeps" on the pay roll.

10. The Boss Himself.—Well, well, we've quite overlooked the fact that the concern really needs a head to it to make up the organization. Bosses do little and come high, but they add dignity to the company. So we engage a boss.

11. Office Supplies.—Pretty soon we order the 'phone, desks and chairs, estimate blanks, dray tickets, filing cases and books. Severally they are hardly worth charging up, but collectively it takes the small coin in the corner of the vest pocket to pay the bills.

12. That Merchants' Tax.—Just as you feel jubilant on having done pretty well for a beginning in the way of sales a round-faced, red-nosed, round-bellied little man of 250 pounds lays a sheet on your desk, requesting you to tell the city collector on the quiet how much those sales amount to, as a little merchants' tax money is really handy coin for keeping up community expenses.

13. Community Duties and Sundry Expenses.—Of course, your being in business puts you in the prominent business class and you are entitled to all of the "pay and look cheerful degrees" of that strata. Donations for conventions, church festivals, civic leagues, public welfare, Boy Scout movements, etc., take a little, and as a matter of course you "chip in" on all of it for fear of being enrolled under the illustrious order of crabs. Then come the little incidental expenses, such as car fare, errands, free samples, getting the customer something, repairs, a coat of paint on the floor, coal for fuel, and a little light when

* Address delivered before Annual Meeting of Southern Retail Lumber Dealers' Association, Memphis.

the sun is down and out. Even so do they sum up and add to the high cost of doing business right.

14. Attorneys' Fees.—And to cap the climax, we find that, after getting our incorporation papers, it might be well to have a counsellor. The customer's lot may have an adhesive plaster that would stick better than lien paper and, therefore, we have the title solemnly examined. The farmer's crop was not what he expected and a little second deed of trust, with monthly notes, properly drawn by "our" lawyer is put on record. Of course, a lawyer costs a bit, but he saves his hire by avoiding the cliffs. So he is down on the expense account.

15. Profit and Loss.—In spite of your precautions you meet men with memories constituted so conveniently that statements, coupled with a request for payment, are handily overlooked and forgotten. Then, there's the crook and deadbeat, who feels that you can afford a loss while he is blamed sure that he himself cannot, as he has nothing to lose. It is fate or destiny that forces you to devote a page on your pretty, ruled ledger to profit and loss.

16. Interest on Permanent Investment of Stock.—Then, to top it all off, do you know that those horrid millmen will only allow a sixty-day limit in which to "ante up" for the stock you buy? That forces an issue, namely, that of making you cash in all your safe investments and cash out to the millman. All your money is, therefore, transferred to the yard and there it sticks permanently and for keeps. Now, money is worth 6 per cent., and on a basis of $25 per thousand feet and a turn of your stock three times during the year, it figures just 50 cents per thousand feet for interest that you must get out of your investment. If your sales can't with certainty produce that on your business, better get back to loaning out your money to the other fellow and let him do the worrying.

So, to sum it all up, suppose we say that lumber on a 20-cent rate is sold by you at $26.50 per thousand delivered on the job. That would mean about a $20 cost basis to you on cars. Out of the $26.50 you have to get back the actual labor charges and the overhead you put up in real money, which, in reviewing the matter, is as follows:

		Per M. feet	Based on cost of $20 per M. Per cent
1	Piling up and putting on wagons	$ .80	4
2	Rent of ground	.50	2½
3	Employer's liability	.04	¾
4	Teaming: Hauling in and out	.75	3¾
5	Depreciation of improvements	.27	1¼
6	Fire insurance	.10	½
7	Advertising	.24	1¼
8	Salesman	.28	1½
9	Office clerks	.32	1½
10	Officers (the boss)	.50	2½
11	Office supplies	.10	½
12	Merchants' tax	.05	¼
13	Community dues and sundry expenses	.10	½
14	Attorney's fees	.05	¼
15	Profit and loss	.10	½
16	Interest on permanent investment	.50	2½
		$4.70	24

I hope that you added a profit of 10 per cent., but don't forget that it is necessary to add 24 per cent. to your f.o.b. cost if you want to get your actual cost.

Figures are Trustworthy

The figures submitted by me are absolutely trustworthy, as they represent an average cost of operations taken from reliable sources and covering a period of time adequate for a true barometer. Having given you a basis to work on, you are now at liberty to adjust the percentages of the various items, making up the whole to suit your conditions. The fundamental costs are, however, before you. It has been unfortunate that you have ofttimes persisted in paring down these fundamental costs to such a narrow margin as to get close to the danger line. It seemingly often has been the pleasure of many yards to see how near they could get to the flame without being burned.

Chart on Cost of Hauling

I have prepared a chart of just one item, namely, hauling, which shows you actual cost of service.

Cost of hauling lumber tabulated to show price per thousand for full, also part wagon loads on long or short hauls:

Time	Team	Loader	Total Cost.	Loads 2,500 ft.	Loads 2,000 ft.	Loads 1,500 ft.	Loads 1,000 ft.	Loads 500 ft.
1 hour	$ .50	$ .25	$ .75	$ .30	$ .37½	$ .50	$ .75	$ 1.50
2 hours	1.00	.25	1.25	.50	.62½	.83 1/3	1.25	2.50
3 hours	1.50	.25	1.75	.70	.87½	1.16 2/3	1.75	3.50
4 hours	2.00	.25	2.25	.90	1.12½	1.50	2.25	4.50
5 hours	2.50	.25	2.75	1.10	1.37½	1.83 1/3	2.75	5.50
6 hours	3.00	.25	3.25	1.30	1.62½	2.16 2/3	3.25	6.50
7 hours	3.50	.25	3.75	1.50	1.87½	2.50	3.75	7.50
8 hours	4.00	.25	4.25	1.70	2.12½	2.83 1/3	4.25	8.50
9 hours	4.50	.25	4.75	1.90	2.37½	3.16 2/3	4.75	9.50
10 hours	5.00	.25	5.25	2.10	2.62½	3.50	5.25	10.50

My sole motive in doing this is to bring vividly before you one of the great problems of the present. The per thousand feet cost is of as wide a range as are the opinions of lumbermen on the cost of each and every item submitted to you, and that makes up the sum total of $4.70 per thousand, or 24 per cent.

Cost Influenced By Market Price

The cost of business is influenced by the market price, or basis price, in your town. If your average cost is $15 per thousand, your investment is lighter than in such towns where averages are well up to $20 per thousand. In those towns near to a source of supply of native lumber we can figure on turning the stock oftener. These cases, however, do not weigh in the balance and would not affect the averages to any degree.

To be fair about cost, we must go to towns and cities of a population sufficiently large to assert themselves and express a demand for all of the modern woods. The yards that are trying to keep full assortments cannot hope to turn their stock more than three times a year under normal conditions. Our country, as a whole, has passed the era of mushroom development and is assuming an air of permanency. Boom sales are past, and we should heed the demand of the times—to keep more complete stocks, give better and more efficient service. Recently I had occasion to learn that one of the most successful department stores of our city is operating with an overhead of 27 per cent. Large business formulates a policy and charges for the service. When it sets aside a fixed sum for advertising, this sum becomes a part of the overhead expense. The lumberman, however, considers advertising a donation and parts with the coin begrudgingly. You must make up your mind to set aside a certain amount, say at least 25 cents per thousand, for the promotion of lumber and let the consumer pay for telling him the story.

For years it has been my opinion that associations should enter upon the field of supplying their members with the means of getting books of entry, accounting and auditing systems at a reasonable price. It would create an awakening and standardize an industry which has been working along the lines of uncertainty as to operating costs.

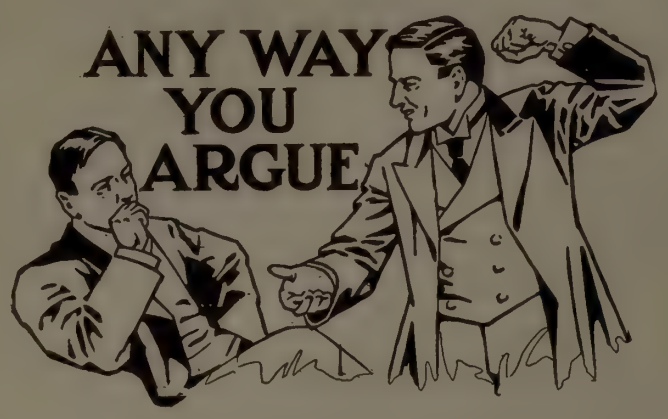
My own conclusions are that for the house bill trade, for complete service of furnishing a bill of lumber at such times as it is required, and in such loads as needed, during the construction of the building, we should add from 30 to 35 per cent. to the f.o.b. market value at the time of sale. On retail sales to the consumer I do not see how you can do business for less than fifty per cent. The demand for auditors and business systems is an outcome and demand of the times, and the retail lumber business should respond to this demand. The manufacturers are making a gallant, open, aggressive and educational fight to educate the trade as to the best use of wood. We must appreciate our duty equally as well by supplying and serving the public in a manner that commends itself to them. The fundamental idea is to do the service well and charge for it.

The Minister of Lands of British Columbia reports that while no sawmill timber is being logged in the Fort George forest district, present operations being confined to the taking out of timber for bridge and road construction, mining development, and cordwood, the future of the lumber industry in that country is looked upon as being hopeful. The prairie demand for lumber has enabled one firm to resume cutting from a stock of logs which has been on hand for years, while another concern is preparing to start up again. The recent reduction in the freight rate on lumber between that district and Edmonton will have a favorable effect, and encourage the mills to cater for other than local needs.

Shells for Huns Made at the C. N. Exhibition

Though munitions of war are being turned out in hundreds of Canadian factories, few but the men actually engaged in the work know anything of the system employed, the process being one of the most closely guarded of war secrets. The veil will be lifted when the Canadian National Exhibition opens on Aug. 26. Permission has been obtained from the War Office, through the Canadian Government, to show the processes of manufacture, and several machines, operated by skilled workmen, will be engaged for the two weeks turning out shells and projectiles for delivery to the Huns through the gun muzzles of the Allies.

Lieut. J. G. Shearer, 1st Regiment, Grenadier Guards, president and managing director of the James Shearer Company, Limited, dealers in lumber, sash, and doors, Montreal, has been presented by Col. J. A. Fages with a parchment testimonial from the Canadian Royal Humane Society, in recognition of his gallant services in February last in stopping a runaway horse in Montreal. The presentation was made at the close of an inspection of the Guards.



"There's One Best Way"

There's one best way to buy and sell special lots of lumber, second-hand machinery, timber lands, etc., and that is by inserting a small advertisement in this department.

Every mail brings word of big results from these small ads. Last week a large lumber firm sold their entire 1916 cut, several million feet, through an advertisement on this page.

What Have You to Advertise?

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Birch Wanted

WANTED—10 Cars 2½ in. No. 1 Common and Better Birch for Fall delivery. Buffalo Hardwood Lumber Company, Buffalo, N.Y. 14-17

Wanted—Lath

Please quote us your best cash price on the following, either delivered Cleveland, Ohio, or F.O.B. Mill, giving rate to Cleveland:

⅜ x 1½ — 4 ft. No. 3 White Pine Lath.
Same—Red Pine.
Same—Spruce.
⅜ x 1½ — 4 ft. No. 2 White Pine Lath.
Same—Mill Run White Pine Lath.
Same—Spruce.

THE AMERICAN LUMBER CO.,
1502 New England Building,
12-15 Cleveland, Ohio.

For Sale–Lumber

For Sale

2,000 Cedar Poles 25 to 45 ft. long; 4,000 Cedar Fence Posts 4 in. and up, 8 ft. long; 2,000 No. 2 Cedar Ties, 3 in. face and up. Lynch & Ryan Lumber Co., Marmora, Ont. 12-15

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
e Montreal, Que.

Wanted–Machinery

Machinery Wanted

One second-hand Alligator. Machinery must be in good condition. Will pay cash. The Field Lumber Company, Limited, Field, Ont. 13-14

Lorries Wanted

Fifteen second-hand lumber lorries, must be in good condition. Campbell MacLaurin Lumber Company, Limited, Drummondville, Que. 11-14

For Sale–Machinery

For Sale

One 30-in. Double Surfacer; one 6-in. Four Sided Moulder; one Self Feed Rip Saw; one International Gas Engine, 12 Horse Power; one 50 Horse Power Corliss Stationary Steam Engine; all in first class working condition. Apply Box 421, Canada Lumberman, Toronto, Ont. 13-14

Saw Mill Machinery For Sale

Two (2) New Waterous Band Mills.
Two (2) 2½ A. Log Carriages.
Two (2) Gun Shot Steam Feeds.
One (1) Dittbener Band Re-saw.
One (1) New Champion Edger No. 405.
One (1) Standard Two-saw Trimmer.
One (1) Overhead Slat Slasher.
Lath Mill Machinery.
Rolls and Drives.
Transfers.
One Refuse Hog.
Sorting Table.
Filing Room Machinery.
Live Rolls, Boxes, Shafting and Driving Chain.

All of the above is new and was never used.

For particulars write to Bayl ss Pulp & Paper Company, Binghampton, N. Y., U.S.A.

Machinery can be seen at any time at Beaupre, P. Q. 14-14

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

FOR SALE

Woodworking Machinery

1 Woods No. 32 Matcher; 1 Goldie 10-in. Moulder; 1 Goldie 24-in. Matcher; 1 Cowan 42-in. Sander; 1 Jackson Cochrane 36-in. Sander; 1 Egan 36-in. Single Surfacer; 1 McGregor-Gourlay 2-drum 30-in. Boss Sander; 1 Egan 30-in. 2-drum Sander; 1 CMC 8-in. 4-side Sticker; 1 McGregor No. 212 30-in. Double Surfacer; 1 No. 180 Berlin 30-in. Double Surfacer; 1 American No. 26 Hardwood Matcher, with boring attachment and end matcher; 1 Ballantyne 12-in. Sticker.

P. B. Yates Machine Company, Limited,
13-t.f. Hamilton, Ont.

Machinery For Sale

Woodworking Machinery for sale, consisting of Planers, Band Saws, Hardwood Flooring Machines, Mortisers, Buzz Planers, Shapers, Mitre and Tennoning Machines, etc., also Steam Boilers and 300 H.P. Steam Engine, Shafting, Pulleys, and large quantity of leather belting. Also a complete Sawmill outfit, a large stock of Rough and Dressed Lumber, Sashes, Doors, etc., manufactured and in process of manufacture. Reply to the Tobin Manufacturing Company in Liquidation, Bromptonville, P.Q. 12-15

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

Young man, four years experience in sawmill office as stenographer and bookkeeper, desires change. Good references. Box 424, Canada Lumberman, Toronto, Ont. 14-16

POSITION WANTED—By man thoroughly experienced in lumber, either in the woods, around the saw mill or in lumber yard. Ready to go either east or west, but Ontario preferred. Address Box 415, Canada Lumberman, Toronto, Ont. 14-14

BAND OR CIRCULAR FILER or Mill Foreman wants position. Twenty-seven (27) years' sawmill experience. Gilt edge references. Box 405, Canada Lumberman, Toronto, Ont. 11-1

Business Chances

Timber Tract and Mill

Valuable Timber Tract, British Columbia; nearly 10,900 acres; 60,000,000 feet of timber; on railroad. Local market for mine props. First class mill, 30,000 feet daily capacity. Very attractive proposition. George W. Grant, P. O. 1676, Calgary, Alta. 13-16

Timber Limit For Sale

Thirty-six square mile limit, North Shore, License allows cutting all kinds of timber. Contains Hemlock, Birch, Spruce, Pine, Cedar Ties and Poles, Pulpwood and Hardwood. Railroad runs through part of berth. Cheap operation. Splendid opportunity for small mill. Apply Box 423, Canada Lumberman, Toronto, Ont. 13-t.f.

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

Saw Mill

For sale on Muskoka Lakes, saw mill complete; daily capacity 20,000 feet. Good trade connection; plenty of timber available. Rare opportunity. Must be sold. Owner deceased. Terms reasonable. Box 418, Canada Lumberman, Toronto, Ont. 12-15

For Sale—Modern Saw Mill

and 300 Million feet of standing timber in British Columbia, most advantageously located on beautiful lake and main line of Transcontinental Railroad having advantage of $3 per thousand feet in freight rates to best markets on the Continent. Logging and manufacturing conditions ideal and very economical. A fortune for the right parties. Will sell on easy terms and may accept other desirable property in part payment. Principals only.

A. C. FROST COMPANY,
Corn Exchange Building,
14-17 Chicago, Illinois.

Demand for Lumber in France

France does not import large quantities of timber. During 1914 the value of imported timber was £1,709,625, an average of 3s. 10½d. per head. This is just 25 per cent. of the amount imported by Great Britain.

About 18 per cent. of the area of France is under forest, which is under the control of the Government, in order to prevent overcutting and maintain the production. The average quantity of timber cut per annum is 910,740,000 cubic feet, which added to the imports, shows an annual consumption per head of 27 cubic feet, about twice that of Great Britain.

A large quantity of this timber is used for railway ties; beech and oak are mostly used for this purpose, their average life being about twenty years. The annual requirements of the French railways are some 6,000,000, of which the majority—i.e., 5,500,000—are produced in the country.

There will be a big demand for timber of all sorts in France for reconstruction purposes immediately after the war, as although stone, brick and cement are produced at home, they will not be obtainable quickly enough for the immediate requirements.

A project has been announced by Le Batiment, a French building trades' publication, whereby a general federation, co-operating with the Government, is to be organized for the purpose of taking charge of the importation of all materials necessary for building and reconstruction enterprises, so that the building-up process in France may be facilitated and the resumption of normal economic life hastened.

The project recommends that the Government take an inventory of the resources that France now possesses in materials of all kinds, so that the organization may efficiently and quickly supply all needed materials. Under the general plan, materials for the reconstruction of the French railways and the building of railways in Morocco will be needed; also for rebuilding homes and factories; for the installation of machines and modern equipment of all kinds, and for the raw materials of manufacture.—Kelly's Monthly Trade Journal.

Pacific Coast Export Shipments For June

Pacific Coast export lumber shipments for the month of June totalled 22,513,387 feet, not including parcel shipments, according to the West Coast Lumbermen's Association. Fir figured in this to the extent of 18,026,135 feet, and redwood, 4,487,252 feet. In normal times with easy delivery at average rates, fir exports for the month of June would average better than 67,000,000 feet.

Union Lumber Co.
Limited

White Pine Cuts

MILNET (Sellwood Jct.)—1915 cut

100,000—2 x 4 and up 10/16—No. 3 cuts and better
50,000—6/4 x 4 " " " "
50,000—1 x 7 " " " "

SPANISH—Bone Dry

18,000—2 x 4 and up 10/16—No. 2 cuts and better
(80 per cent. No. 1 cu s and better)

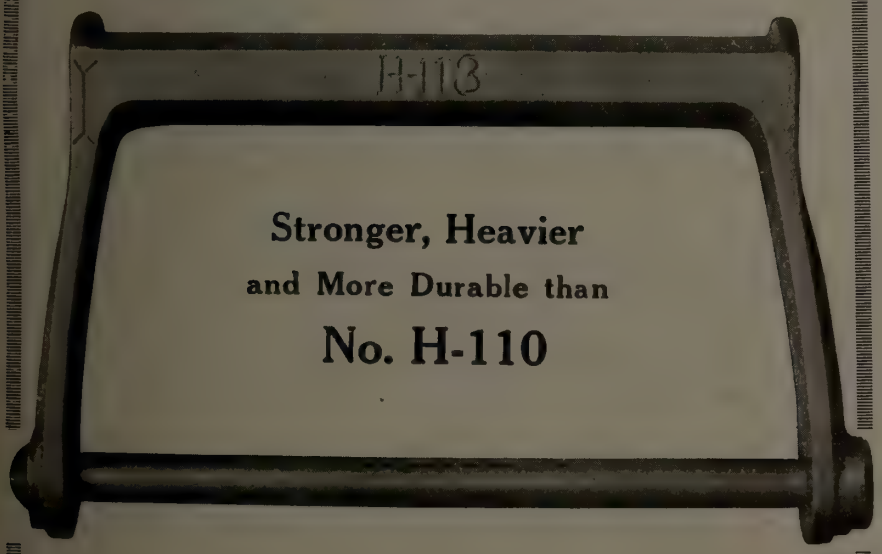
17,000—5/4 x 4 and up 10/16—No. 2 cuts and better
(66⅔ per cent. No. 1 cuts and better)

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

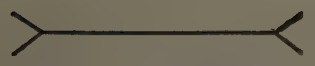
H-113

Riveted Malleable Iron
LINK-BELT
for Sawdust or Refuse

Improved No. H-110. May be substituted for No. H-110 without any change in trough or wheels.



Stronger, Heavier
and More Durable than
No. H-110

This Trade Mark  on Every Link

Write for Folder No. 266

CANADIAN LINK-BELT CO., LTD.
1189 King Street West, TORONTO
A. R. Williams Machinery Company, Limited, Vancouver, B. C.

TRY IT!
At Our Expense

Sample of Egyptian Liniment FREE to Lumbermen

We make this offer simply to convince you of the genuine merits of Egyptian Liniment. This liniment is not an experiment, but a recognized PROVEN cure for the various ailments of horses. **It stops bleeding instantly** and is invaluable in cases of thrush, cuts, callouses, spavin, etc. You should always have some on hand, ready for an emergency.

Write for a Free sample and prove its merits.

Review of Current Trade Conditions

Ontario

The most frequently discussed matter in connection with the lumber business in Ontario is the fact that the farmer, who is generally believed to have made a lot of money out of his crops last year, is not showing any readiness to part with it for lumber or building materials. The disappointing spring weather had much to do with this. Having spent so much time with his seeding, the farmer did little or nothing in the way of building, and. when the fine weather set in at last, he had passed the time of year when he likes to start building, or making repairs. It is not likely that the Ontario farmer will be a factor of any importance in the lumber trade for the balance of the present year. He will of course take a moderate amount of material and perhaps a little more than he did last year.

One of the interesting features of the trade to-day, though not one to be pleased about, is the way in which the market for hemlock has failed to take any interest in No. 2 stock. The small movement there is in hemlock is all in No. 1, of which stocks are not large, while No. 2 stocks are accumulating and are really making the manufacturers wonder whether they can be got rid of at all.

The demand for stock for shell box purposes continues strong. The latest contracts let by the Imperial Munitions Board call for large quantities of lumber and they are now well on the market. One hears on all sides, however, the continued complaint that the Board have got the prices down so low, by calling for tenders, that the production of shell boxes is a losing proposition for those who get contracts, and that the Board is likely to feel the effects of this in the way of unsatisfactory deliveries. Moreover, wholesalers and manufacturers who are selling stock to shell box manufacturers are frequently very dubious as to whether they will get their money out of it.

Most hardwoods are quiet but firm. There seems to be a general improvement in basswood, caused to some extent by a shortage of stocks. A lot of small mills which turned out stock last year have produced nothing this year on account of unsuitable weather conditions which prevented the logs from coming out. No. 3 common birch is practically off the market.

Eastern Canada

There is very little change to report in the lumber trade of New Brunswick, but there has been an important falling off in the cost of freight space for ocean shipment, during the last fortnight. Our latest advices tell of a drop of 125 shillings per standard. There has been no rush to secure space, however, as the demand in the English market has fallen off greatly. Coastwise freights have also come down, the decline amounting to about $1 per thousand feet. Stocks are not large and an improvement in the demand would probably stiffen up prices all round. The American market has steadied down to some extent and no longer shows the nervousness that prevailed a fortnight ago. Local trade at St. John is very quiet.

Building operations at Montreal are still on a small scale and the local lumber trade is quiet. The trade in hardwoods was active a short time ago, but has also become quiet. There is a fair amount of interest in B. C. lumber, especially Douglas fir. Trade with the United States is on a moderate scale only, and the same thing applies to that with Great Britain.

Business has been dragging to some extent in the spruce trade of Boston of late. Lower quotations have apparently made the retailers anxious, instead of tempting them to buy more extensively. The best quotations on frames are still held at $25 by large wholesalers. Random is in fair demand at the following range: 2 x 3, $20.50 to $21; 2 x 4, $21 to $21.50; 2 x 5 and 2 x 6, $20.50 to $21; 2 x 8, $24; 2 x 10, $25.50 to $26.50; 2 x 12, $26.50 to $27.50. Spruce boards are quiet and buyers are adopting a waiting policy. Hemlock at Boston has been affected to some extent by the reduction in the price of southern pine and by the altered quotations on spruce. Hemlock boards have been lowered a little bit by some dealers to meet the new situation. Hemlock planks are in better demand and steady. Shingles continue in good demand at Boston with prices firm, but there is a possibility that manufacturers will be catching up with their orders before long, and prices may ease off a little. Extra good white cedar extras are selling easily at $3.60.

United States

As forecasted in our issue of July 1st, a movement for curtailment of output has now developed throughout the Southern States and to a considerable extent also through the West Coast producing territory. Manufacturers in the west have found that the one way to avoid trade depression will be to cut down the output, and most of them have already commenced to do so. The same is true in the southern yellow pine districts. The trade situation in connection with southern pine shows some improvement, there being a better demand, with prices showing a tendency to stiffen. In some lines, such as dimension, prices have advanced 50c. per thousand feet. Other items are holding and are expected to do so as long as the manufacturers continue their curtailment policy.

The lumber trade of Chicago, which is generally a pretty good barometer of average trade conditions throughout the northern and western States, is not in so great volume as might have been expected, the result chiefly of unfavorable weather conditions. Lumber receipts at Chicago during the week ending June 24th amounted to 54,970,000 feet, as compared with 47,945,000 feet during the corresponding week of 1915. Shipments for the same week were 30,521,000 feet, an increase of 6,978,000 feet, as compared with the corresponding week of 1915. The total shipments from January to June 24, 1916, were 691,618,000 feet, an increase of 174,440,000 feet over the shipments during the corresponding period of 1915. The demand at Chicago for the upper grades of northern pine for pattern stock and other general factory use is greater than the supply, as dry stocks are scarce at most mill points.

The white pine trade at Buffalo is quiet. Weather conditions have been unfavorable for building work and the high prices of material and labor have been cutting down the volume of construction work. Prices are about steady.

The yellow pine situation is making itself felt in the form of pressure upon the hemlock market, and weakness is shown in this wood at some points. There is a fairly extensive movement of No. 1 hemlock boards at Chicago, and also a moderate movement of low grade stock, most of it being taken by the box factories. At Buffalo, the hemlock trade is as active as any other and the prices are steady. Wet weather has limited the demand from the country trade, but in the building business and other lines in the cities there is a little more activity than there was a year ago.

Hardwoods are rather quiet at Buffalo. Maple, oak, and ash are in fair demand, thick maple being in the lead. Prices are unchanged. Wholesalers are adding to their holdings and are expecting improvement in trade. There is also better feeling in the hardwood trade at Chicago. Thick stock in all northern hardwoods is moving well, particularly in birch.

Great Britain

The market at London continues fairly active. Rather large shipments of Canadian spruce are reported as having arrived, and importers are hoping for others in the near future. In connection with this trade it is encouraging to note in a recent issue of the Lumber Trades Journal, the following remarks: "It should be the duty of importers to do as much business as possible with our colonies and to instil into the minds of consumers the advantages of the freer use of colonial woods. We know that freights are still high from Canada, but this also applies to all lumber producing countries. It is unfortunate, however, that freights on spruce goods cost three or four times the value of the wood." Deliveries at London docks during the week ending June 10 amounted to 6,140 standards, as compared with 4,839 standards during the corresponding week of 1915.

On account of the temporary decline in freight rates for spruce shipments, c.i.f. prices at Liverpool have been a shade lower of late, but the result is simply to prevent other price advances for the time being. Spot prices are practically as firm as ever, £35 to £36 being paid for 3 x 11 in.; £33 to £34 for 3 x 9 in., and £31 to £32 for 3 x 7 in. Some merchants are looking for a little weakness in prices when the new season's arrivals make their presence felt upon the market, but if holders do not try to force matters, prices are not likely to drop. The slight concessions in the freight market are thought to be only temporary and not to warrant any modifications in prices in Great Britain.

At Manchester, prices continue high all around, with the single exception of spruce, which is a shade easier. Prices apparently depend pretty definitely upon the desires of ship owners. When they want money they are likely to reduce freight rates and spruce prices will become easier as a result, but when they are not in need of ready money they apparently will continue to take all the traffic will bear. At Glasgow, the trade continues on the quiet side. Buyers are not taking much interest in stocks, and owners are not showing any anxiety to dispose of them unless they get good prices. The temporary set back in freight rates seems to have had no effect on Glasgow spot values. A fair number of sales are reported in pine and spruce deals from shipments which have recently arrived, also a number of transactions in pine boards of the lower grades, all at very firm prices. The demand for pine still favors the lower grades almost exclusively.

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Trade—Ocean Freights Down

St. John, N.B., July 6th.—(Special to the Canada Lumberman).—The past two weeks have seen little change in the lumber business at St. John. In so far as shipments and local sales are concerned, the only change has been in foreign freights, which have eased off over 125 shillings per standard, and are still falling. Very little tonnage is being offered, but what is offered is not readily bid for, as was the case during the past twelve months, and if the boat wishes a charter very much the owners are forced to accept a much lower rate than at any time in the last year. Coastwise, the same effect is being felt. Schooners which were asking $5 to $6 to New York, are now taking $1 per M. less. The great reason for lower freights is the poor demand for lumber, the price of which in the English market has receded £5 to £6 per standard, with the demand growing less all the time. Stocks are not excessive, and if any business were offered no doubt prices would stiffen at once. This would cause shipping to be resumed and freights would continue to advance. The allies have not been buying timber to any extent during the last two months. Their demand has been a large factor in keeping freights and prices at the high pitch during the past month. If they should again come on the market it would have a tendency to harden prices.

No sales of any deals have taken place during the last two weeks and practically no shipments have gone forward. Upwards of ten million deals are piled on lighters awaiting shipment, and probably as many more are on the wharves at the mills, with plants still running, 5 mills sawing English deals and two American sizes.

The American market is no weaker than two weeks ago. If anything, it is steadier and the nervousness has subsided to some extent. The base price still remains at $25, Boston, and the tendency seems to be to stiffen. Many of the eastern mills which used to saw deals are closed, and the logs are going into pulp mills. The months we are now passing through are always hard ones, and when cooler weather comes along it usually brings a change for the better.

Local conditions are no better than some two weeks ago. The amount of building is being curtailed more and more, with no very good outlook ahead for the fall. Last year a fall crop of houses came on the market and helped to keep the factories busy all winter. Whether this will happen again this season cannot be told, but it is to be hoped it will be the case. Stocks of low grade lumber are excessive and are lower than some time ago. Spruce boards are not moving freely, either on rough or matched. Short lumber prices are firmer than long lumber.

Laths are worth about $2.75 on wharves at St. John. Shingles, so far as St. John is concerned, are in an independent position, for very few mills have any cedar logs to saw.

The box shook trade is very busy and has been the only trade which has not shown a falling off.

All the logs are now safe on the booms. Up to July 1st the Boom Co. had rafted out over 25,000,000 feet of logs. This is about one-half the logs in the booms. Plenty of late rains have kept the water up to a good pitch and driving has been finished a month earlier than usual.

Messrs. Murray & Gregory, Ltd., have just completed and started their new mill at Lac Frontiere, Que., where they have 6,000,000 of logs to manufacture before snow flies, besides a large quantity of pulp wood. This mill will saw about 50,000 feet per day, and is fitted with a fast feed rotary and all the best equipment for a modern mill.

B. C. Stocks Attracting Attention at Montreal

Montreal, July 10.—(Special to the Canada Lumberman).—With building operations still on a small scale, the local market is quiet. Apart from two or three theatres and a small number of schools and churches, building projects are of little importance. The additions to factories necessitated by munition orders are now about over, and contractors are relying for the main part of their work on residences, but even these are not as a rule of any size. There is a fair amount of building proceeding in the province, and this of course helps the volume of trade. The Montreal permits for the month of June were valued at $748,050, a decrease of $276,065, while for the half year the total was $2,434,344, a decline of $984,765.

Business in hardwoods, which was brisk for a considerable period, has now fallen off.

An inquiry for about 125,000,000 feet of lumber for French account—for the Government, it is stated—has been received here. Spruce, pine, B. C. fir, and various hardwoods are called for. The specifications include one random lot of over 26,000,000 feet.

Of late there has been a better demand for B. C. lumber, especially fir, the result of the publicity campaign of the Government and also of the increase in direct representation of B. C. lumber companies. Recently two or three wholesalers have been pushing the sale of B. C. woods.

Trade with the United States is moderate. More barges are available, but rates continue high.

A considerable amount of tonnage is again available for the United Kingdom. Owing to more grain being on offer, rates have a tendency to stiffen. Quotations were down to 250s. per standard, but have risen again to 300s. The fluctuations are also due to the quantity of space free from time to time, the arrival of boats being somewhat irregular.

Pulp and paper markets continue to boom. There is practically no sulphite on sale for near delivery, production having been nearly all sold for some time ahead. The Riordon Pulp and Paper Company are shipping a considerable quantity to the United Kingdom. It looks as if there will not be enough sulphite to go around when the usual fall demand sets in. Ground wood is also in active request.

Parrsboro Shipments Increasing

Parrsboro, N.S., July 5th.—(Special to the Canada Lumberman).—Lumbering news is rather scarce at present owing to the difficulty the shippers still find in obtaining bottoms. When the vessels now building are afloat, they will help to some extent, for it is understood that it is the intention of the builders to charter them for overseas. The largest one will probably be able to take two cargoes this season, and possibly some of the others will do the same.

The steamer Manchester Civilian, Capt. Spencer, which sailed from this port recently for "Somewhere in France," took a cargo of 4,225,825 feet (2,134 standards) of spruce and hemlock deals and scantling. This was the largest lumber cargo ever shipped from Parrsboro. The freight amounted to the tidy sum of $207,000.

The Parrsboro tern schooner Lilian H., launched at Port Graville last April, has been chartered to load deals here for Europe at 400 shillings per standard. She took a cargo of piling from Port Graville to New York, and from there brought hard coal to St. John, N.B., thence returning to Parrsboro. Several other large schooners are due to load deals here shortly, and another big steamer is expected to load here in July.

Shipbuilding all along the Parrsboro shore is being pushed rapidly.

Parrsboro Export Trade Active

Parrsboro, N.S., July 5.—(Special to the Canada Lumberman).—The new tern schooner Lillian H., cleared to-day for Newport, England, with 530,000 feet of spruce and hardwood deals and scantling.

A Norwegian steamer arrived to-day to load deals for the United Kingdom.

The tern schooner Exilda, which made four successful trans-Atlantic voyages from this port last season, arrived at Preston, England, this week with her first cargo of deals for this year.

Two tern schooners are loading lumber here at present—one for the United Kingdom and one for the United States. Three other three-masters are chartered to load here at once for Great Britain at about 360 shillings per standard. The schooner which cleared to-day had 400 shillings, which is probably the record, as the recent heavy slump in the English market is undoubtedly affecting freights. Two of the chartered schooners are in port and the other is due to arrive. It is probable that the lumber business will be pretty brisk here for a few weeks, for, in addition to the bottoms already mentioned, another steamer is on the passage to this port, and at least one more is chartered for early loading.

The shipbuilders along shore are pushing their work as fast as scarcity of shipwrights and unfavorable weather will permit. Nearly all of them have announced that they will commence larger vessels as soon as those now on the stocks are completed. Their present intentions, however, may be changed by future conditions.

North Shore Lumbering Conditions

Thessalon, Ont., July 4, 1916.—(Special to the Canada Lumberman).—The drives are about completed for the season and we have had the most favorable weather for driving that has ever been experienced in Algoma. There was rain nearly all the time and the water in the rivers and creeks held out so that operators were able to do the driving with a smaller force of men than formerly. Although

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You have the Goods. Place your Lists with full particulars in our hands. We are in daily touch with all the Buyers in the United Kingdom.

PLEASE NOTE.—We pay cash against all documents, and take the whole of the Delcredere risk on Buyers.

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Every Manufacturer in the Lumber Industry realizes that to be "up-to-date" their Factory should be installed with **Shaving Exhaust Fans.**

The Sheldon Shaving Exhaust Fan

is especially designed to suit your particular requirements giving greater efficiency and independence than any other on the market.

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Messrs. Robt. Hamilton & Co. Ltd., Bank of Ottawa Bldg., Vancouver, B.C.

AN UNLIMITED MARKET

A LESSON OF THE WAR

IMPERIAL Trade! Have you given this phase of the World-War consideration The recent action of Sweden regarding the Export of Wood Pulp to the United Kingdom has roused British interests to look to Canada for a greatly increased supply; the demand for Canadian Wood Pulp will increase in the same ratio to the supply and every Saw Mill in the Dominion should have a small SODA PULP PLANT to take care of its Slats, Tops, Bottoms and "Waste" Wood. Contracts for long periods of years can be obtained. For full information apply—

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WHO HAVE IMPORTED NINETY PER CENT. OF THE CANADIAN PULP SUPPLIED TO EUROPE SINCE 1899

GREAT BRITAIN DEMANDS MORE CANADIAN WOOD PULP

The Lumberman's Milk
IN POWDER FORM
KLIM
READ BACKWARD
Klim is pure—cheaper than fresh liquid milk. One-third the cost of condensed milk. No freights on useless water—keeps in any temperature—no waste.
Packed for camp use especially in 10 pound tins $2.00 each, the pound makes one gallon. Case lots, special price.
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Paper Makers, Agents, Wholesale and Export Stationers
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Specialties:
FINE and COMMON NEWS on Reels and in Sheets
ART and IMITATION ART PAPERS
Printings, Browns, Mill Wrappers, Krafts, Strawboards, etc.
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Large Stocks of Every Class of Waste Paper for Papermaking Purposes.

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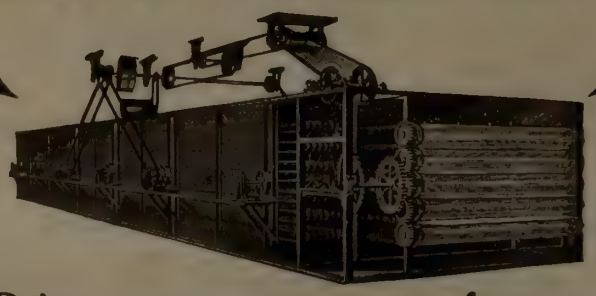
Dries enormous amount of veneer perfectly flat and pliable at minimum cost, without checks or splits
Send for catalog and list of users
The Philadelphia Textile Machinery Co., Philadelphia

supplies were more expensive than usual the drives have come out quickly and therefore at a reasonable cost.

The largest deal that has been put through on the North Shore for some years was closed recently when the firm of White, Gratwick & Mitchell, of Buffalo and Tonawanda, N.Y., purchased the entire holdings of the Hope Lumber Company of Thessalon, Ont. The purchasers acquired 200,000,000 feet of the finest white pine timber in Algoma, together with the sawmill and the whole plant of the Hope Lumber Company as a going concern. Mr. Carney, the new manager, has just arrived in Thessalon and will be general superintendent of the whole business, being assisted by Mr. Charles Williams, formerly of Spanish River.

Mr. H. H. Bishop, of the Thessalon Lumber Company, arrived in Thessalon a few days ago and reports that the company have all their lumber sold. Their work this summer will consist simply of sawing the stock and making shipment. In discussing the outlook for the present season, Mr. Bishop was rather guarded, not feeling inclined to give any definite information. Labor, he believes, will be very scarce, and he expects that wages in the woods will be high when the logging season commences.—Algoma.

The Spruce Market at Liverpool

In a discussion of the market situation for spruce at Liverpool, the "Timber Trades Journal" of London, England, in its issue of June 17th, refers to the subject as follows: "During the past week the c.i.f. market, for lower port spruce, has lost some of the firmness that has characterized it for such a considerable time, and the weaker tendency that prevails, whether of short duration or not, is both sudden, and, except among a few importers, unexpected. Allusion has been made to the uneasiness that appeared to be displayed by many consumers and merchants, who were of the opinion that the falling off in freights was the beginning of a slump in spruce, but at the same time it is impossible to say whether the freight situation, as seen to-day, is really responsible, in itself, for the sluggish feeling in the trade at present existing.

"True, tonnage rates are down, and, reflecting the weakness in grain, etc., they may yet recede further, but the lower steamer fixtures are for prompt voyages, and so far do not apply to later shipments; so that the present position may be no criterion even of the near future, although, with the more definite control of British tonnage, the likelihood is that neutral boats will be seriously affected.

"A further setback in freights may not, however, mean correspondingly lower spruce prices, as the highest c.i.f. figure recorded this season does not permit of the highest freight paid, and the possibilities are that the bulk of the shippers' cargoes already chartered for are now disposed of. Further, though additional chartering is sure to take place, it is likely not to be to a large extent; as it is understood the tonnage shortage of some weeks ago does not to-day exist, in view of the f.o.b. business which has taken place, and for which the Government transports will be utilized.

"Whilst the freight outlook has played some part in shaking the importer's opinion of the future, to make it entirely responsible is misleading. A more reasonable cause is that the weakening is due to sympathy with the Swedish position; and in the fact that among the first arrivals from the lower ports were a few unsold cargoes. Coming as they did on the top of an easy tonnage market, despondency was quickly brought about, and unless the unforeseen happens, a better state of affairs can still transpire. Heavier arrivals must be expected at this time of the year, but, allowing for all, shipments may yet be well short of anticipations."

Boston Trade Slacking Off

A Boston firm of wholesalers advises us under recent date, as follows: white pine in the barn board grade seems to be firm. The spruce list is almost all weaker. There seems to be a let-up in buying just now. There were a great many embargoes in force during the winter and some people bought and kept on buying because they could not get what they bought. Finally they have gotten the lumber in and it seems to have overstocked them, and there has been rather a general hold-up in buying. We think the yards are doing a fair trade, some of them a very good trade. There is a little trouble through New England in certain localities with strikes. Altogether the edge seems to be off the boom. However, we have little doubt but there will be a strong trade again by fall. N. C. pine has been the weakest thing and the low grades of box and roofers have very materially fallen off. White pine box, on the other hand, seems to be fairly firm and not over and above plenty.

Market for Shooks in Greece

There is a sharp demand in the Patras market for shooks used in making currant cases. The size chiefly used for exporting currants is known as the quarter case. The inside measurements of the quarter case are: Length, 18½ inches (47 centimetres); wodth, 9½ inches (24 centimetres); depth, 9 inches (23 centimetres). The pieces for the sides of the case should be two-fifths inch thick; those for the

Camp Groceries

You can always be sure that we have at all times a good supply of everything that is needed by the cooks in the camp.

Buying in large lots, we can quote the lowest market prices which are prevailing at the time of inquiry.

We solicit a share of your business requirements and will gladly quote and send samples on request.

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WHOLESALE GROCERS

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McLENNAN'S

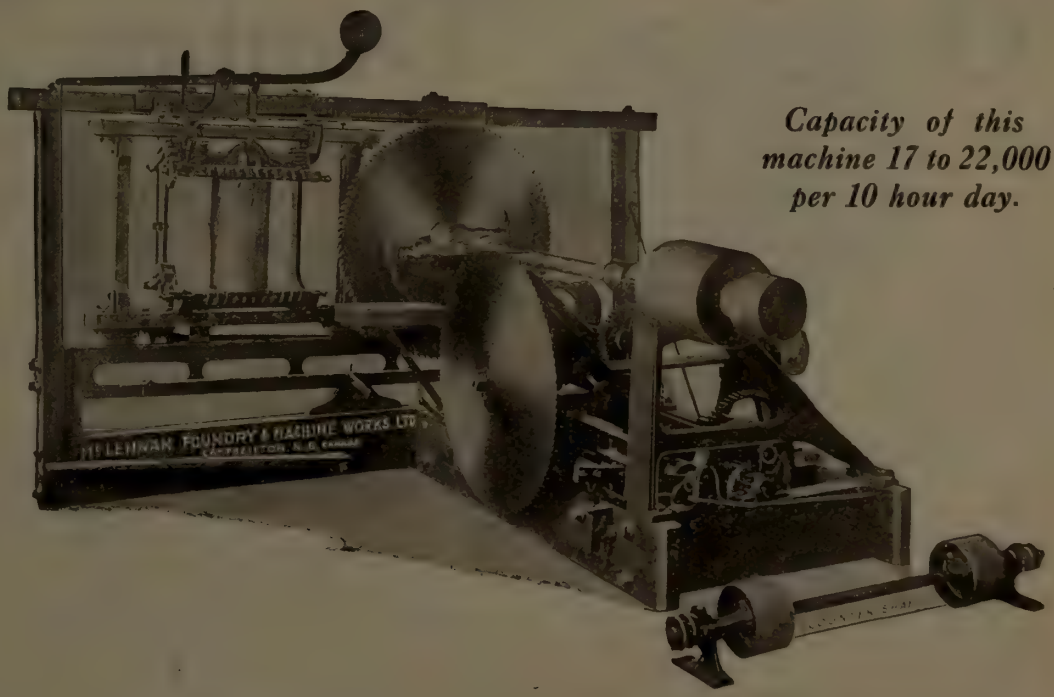
Shingle Machine

Improved Model

A smooth running, efficient, and low cost machine of the most modern design.

Floor Space 8 feet x 8 feet

We also make gang edgers, lath machines, bolters, sleeper machines, sleeper barkers, etc.



Capacity of this machine 17 to 22,000 per 10 hour day.

Write us for specifications and further details.

McLennan Foundry & Machine Works

LIMITED

Campbellton, - N. B.

ends, five-eighths inch. The ends are set in. They should always be of one piece, as the stability of the case depends largely upon the ends. The top should also be of one piece. At least one side should be of one piece. The kind of wood to be used is especially important. It should be odorless. Such woods as pine have a resinous odor which attaches to the currants and damages them. The material should be of light weight and fairly tough. Spruce is probably best adapted for this use. The annual consumption of quarter cases on this market is about 2,000,000. Local firms are now beginning to place their orders in the United States against the opening of the currant season, August 23, 1916. Quotations should be per case, and if possible c.i.f. Patras or Piraeus, Greece; they may be f.o.b. New York. Shooks should be bound in small parcels. American firms are especially invited to send to Patras, by parcel post, samples of the woods they offer for the benefit of local dealers. The latter are not yet well acquainted with American woods, and some of the woods that have been imported did not prove entirely satisfactory.—United States Consul A. B. Cooke, Patras.

Quebec Cullers' Report

The following comparative statement of timber, measured and culled to date, is furnished by the Supervisor of Cullers' office, Quebec, P.Q., under date of July 7th:—

	1914 Cubic ft.	1915 Cubic ft.	1916 Cubic ft.
Waney White Pine	384,240	139,240	16,680
Oak	184,320	78,160	167,560
Elm	253,200	46,840	58,880
Ash	600	480	240
Birch and Maple	50,800	42,240	46,880

Barbados Market Report

S. P. Musson, Son and Company, Bridgetown, Barbados, report under date of June 8th, as follows:—Lumberstuffs—White pine—The position is the same as last advised. No arrivals have taken place during the fortnight, and we can recommend further shipments, which would sell to advantage. Spruce—We note the arrival of a small lot of 56 m. ft. by the Schr. "Gladys & Lillian" from Lunenburg, which was purchased by an exporter at the net round price of $29 bond. Locally, supplies are still wanted, as no receipts have come to hand. Shingles—We understand that during the fortnight a cargo of about three million cedar laying has been placed to arrive, at $2.82 for Extra No. 1's and $2.32 for No. 1's. There is also some enquiry at present for Long Gaspe. Shooks and wood hoops—No arrivals to note.

Taxing Lumber Off the Face of the Earth

In an address before the Federal Trade Commission of the United States, one of the counsel for the National Lumber Manufacturers' Association made the following remarks about the Pacific Coast lumber industry, recently:—

"A factor of greatest significance is the geographical location of the industry as related to the markets. The freight to the markets of greatest consumption generally equals, and often exceeds, the value of the manufactured product. The rail haul to the competitive markets approximates 2,000 miles.

"The local trade consumes about three-fifths of the entire production. The entire production in the States of Oregon and Washington annually during a normal year is 5,600,000,000, or nearly 6,000,000,000 feet. In round numbers the State of Washington will produce about 4,000,000,000 and the State of Oregon about 2,000,000,000.

"Common building grades of lumber, such as boards, shiplap, and dimension, are sold at the mills to-day at from $6 to $8. The consumer in the east, on the other hand, pays anywhere from $22 to $30, depending on the keenness of competition, and where it is located.

"To the north lies British Columbia, manufacturing in competition the same commodity. The industry there enjoys the aid of the Government. We can rest assured that when peace comes, greater and more substantial aids will be given the Canadian operators.

"The tax element is a prime influence in the urge of over-production. The average value in fourteen counties in which one company owns land in tracts varying from 5,000 to 30,000 acres, is $26 an acre, and that is the assessed valuation, and on that basis the average tax for the year 1913 was $1.119 per acre. That is a little over 2 cents per thousand on the county cruises.

"Outside of those averages in one county they have taxed it so high that the taxes per annum amount to as high as $6 per acre, and the consequence is that while we have been holding our timber for years this company felt it was confiscation if held much longer, and consequently, between Everett and Seattle, along the line of the Interurban Railway, you will see a barren country logged off in the last five years, and the company is going to continue in this county until there is nothing left but the land, and will sell that for what they can get for it."

Original "Dunbar" Machines

We are the original and the only makers of "Dunbar" Shingle Machines, Lath Machines, Clapboard Machines, Steam and Gasoline Logging Engines. Each is the best for its particular work. Are you using the best?

Lath Machine

From our many years of experience we evolved this "Dunbar" Original Lath Machine. Every improvement that could be suggested, every time-tested idea for the betterment of product and for greater speed, has been incorporated in this machine. We believe it has no equal, and there are a great number of mill men throughout Canada who share this belief with us. Carefully constructed of high grade materials and designed to work steadily under the hardest conditions.

Steam and Gasoline Logging Engines

Conditions in Canada necessitate an engine that will stand any amount of strain and hard work in the lumber industry. With this idea in mind we have brought out the "Dunbar" engines perhaps a little stronger than is really needed. They do their work easily and willingly, and stand a great amount of hard usage. Built entirely in Canada for the Canadian lumber trade.

Clapboard Machine

You will need no excuse for the quality of your product if you use the original "Dunbar" Clapboard Machine. Expert in every detail. This machine will give you the very best service under most trying conditions. It will turn out work without delays. It will need practically no repairs and will increase your output. We cannot recommend it too highly because it is giving this very service to lumbermen in all parts of this country.

Send for catalogues of any or all of these machines.

Dunbar Engine & Foundry Co.

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You'll Eat More Bread

You never saw anything like the way the bread will disappear when you make it with

Cream of the West Flour

the hard wheat flour that is guaranteed for bread

It has splendid baking qualities that puts the bread entirely in a class by itself. That's what the lumbermen are telling us. Better try some and see for yourself.

You can get our special Crushed Oats, Mixed Crushed Feed or Chop for the horses. Made especially to keep them in fine trim around the lumber camp.

Write for prices

THE CAMPBELL FLOUR MILLS CO., LIMITED

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We make a Specialty of

Horizontal Tubular Boilers

for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

Sherbrooke Montreal Cobalt So. Porcupine St. Catharines Toronto Vancouver Nelson

Present and Future of Prairie Trade

By H. Finger, of Finger Lumber Co., The Pas, Man.

Probably no industry in Canada has suffered more from the effects of the war than the lumber industry. While the war has been the means of a rapid increase in the prices of commodities such as food stuff, iron, clothing, etc., lumber has not been so favored. The few advances that have taken place since last fall have not as yet placed lumber at normal value.

The export business of British Columbia has not yet attained the activity hoped for. The demand from foreign countries is there, but the manufacturers have been unable to secure sufficient ship space to load. The B. C. mills have, therefore, been compelled to look to the Prairie Provinces for the marketing of their lumber. This active competition of the B. C. mills is considered an important factor in the tendency to keep the price of our native product, spruce, down to almost unprofitable level.

During the summer of 1915 the lumber market was in a demoralized state. The big crop harvested in Manitoba, Saskatchewan, and Alberta changed the situation somewhat, and during the latter part of the year there was a real old-time demand for lumber and prices actually went up a notch. The spruce manufacturers were hopeful that at last a change for the better had taken place and as the stocks at all the mills were very low and badly broken in grade and sizes, they prepared for a rather heavy output of logs. I am not in possession of reliable statistics as to the extent of last winter's logging, but I believe I am safe in placing the output of Northern Manitoba and Saskatchewan spruce at 110,000,000 feet. The logging was favored with good weather conditions, but at times operations were handicapped by heavy snowfall. Men were fairly plentiful, but certain restlessness was noticed among them at times and wages had a tendency to advance. The scale of wages ranged from $15.00 to $45.00 per month.

All the drives have been successfully brought to the mills and sawing operations commenced under favorable conditions. All the mills are preparing for a big cut, running night and day.

Lately there has been a noticeable falling off in demand, but prices still remain firm, and it is not considered that the decline is caused by any real stagnation of business in the Prairie Provinces. Weather conditions throughout the Middle West have been very unfavorable for building and heavy rains have delayed seeding to a certain extent. As soon as weather conditions improve, it is certain there will be a very active demand for lumber. This demand is bound to increase as soon as peace is established in Europe. Tremendous quantities of lumber will be needed in European countries that have been devastated by the war, in reconstruction, and as soon as the mills at the seaboard, both Atlantic and Pacific, can obtain bottoms to load, the pressure in the domestic market will be relieved. It is also quite certain in my mind that with the approach of normal conditions, public, private and railway construction will be resumed with renewed activity. There are so many needed repairs, so many needed public buildings, so many needed new railway lines, the construction of which have been postponed during the last four years for better times, that as soon as the sword is sheathed in Europe there is bound to be a rush in construction all over this western country. I am, therefore, hopeful that next year will place lumber at a value that will insure the manufacturer a reasonable profit so as to recompense him for the loss, worry and strain to which he has been submitted the last four or five years.

In conclusion, I wish to say that I believe it would benefit the trade generally if a closer relation existed between the retailer and the manufacturer. Their interests are common; what benefits one, benefits the other. The manufacturer should study the retailer's requirements and fill the orders promptly as called for, but if the manufacturer finds he must make an extra charge for special working, I do not believe the retailer should kick. It also seems to me the retailers are at times somewhat unreasonable in demanding "prompt shipment or cancellation." The capacity of a mill's shipping department is just so much and beyond that it cannot be increased, and it seems unfair that one reailer should demand that his order have preference over others. Retailers do not always seem to remember there is such a thing as car shortage, which particularly makes itself felt during the season when the grain is being moved. Crowding the orders could be prevented if the retailers could be induced to place orders ahead and carry sufficient stock of the items for which there is continual demand.

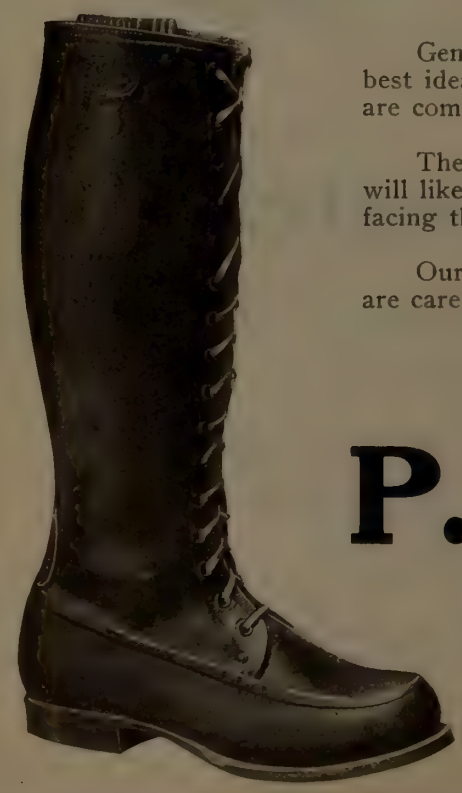
Reports recently received from railroad officials in Montreal state that the shipment of B. C. timber and forest products to Eastern Canada during the past month or two have been about three times their normal quantity.

R. N. Duff, of the firm of Duff and Stewart, lumber manufacturers and dealers, Bluevale, Ont., died recently after a severe illness of many weeks, following a stroke of paralysis.

GENDRON
SHOE PACKS

THE P.T. GENDRON SHOE PACK CO. MIDLAND GENDRON MIDLAND ONT. CAN.

Made in Canada



Gendron Genuine Draw String Shoe Packs embody the latest and best ideas of manufacture. They wear, they keep the feet dry, they are comfortable under all conditions. These are the main points.

The price is reasonable. The value is away above the price. You will like these shoe packs if you try them. Hundreds of lumbermen facing the same conditions as you, are enthusiastic about them.

Our manufacturing process is thorough from start to finish. We are careful with every pair.

Send for our catalogue and prices.

P. T. Gendron
Shoe Pack Co.
Limited

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If It's a Tent

No matter how large or how small our facilities are equal to the emergency. Try us.

Smart-Woods Stable, Storage and Circus Marquee.

Smart-Woods Refreshment or Military Marquee.

Smart-Woods Mosquito or Black Fly Proof Fronts.

SEND FOR "CATALOGUE DE LUXE"

Keep tents free from flies, mosquitoes and other insects. End of tent may be left open even in the worst periods of the year and with careful attention this insect proof end will keep the inside habitable and a welcome place to sleep in. A necessity to every woodsman, lumberman or railroad contractor during the warm months. Write for quotations.

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Why An Aloxite Saw Gumming Wheel Cuts Cool

ALOXITE is tough—it has just the proper temper to keep the wheel with a free cutting face.—The wheels are of an open or porous nature, thus allowing the free action of the grain. —A close bonded wheel drags—creates friction—friction means heat. Aloxite wheels cut cool, free, fast—they don't fill—they produce no unnecessary friction—they work without rasp or screech—hold their shape—show long life.

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THE EAGLE LUMBER CO. Limited
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SPRUCE rough or dressed

1" No. 2 and Better Birch, 1914 cut
also Basswood, Hemlock and Pine

Saw Mills at MONT LAURIER.
Dressing Mills at ST. JEROME.

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DRY STOCK. 1915 SAWING

1 car 4/4	White Pine Good Shorts.
3 cars 1 x 7 in.	Mill Run White Pine.
5 cars 1 x 7, 9, 11 in./up	Mill Run White Pine.
5 cars 1 x 12 in.	Mill Run White Pine
2 cars 2 x 10 in.	Mill Run White Pine.
5 cars 2 x 12 in.	Mill Run White Pine.
5 cars 1 x 4 in. and up	No. 1 White Pine Culls.

Also complete assortment of White Pine, 1916 Sawing

EXCELLENT PLANING MILL FACILITIES

LATH

Campbell, MacLaurin Lumber Co.
Limited
Board of Trade Building, MONTREAL

Pine, Spruce Hemlock Hardwoods, Lath

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber. Lath and Shingles
Offices—500 McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

F. C. Smith, Harrow, Ont., recently suffered a serious loss by fire. The amount of the loss is estimated at $8,000.

A few piles of lumber in the yard of the Colonial Lumber Company, Pembroke, Ont., were recently destroyed by fire. The loss is covered by insurance.

The Thessalon Lumber Company, Nesterville, Ont., report that they have disposed of their whole stock of lumber to be sawed during the present season.

J. Dent, Dutton, Ont., is contemplating the erection of a new sawmill and barns at a cost of $4,000, to take the place of the ones that were recently destroyed by fire.

The Northumberland Paper & Electric Company, Campbellford, Ont., have commenced work on the rebuilding of their paper mills, which were recently destroyed by fire, at a cost of $60,000.

C. F. Smith, Harrow, Ont., whose planing mill was recently destroyed by fire, will rebuild the mill as soon as possible. The new plant will cost about $10,000 and will be equipped with electrically operated machinery.

The sawmill and barns belonging to J. Dent, of Dutton, Ont., were destroyed by fire recently. The sawmill was a portable one, placed in a building adjoining the barn. The cause is unknown. The loss may exceed $3,000, and there was no insurance.

The Hugh Munro Lumber Co., Ltd., has been incorporated, with head office at Toronto, Ont., and capital stock of $40,000, to carry on business as manufacturers and dealers in timber, lumber and wood products. Those interested are Hugh Munro, J. Munro, and A. Munro, all of Toronto.

The Sangeen River recently rose very rapidly as a result of heavy rain fall, and caused a lot of damage, one of the sufferers being A. Dawson, who operated a sawmill on the river at Chesley, Ont. Several dams were carried away and Mr. Dawson's logs were swept away, involving a loss of about $3,000.

The hardwood plant of Dominion Hardwoods, Limited, Deseronto, Ont., manufacturers of woodenware, was totally destroyed by fire on July 9th. The company was a new one, which had recently commenced operations and had a large quantity of orders on hand. The loss is estimated at $100,000, which was partially covered by insurance. The company expect to rebuild immediately.

White, Gratwick & Mitchell, of Buffalo and Tonawanda, N.Y., have purchased the entire holdings of the Hope Lumber Company, of Thessalon, Ont., including 200,000,000 feet of the finest white pine in Algoma, together with the company's sawmill at Thessalon. The new manager of the business will be Mr. Carney, and he will be assisted by Mr. Charles Williams, formerly of Spanish River.

Eastern Canada

F. H. Stearns & Company, wholesale lumber merchants, Montreal, P.Q., have been registered.

J. A. Bourassa & Cie., Shawinigan Falls, P.Q., have been registered. Those interested are Harvey E. Howe and Jos. A. Bourassa.

Theodore Groleau & Fils, timber contractors, St. Thecle, P.Q., have been registered. Those interested are Arthur Groleau and Josephat Groleau.

Frederic Talbot, St. Lucien, P.Q., recently lost his sawmill by fire. The amount of the loss is not stated, but it is probable that it was covered by insurance.

The sawmill belonging to J. W. and J. Anderson, Burnt Church River, Northumberland County, N.B., was recently destroyed by fire. There was no insurance.

Wm. M. Sullivan, Nelson, N.B., has not yet drawn up definite plans for the sawmill which he intends to build this year, but reports that it will be a band mill and will probably cost between $35,000 and $40,000.

The International Land & Lumber Company, Ltd., are preparing plans for the erection of a pulp mill near St. Valician, P.Q., to cost about $200,000. The secretary of the company is S. A. Huntington, 285 Bank Street, Ottawa, Ont.

The River Valley Lumber Company, of Oromocto, N.B., recently paid $300 per square mile for a timber berth of 4½ square miles on Bear Brook, a branch of Little River, in Sunbury County, the berth being offered at a public auction.

The Richelieu Industrial Company, Limited, has been incorporated, with capital stock of $45,000 and head office at Montreal, to carry on business as lumbermen. Among the incorporators are S. Lavery, Advocate, of Longueuil, P.Q., and T. Robillard, Bailiff, of Montreal.

Traversy, Limited, have been incorporated with capital stock of $100,000 and head office at Montreal, to manufacture and deal in all kinds of timber,

lumber logs, etc. Among those interested are V. T. Traversy and V. I. Traversy, mill owners and manufacturers, of Westmount, P.Q.

La des Bois du Nord Cie, lumbermen, Montreal, P.Q., have been registered. The chief party interested is Jean P. Chevassu.

The Holjohn Company, Ltd., has been incorporated with head office at Montreal, P.Q., and capital stock of $49,000 to carry on business as manufacturers and dealers in logs, lumber, timber wood, etc. Those interested are E. W. Howard, J. DeWitt, H. E. A. Rose, and H, C, McNeil, all of Montreal,

Bras d'Or Coal Company, Ltd., has been incorporated with head office at Montreal, P.Q., and capital stock of $45,000, to carry on business, among other things, as manufacturers and dealers in timber, lumber, logs, etc. Those interested are H. A. Lovett, G. W. Cole, N. Sheach, B, F, Fowler, and P, F, Brown, of Montreal,

Murray and Gregory, Limited, St. John, N.B., have completed their new mill at Lac Frontiere, P.Q., and have commenced operations at that point. They have a stock of 6,000,000 logs on hand for this mill and will saw it before the winter. The mill is equipped with a fast feed rotary and other modern machinery and will turn out about 50,000 feet per day.

The Cushing mill at Union Point, N.B., owned by the Edward Partington Pulp & Paper Company, was completely destroyed by fire recently. The loss amounted to $25,000 and there was no insurance. The fire broke out in the little mill and quickly spread through the sawmill to which it was confined. This mill was built by the Andre Cushing Company, at an original cost of $120,000, and was one of the finest on the St. John River. After being taken over by the Partington people the machinery was sold and the building had been used largely as a storeroom.

Price Bros. and Co., Limited, Kenogami, P.Q., have secured funds for additions to their news print and pulpwood mills. It is expected that the new news print unit will be in operation by February next year, bringing up the total output to 62,000 tons per annum. October 1st next is the date fixed for the completion of the ground wood and sulphite additions. The production of the former pulp mill will be increased to 55,000 tons per annum and the latter to 25,000 tons. Half a million dollars have been secured by the sale of 6 per cent. collateral trust notes, secured on the development of the Shipshaw Power Company, which supplies power to Kenogami mills.

The St. Maurice Lumber Company, Three Rivers, P.Q., have constructed a telephone line on their Mekinak Limits for a distance of 15 miles through the forest. The line runs from their Middle River headquarters on the National Transcontinental Railway, where they receive their provisions and supplies for logging operations, to the mouth of the Brochet River, where the logs are placed in pocket booms to be towed across Lake Mekinak by a tug, and from Brochet River the telephone line continues to Lake Mekinak dam at a point where the logs are sluiced into the Mekinak River and driven for a distance of seventeen miles to the main St. Maurice River, twenty-one miles above Grandes Piles. This telephone line is a great convenience both for their logging and driving operations. It is their intention now to have lines to the different streams that run into Lake Mekinak. This facility of telephone communication will be a safeguard against forest fires, as well as a convenience in their operating works.

Western Canada

The Capilano Cedar Company, Limited, has been incorporated with capital stock of $10,000 and head office at Voncouver, B.C.

The Roy & Moffatt Logging Company, Limited, has been incorporated with capital stock of $10,000, and head office at Vancouver, B.C.

The Hammond Cedar Company, Limited, has been incorporated, with capital stock of $40,000, and head office at New Westminster, B.C.

The Colonial Lumber and Paper Mills, Standard Bank Building, Vancouver, B.C., are clearing the site for paper and pulp mills which they will erect at Quatsino, B.C.

The Ross Saskatoon Iumber Company, Waldo, B.C., are arranging to make a number of repairs to their sawmill which was damaged by recent floods. The repairs will include the installation of new machinery.

C. L. Wiley, Seattle, Wash., has purchased 3,400 acres of timber on Clear Water Creek and will erect a shingle mill near Nelson, B. C. About 40 men will be employed in the camps and mill. A shingle dry kiln will also be erected in connection with the plant. Mr. D. C. Wiley, a son of Mr. C. L, Wiley, will be in charge of the operations.

Sealed tenders are being received by the Minister of Lands for B. C., until July 26th, for the purchase of license X 90, to cut 7,130,000 feet of Douglas fir, hemlock, cedar, white pine, and balsam fir and 535 cords of shingle bolts, on an area adjoining lot 115, Sydney Bay, Coast district, Range 1. Three years will be allowed for the removal of the timber.

The Western Canada Timber Company will resume operations at its mill at Gerrard, B.C., this month. Mr. J. Fred Robinson, manager of the company, has let a contract for taking out 10,000,000 feet of logs from the company's limits on the Lardeau. The company have about 4,000,000 feet of logs on hand. They will employ about 50 men in the mill and 40 in the camps. The mill has a capacity of 75,000 feet a day. The company's mill at Summit Lake is running regularly, employing about 45 men at the plant and in the logging camps and turning out about 35,000 feet a day. Mr. Robinson has made an arrangement with a Calgary firm to handle the entire output of the company's plants.

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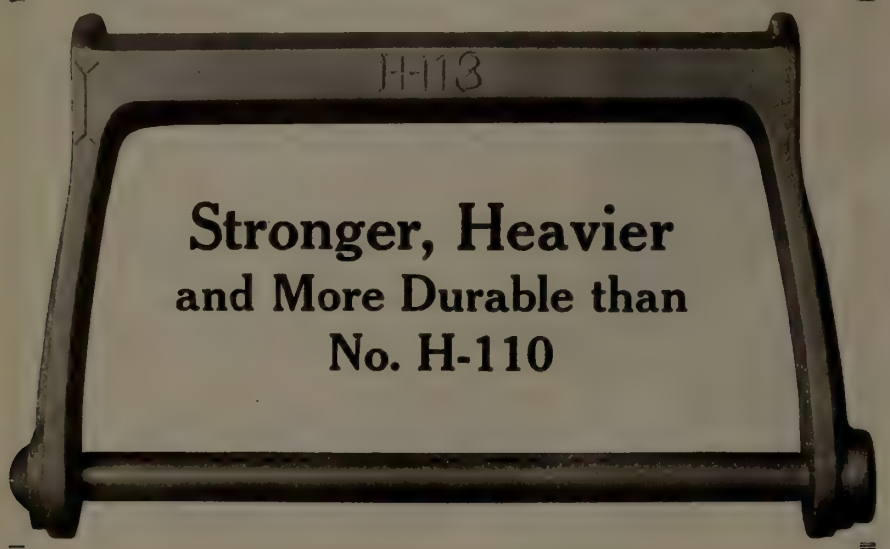

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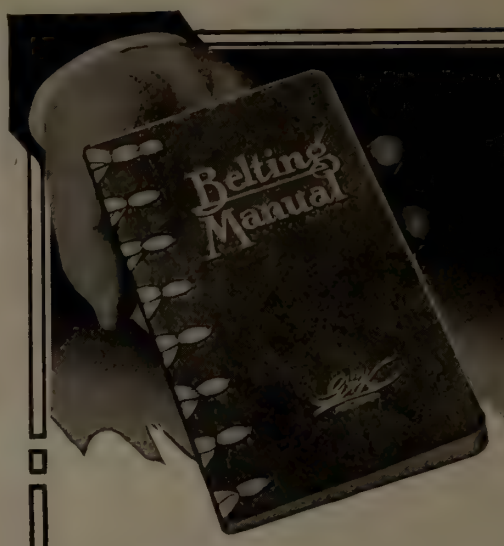

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Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa, Deputy Minister.
December 20th, 1912.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	31 00	32 00
1 x 12 common and dressing	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft.		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft.		16 00
2 x 4 to 12, 10 and 16 ft.		20 00
2 x 4 to 12-in., 12 and 14 ft.		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet: 8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain		31 50
Fir flooring, 1 x 4, edge grain		35 00
Fir flooring, 1 x 4, flat grain		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 25
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	40 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1st and 2nds, 4/4	44 00
Birch, No. 1 com, and bet., 4/4	35 00
Birch, 1st and 2nds, 6/4 and 8/4	46 00
Birch, 1st and 2nds, 10/4 and 12/4	60 00
Birch, 1st and 2nds, 16/4	62 00
Basswood, 1sts and 2nds, 4/4	40 00
Basswood, No. 1 com. and bet., 4/4	35 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet.	30 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft elm, No. 1 com. and bet., 4/4	32 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4.	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1st and 2nds, 4/4	40 00
Hard Maple, common and better, 4/4	33 00
Hard maple, 12/4 & 16/4, 1sts and 2nds	50 00
Red oak, plain 1st and 2nds, 4/4	66 00
Red oak, plain, No. 1 com., 4/4	40 00
Red oak, plain No. 2 com. 4/4	32 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain 1sts and 2nds, 4/4.	68 00
White oak, plain, No. 1 com., 4/4	40 00
White oak, plain, No. 2 com., 4/4	32 00
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	66 00
Red and White oak, plain, No. 1 com. 5/4 and 6/4	43 00
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00
Red and White oak, plain, 1sts and 2nds, 8/4	72 00
Red and White oak, plain, No. 1 com. 8/4	48 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00
White oak, ¼ cut No. 1 common	57 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$52 00	54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips	23 00	24 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	24 00	25 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00	27 00
Pine, 1-in. x 10-in. M.R.	28 00	29 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	17 50	18 00
1"x 3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16'	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles:		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Quebec Spruce Deals		
12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.		$54 00
1 in., 8 in. and up wide		62 00
1¼ and 1½ in. and up wide		65 00
2 in. and up wide		70 00
Cuts and Better		
4/4 x 8 and up No. 1 and better		50 00
6/4 x 8 and up No. 1 and better		60 00
8/4 x 8 and up No. 1 and better		62 00
6/4 x 6 and up No. 2 and better		52 00
8/4 x 6 and up No. 2 and better		54 00
6/4 x 6 and up No. 3 and better		46 00
8/4 x 6 and up No. 3 and better		50 00
No. 1 Cuts		
1 in., 8 in. and up wide		40 00
1¼ in., 8 in. and up wide		55 00
1½ in., 8 in. and up wide		57 00
2 in., 8 in. and up wide		60 00
2½ and 3, 8 in. and up wide		75 00
4 in., 8 in. and up wide		85 00
No. 2 Cuts		
1 in., 6-in. and up wide		31 00
1¼ in., 6-in. and up wide		42 00
1½ in., 6-in. and up wide		44 00
2-in., 6-in. and up wide		44 00
2½, 3 and 4 in., 6-in. and up wide	62 00	65 00
No. 3 Cuts		
1 in., 6-in. and up wide		24 00
1¼ and 1½ in., 6-in. and up wide		33 00
2-in., 6-in. and up wide		33 00
2½, 3 and 4-in., 6-in. and up wide	43 00	48 00
Common and Dressing Mill Run		
1-in. x 4-in.		25 00
1-in. x 5-in.		25 00
1-in. x 6-in.		26 00
1-in. x 8-in.		27 00
1-in. x 10-in.		29 00
1-in. x 12-in.		34 00
1 in. x 13 in. and up		34 00
1¼, 1½ and 2-in.		30 00
No. 1 Barn		
1 inch	31 00	45 00
1¼, 1½ and 2-in.	36 00	45 00
2½ and 3-in.		45 00
4 inch		50 00
No. 2 Barn		
1 inch	28 00	36 00
1¼, 1½ and 2-in.	30 00	36 00
2½ and 3-in.		38 00
No. 3 Barn		
1 inch	21 00	28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00	25 00
Box		
No. 1, 1, 1¼, 1½, 2-in.	22 00	25 00
No. 2, 1¼, 1½, 2-in.	19 00	23 00
Mill Culls		
Mill run culls, 1-in.		19 00
1, 1¼, 1½ and 2-in.		20 00
No. 2	17 00	18 00
Lath		
No. 1, 32-in. pine		1 80
No. 2, 48-in. pine		4 35
No. 1, 48-in. pine		4 85
No. 3, 48-in. pine		3 85
Hemlock Lath 48 in.		3 80

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1. E.			
	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8	14 00	17 00	20 50	21 50
2 x 10	18 00	18 50	21 50	22 50
2 x 12	18 00	19 00	23 50	23 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	21 50
2 x 4, 10, 18, 20	23 50
2 x 6, 8 to 16	21 50
2 x 8, 8 to 16	21 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	29 50
2 x 10 and 2 x 12; 8-16 ft.	26 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	28 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	30 50
No. 1 Common Boards	
4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50
Flooring	
4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00
Shiplap—Finished	
6 inch	22 50
8, 10 and 12 inch	23 50
Siding	
6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00
Lath	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed)	4 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	27 10
3 x 8 in.; 8 to 16 ft.	24 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	27 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	29 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	20 50
2 x 4 in.; 12 and 14 ft.	21 50
2 x 4 in.; 10 and 16 ft.	22 50
2 x 4 in.; 18 and 24 ft.	23 50
2 x 4 in.; 22 and 24 ft.	24 50
2 x 4 in.; 26 to 32 ft.	26 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	23 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	25 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	26 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	28 00
2 x 14 in.; 10 to 16 ft.	28 00
2 x 14 in.; 18 and 20 ft.	30 00
2 x 14 in.; 22 and 24 ft.	31 00
2 x 14 in.; 26 to 32 ft.	33 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	24 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	25 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	26 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	27 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	27 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	27 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	28 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	28 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft.	23 00
No. 2 Shiplap, 6 in.	22 00
No. 2 Shiplap, 8, 10 and 12 in.	23 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 85

LATH

Fir lath, ⅜ x 1⅜ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ⅜ x 1⅜ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00

(Continued on page 60)

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are daily reducing delivery and haulage costs in many varied lines of business.

Our traffic engineers have a plan that will lower the cost and increase the efficiency of lumber transportation.

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No. 1 Moulding 8/4	62 00
No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	37 - 39	24 - 26	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in...		98 00
Selects, 1 to 2 in.		88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	72 00	74 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2. Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	38 00	40 00
No. 2, 1 x 10		35 00
No. 2, 1 x 8		34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 50	30 00
No. 3, 1 x 8		29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		25 00
Spruce 8 in. and under dimen.		27 00
10 and 12 in. random lengths, 10 ft. and up	26 00	27 50
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	22 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	22 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50	23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled		22 00
1½-in. spruce laths	4 10	4 15
1½-in. spruce laths		3 75

New Brunswick Cedar Shingles

Extras	3 50	3 60
Clears	3 10	3 15
Second clears	2 30	2 40
Clear whites	2 10	2 20
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.		3 75
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear		3 65

Logging Harness

Harness for Lumber Camps has to stand an extraordinary amount of strain under most trying conditions.

For this reason special attention has to be paid to it, in the making, in order to produce a product to last and give good service.

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For Lumbermen

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100 Rooms, Private Bath, $2.50 Single, $4.00 Up Double.
100 Rooms, Private Bath, $3.00 to $5.00 Single, $4.50 Up Double.

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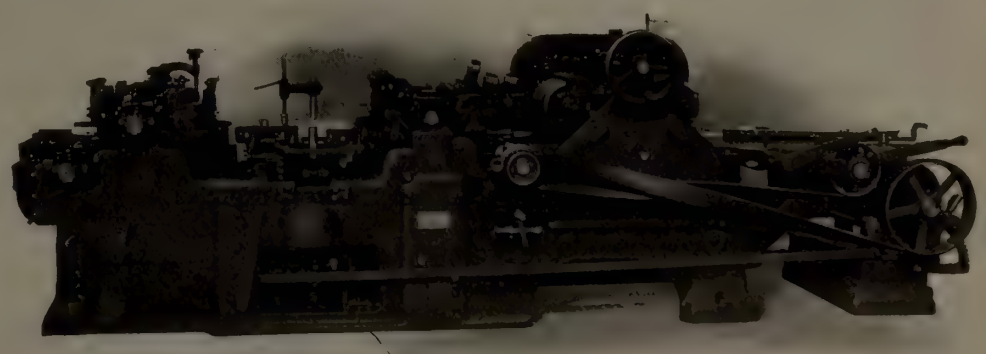

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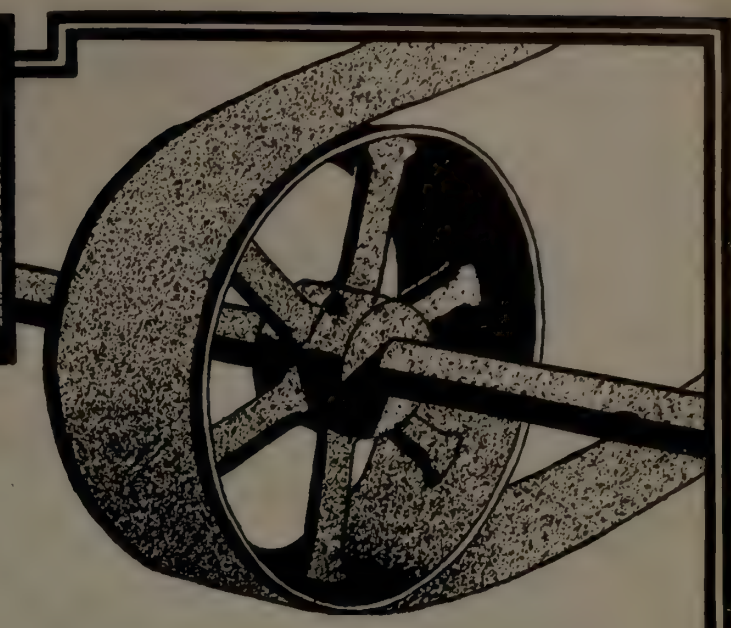

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Cedar Mills—Roche Point, B. C. (Burrard Inlet)

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Gutta Percha & Rubber Company
Main Belting Company
McLaren Belting Company, J C
Sadler & Haworth
Turner Brothers Canada, Limited

BLOWERS
Canadian Blower & Forge Company
Sheldons Limited
Sturtevant Company, B. F.
Toronto Blower Company

BOILERS
Hamilton Company, William
Jenckes Machine Company
Waterous Engine Works Company

BOOM CHAINS
Hingley & Sons, N.

BOX MACHINERY
Morgan Machine Company
Yates Machine Co., P. B.

CABLE CONVEYERS
Jeffrey Mfg. Company
Waterous Engine Works Company

CALIFORNIA SUGAR PINE
Hayden Westcott Lumber Company.

CAMP SUPPLIES
Campbell Flour Mills
Canadian Milk Products Limited
Davies Company, Wm.
Douglas & Company
Hall, Adam
Johnson A. H.
Smart-Woods Limited
Turner & Sons, J. J.

CANOES
Peterboro Canoe Co.

CANT HOOKS
Pink Company, Thomas

CEDAR
Federal Lumber Company
Long Lumber Company
Mainland Lumber & Shingle Co.
Muir, Kirkpatrick & Sharpe
Shawnigan Lake Lumber Co. Ltd.
Terry & Gordon
Thurston-Flavelle Lumber Company

CHAINS
Canadian Link Belt Co.
Columbus Chain Company
Hamilton Company, William
Jeffrey Mfg. Company
McKinnon Chain Company
Pink & Company, Thos.
Waterous Engine Works Company

CHINA CLAY
Bowater & Sons, W. V.

CLOTHING
Grant, Holden & Graham

CONVEYOR MACHINERY
Can. Mathews Gravity Carrier Co.

CYPRESS
Chicago Lumber & Coal Co.
Long Lumber Company
Louisiana Red Cypress Company
Wilson Bros.
Wistar, Underhill & Nixon

DRY KILNS
Sheldons, Limited

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Benson & Bray
Boake Mfg. Co.
Canadian Western Lumber Company
Haeberle Lumber Company
Harquail Company, Ltd., J. & D. A.
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Terry & Gordon

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Auger & Son
B. C. Lumber Commissioner
Canadian Western Lumber Company
Chicago Lumber & Coal Co.
Federal Lumber Company
Long Lumber Company
Mainland Lumber & Shingle Co.
Mason, Gordon & Company
Muir, Kirkpatrick & Sharpe
Shawnigan Lake Lumber Co. Ltd.
Terry & Gordon
Timberland Lumber Company
Timms, Phillips & Company

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Canadian Blower & Forge Company
Sheldons Limited
Toronto Blower Company

ELEVATING AND CONVEYING MACHINERY
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Jeffrey Manufacturing Company
Waterous Engine Works Company

EMERY GRINDERS
Carborundum Company
Waterous Engine Works Company

ENGINES
Canadian Blower & Forge Company
Hamilton Company, William
Jenckes Machine Company
Waterous Engine Works Company

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Canadian Blower & Forge Company
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Toronto Blower Company

EXHAUST SYSTEMS
Canadian Blower & Forge Company
Sheldons Limited
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Campbell Flour Mills

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Nicholson File Company
Simonds Canada Saw Company

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Elk Fire Brick Company of Canada
Waterous Engine Works Co.

FIRE FIGHTING APPARATUS
Waterous Engine Works Company

FLOUR
Campbell Flour Mills

FOREST ENGINEER
Lt.-Col. L. J. D. Marquis

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Eisendrath Glove Company

GRAPHITE
Turner Brothers Canada, Limited

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Can. Mathews Gravity Carrier Co.

HARNESS
Lamontagne Limited

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Cameron & Company
Cannon River Lumber Co.
Chicago Lumber & Coal Co.
Fassett Lumber Company
Fesserton Timber Company
Fraser Limited
Gillespie, James
Hoffman Bros., Company
Long Lumber Company
Moores, Jr., E. J.
Muir, Kirkpatrick & Sharpe
Murray & Gregory
Partington Pulp & Paper Co., Ed.
Shafer Company, Cyrus C.
Spencer, C. A.
Stearns Salt & Lumber Company
Summers, James R.
Terry & Gordon
Webster & Bro., James
White & Son, Chas. T.

HARDWOOD FLOORING
Long Lumber Company
Wilson Bros.

HEMLOCK
Anderson Lumber Company, C. G.
Bartram Bros.
Bourgouin, H.
Fesserton Timber Company
Graves, Bigwood & Company
Haeberle Lumber Company
Hart & McDonagh
Laferte, J. A.
Long Lumber Company
Muir, Kirkpatrick & Sharpe
McGibbon Lumber Company
Mason, Gordon & Company
Spears & Lauder
Spencer, C. A.
Terry & Gordon
The Long Lumber Company

HOSE
Dunlop Tire & Rubber Co.
Gutta Percha & Rubber Company
Turner Brothers Canada, Limited

HARDWOOD VENEER DOORS
Wilson Bros.

INTERIOR FINISH
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Canadian Western Lumber Company
Chicago Lumber & Coal Co.
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Muir, Kirkpatrick & Sharpe
Southern Lumber Company
Stout Lumber Company
Terry & Gordon
Valley Lumber Company
Wilson Bros.
Wisconsin & Arkansas Lumber Co.

KNIVES
Disston & Sons, Henry
Peter Hay Knife Company
Simonds Canada Saw Company
Smith Company, R. H.
Waterous Engine Works Company

LATH BUYERS
Cannon River Lumber Company.

LATH
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Austin & Nicholsin
Bartram Bros.
Beck Mfg. Company, C.
Chicago Lumber & Coal Co.
Christy-Moir Company
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Fesserton Timber Company
Fraser Limited
Fraser-Bryson Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Graves, Bigwood & Company
Harris Tie & Timber Company
Long Lumber Company
McGibbon Lumber Company
Miller Co. Ltd., W. H.
Muir, Kirkpatrick & Sharpe
Murray & Gregory
New Ontario Colonization Company
River Ouelle Pulp & Paper Co.
Southern Lumber Company
Stout Lumber Company
Spencer, C. A.
Terry & Gordon
Valley Lumber Company
Victoria Harbor Lumber Company
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LOCOMOTIVES
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Canadian Link-Belt Company

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National Steel Car Company

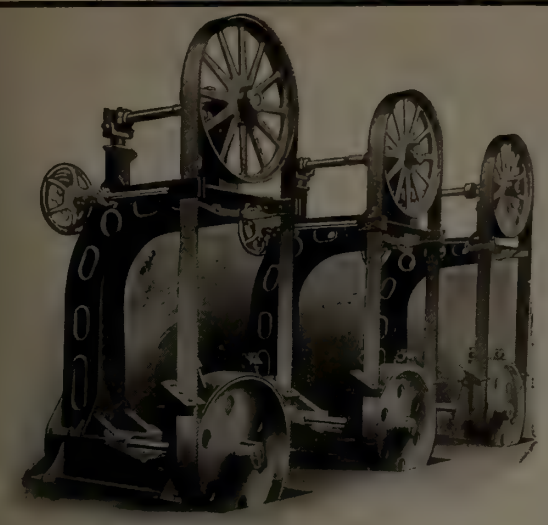
LOGGING CHAINS
Columbus Chain Company
Hingley & Sons, N.

LOGGING ENGINES
Dunbar Engine & Foundry Co.

LOGGING & MACHINERY EQUIPMENT
Hamilton Company, William
Ryther & Pringle Company
Waterous Engine Works Company

LUMBER
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Auger & Son Limited
Austin & Nicholson
Canadian Western Lumber Company
Chicago Lumber & Coal Co.
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Muir, Kirkpatrick & Sharpe

(Continued on page 66)



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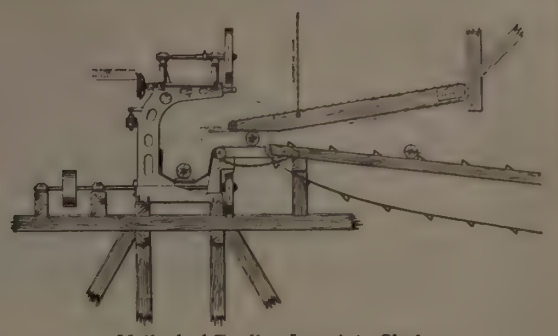
The Clark Band Saw Slasher for Cutting Pulpwood

Made for either 24" or 48" Wood

The Band Saw has 3/32" Kerf and Cuts SMOOTH.

Your saw has 3/8" to 1/2" Kerf and leaves end of wood torn and rough.

The Band Slasher takes only 1/3 as much power to drive as a Circular Saw Slasher.



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Let us give you drawings and estimates for one to fit your plant

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Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

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Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

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The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
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Harris Tie & Timber Company
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Hettler Lumber Co., Herman H.
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Donogh & Company, John
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Fesserton Timber Company
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Gordon & Company, George
Gillies Bros. Limited.
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Harris Tie & Timber Company
Hart & McDonagh
Hayden Westcott Lumber Company
Hettler Lumber Co.. Herman H.
Long Lumber Company
Mason, Gordon & Company
Moores, Jr., E. J.
Muir, Kirkpatrick & Sharpe
Oliver Lumber Co.
Partington Pulp & Paper Co., Ed.
Spencer, C. A.
Summers, James R.
Terry & Gordon
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Jeffrey Manufacturing Company

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Haeberle Lumber Company

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Disston & Sons, Henry
Hoe & Company, R.
Shurly-Dietrich Company
Simonds Canada Saw Company
Smith Company, R. H.

SAW SHARPENERS
Waterous Engine Works Company

SAW MILL MACHINERY
Clark Bros.
Dunbar Engine & Foundry Co.
Hamilton Company, William
Huther Bros., Saw Mfg. Company
Jeffrey Manufacturing Company.
Long Manufacturing Company, E.
McLennan Foundry & Mach. Works
Parry Sound Lumber Company
Payette & Company, P.
Waterous Engine Works Company
Yates Machine Co., P. B.

(Continued on page 68)

The Babbitt Metal that's at the Front in Efficiency and Economy

HARRIS HEAVY PRESSURE

"The Babbitt Metal Without a Fault," is guaranteed to give EXCELLENT SERVICE. It will not crack or squeeze out. It will run cool at any speed. It is copper coated and copper hardened. It is best for all general machinery bearings. Order a box from our nearest factory.

It is Made in Canada. What We Make We Guarantee.

We Manufacture All Grades of Babbitt Metals.

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EXPERIENCE : RESOURCES : PRECISION

Are You Interested in Timberlands

In South America?
British Columbia?
Perhaps in Texas?
Or in California?
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In Washington?
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Georgia,
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SOMEWHERE?

No matter where, if there is timber growing there, you can get sound information on just what you want from the great International Record Files of

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INTERNATIONAL TIMBERLAND FACTORS
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MAKERS ALSO OF MANILA ROPE FOR EVERY PURPOSE

Don't Blame the

FIRE BRICK

if it fails to give satisfaction. More likely than not you have been using the wrong kind for your particular purpose. A firebrick intended for use in a small hand-fired boiler may not give the same result if used under high pressure boiler with mechanical stoker.

So when sending us your enquiries be sure to specify for what purpose these brick are to be used.

You are sure then of a high quality brick, that is absolutely the best for your purpose.

We Manufacture the Following Well Known Brands

"Elkco," "Elk Steel," "St Marys," "Keystone" and "Rotex"

Catalogue is yours for the asking.

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HIGH GRADE FIRE BRICK and CLAY
Sun Life Bldg., Hamilton, Canada

New **RAILS** Relaying
12 to 80 pounds per yard.

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Miller Co. Ltd., W. H.
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Arkansas Lumber Company
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Edgar Lumber Company
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Fordyce Lumber Company
Gates Lumber Company
Hobart & Company
Long Lumber Company
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Waterous Engine Works Company

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Signal Systems Co.

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Smith Company, S. Morgan

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Long Manufacturing Company, E.
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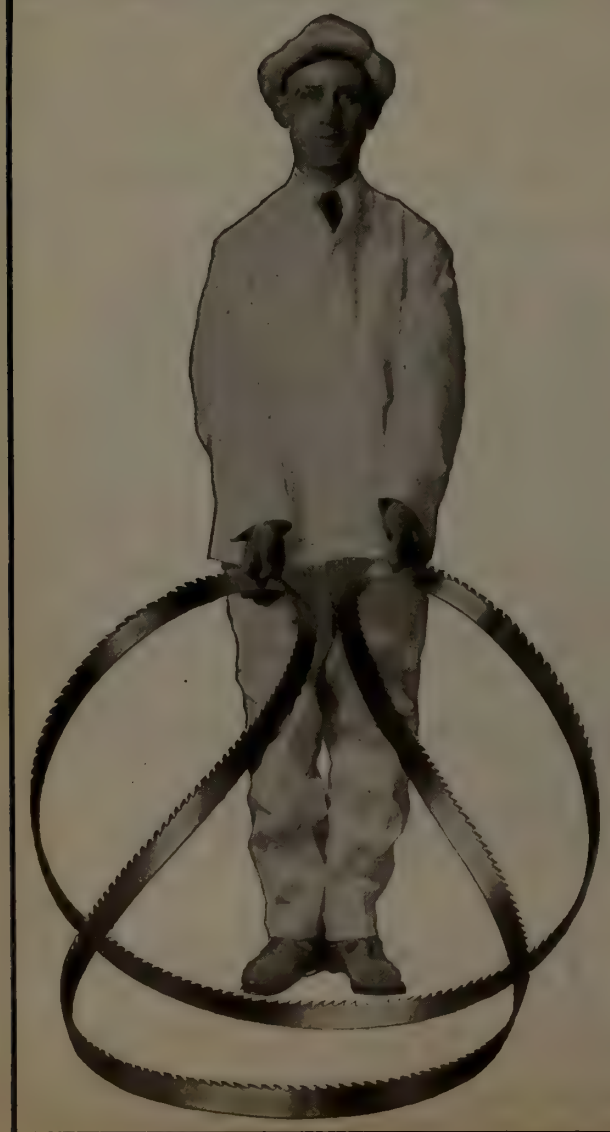
Becker & Co.
Miller Co., Ltd., W. H.
New Ontario Colonization Co.
River Ouelle Pulp & Lumber Co.



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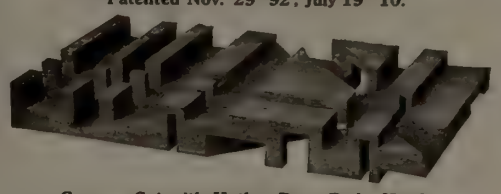

Grooves Cut with Huther Bros. Dado Heads

Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

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A locomotive to justify its cost must start the required load and keep it going.

The right amount of the right material must be provided in the right place.

Each and every part must be sure to fit not only the locomotive for which it was made, but every other locomotive of the same size and design. Spare parts must be instantly available, made so well as to go into place without a machine shop.

We have a number of standard sizes of locomotives in stock and can make immediate delivery.

MONTREAL LOCOMOTIVE WORKS, LIMITED,

DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

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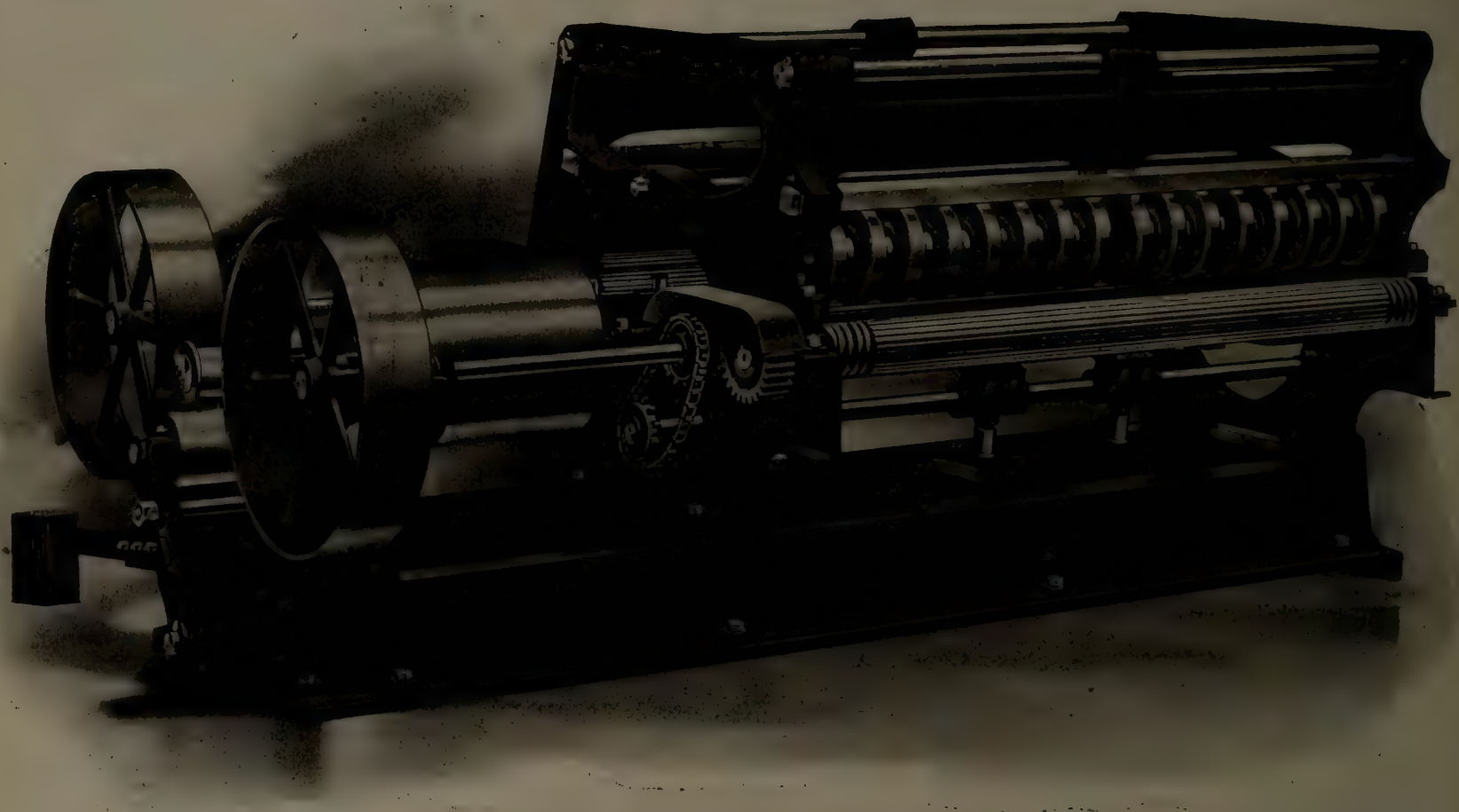
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

Heavy Duty Edger



These sturdy, heavy duty edgers are built in sizes of 48 inch, 54 inch, 60 inch, 66 inch, 72 inch and 84 inch.

A feature in the construction of these machines is the casting of the base in one piece. This makes the machine self-contained and always in alignment.

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1.—It is built in 8, 9 and 10 ft. sizes—one for every kind of work.

2.—The spring-cushioned, all knife-edged tension device is the most sensitive in use.

3.—Upper and lower guides swing about the exact centre of the saw blade.

4.—The upper guide is raised and lowered by steam, an accurate, easy and swift adjustment unequalled by any other.

5.—Wheel raising device and tilting device are roller bearing.

6.—All operating mechanism is enclosed within the columns—sawdust and slivers cannot reach it.

7.—Massive design of bed and columns precludes vibration during cutting. This mill is absolutely steady doing the heaviest work.

8.—Mandrel bearings, both upper and lower, are easily adjustable and align rapidly and accurately.

9.—Every part of the mill is designed to make millwrighting easy and adjustments and inspections can be made without difficulty.

10.—Waterous Band Mills are designed and built in a plant that has specialized in the manufacture of Canadian sawmill machinery for more than seventy years.

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Ask us to send you a list of users. There is one in your neighborhood.

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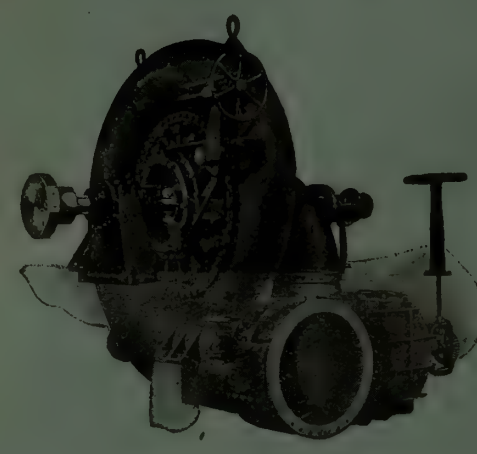
for driving the

Paper Mill and Pulp Grinder



This type of equipment specially designed for high head developments.

Our particular claim for these turbines is service, the kind of service that responds to the demand

Promptly and Efficiently

Write for Bulletin F

S. Morgan Smith Co., York, Pa.

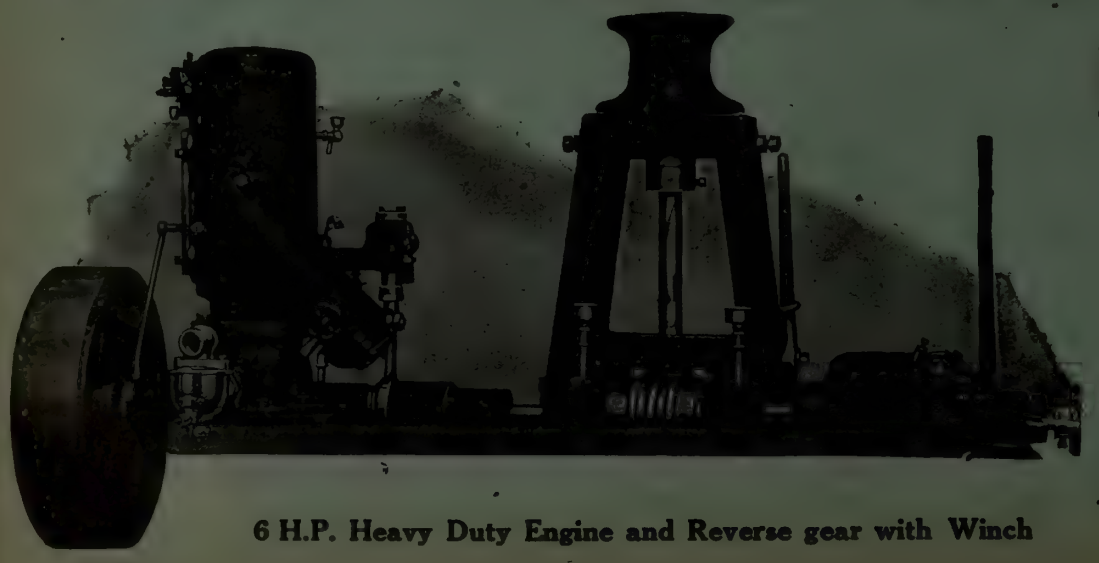
H. B. VanEvery—CANADIAN REPRESENTATIVE
405 Power Bldg. - - - Montreal, Can.

Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.

Limited

General Mill Supplies MONTREAL



6 H.P. Heavy Duty Engine and Reverse gear with Winch

River Driving Costs

will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

Adams Launch & Engine Co.

Penetang, Ont.

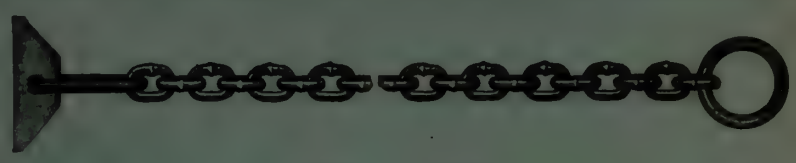
Vol. 36 Toronto, August 1, 1916 No. 15

Canada Lumberman & Wood Worker

EVERY dollar you spend for Dart unions to make the connections on your piping will return you two for one in saving and service.

That's why Dart unions are guaranteed two for one. Your jobber sells them.

Dart Union Co., Limited, Toronto



Made in all styles

Electric-Welded Boom Chain

We also specialize

Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

Canadian Blowers and Exhausters

For forced draft with boilers, for ventilating, for shavings exhaust systems, or for hollow blast grates.

Made strong and substantial, with ring oiling bearings.

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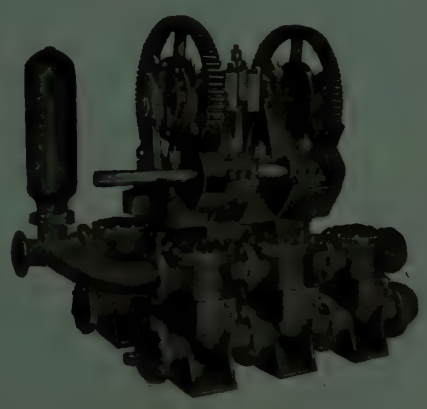
ASBESTOS

We manufacture practically every article that can be made of Asbestos—including

Asbestos { Packings, Boiler Gaskets, Pipe and Boiler Coverings

Turner Brothers Canada, Limited

MONTREAL



Better Pumps

At Reasonable Cost.

Write to

The Smart - Turner Machine Co., Limited

HAMILTON, CANADA

Keep Tab On Your Stock

The Morrison Lumber Measuring Register can be used in the saw mill, planing mill, woodworking plant and retail lumber yard. It can be quickly attached to any machine and is guaranteed to accurately measure every stick as it is fed under the wheel of the register. It saves you money, time and labor.

Write for detailed information.

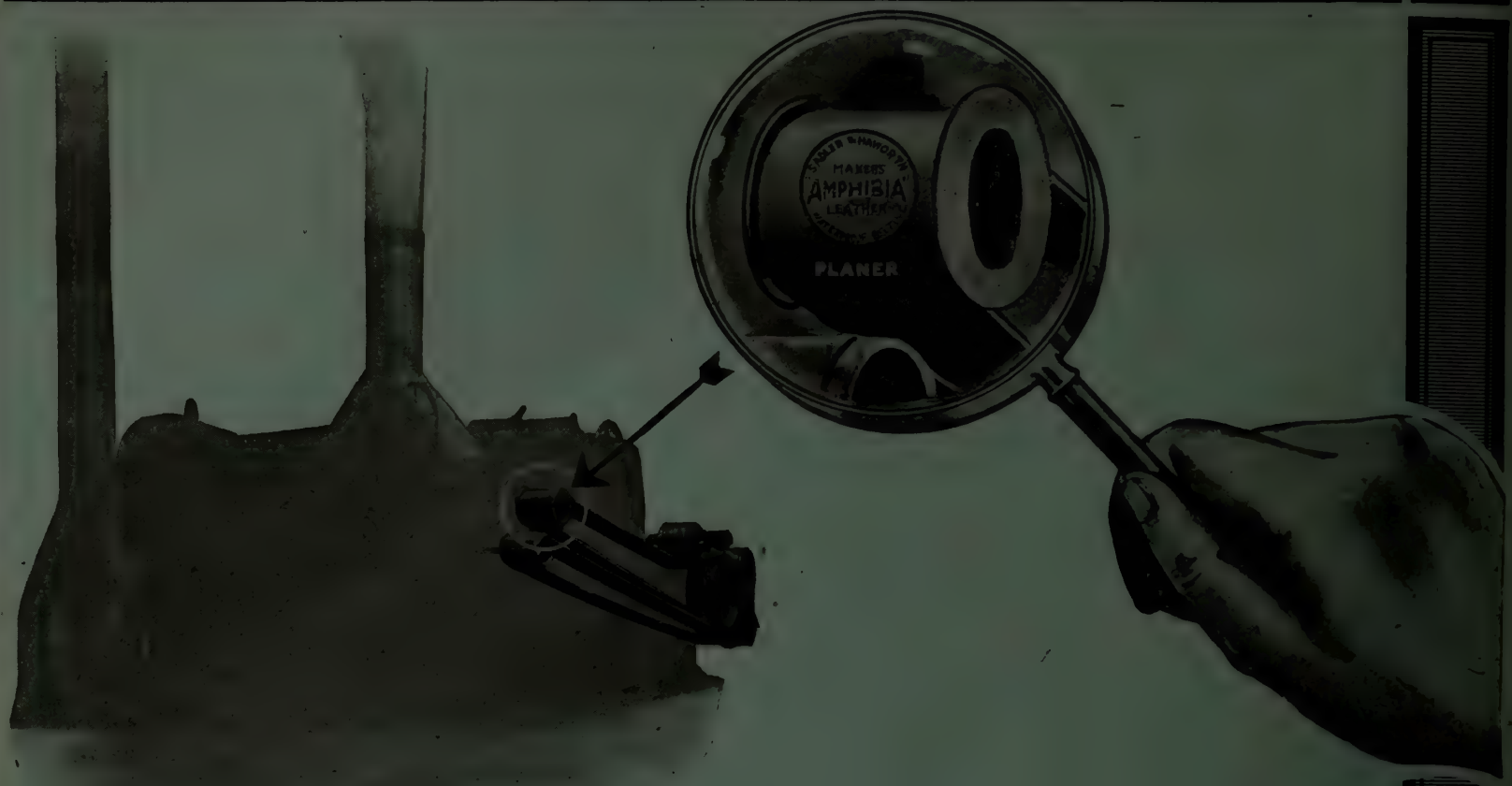
The James Morrison Brass Mfg. Co. Limited

93-97 Adelaide St. W., Toronto

J. M. T. Steam Specialties

We make a high-grade line including Reducing Pressure Valves, Pop Safety Valves, Injectors, Ejectors, etc., etc.

Alphabetical Index of Advertisers, Page 62 Classified Directory to Advertisements, Page 64



"AMPHIBIA"

BELTING

For Difficult Runs

The supreme test—the acid test of belting is on heavy duty machines, over high-speed small pulleys. AMPHIBIA Belting on these runs, as shown above, makes you forget belting troubles, because no trouble develops. The wear is there under all conditions.

Prove it. Try a sample of AMPHIBIA Planer and see for yourself.

Sadler & Haworth

Tanners and Manufacturers *Established 1876*

FOR 40 YEARS TANNERS AND MANUFACTURERS OF THE BEST LEATHER BELTS

MONTREAL, 511 William Street

TORONTO 38 Wellington St. E.
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"Leather like gold has no substitute."

Shell-Box Stock

WE are now running on SPRUCE and JACK PINE and are prepared to book orders for your requirements in 1 in., 5/4, and 4 x 5— Our Jack Pine is being used with good results by several of the largest shell-box manufacturers.

LET US SHIP YOU A SAMPLE CAR

Bartram Brothers

Limited

White Pine, Spruce, Norway and Jack Pine

Ottawa, Canada

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This Week's Specials

Lot No. 1

250,000 2 x 4 and up, 6/16 Mill Cull Spruce
80,000 1 x 4 and up, 6/16 Cull Spruce (crating)
50,000 1¼ x 5 10/16 Mill Run Spruce

Lot No. 2

1 Car 4 x 4 and up, 6/16 W. P. Mill Cull

Lot No. 3

17,000 5/8 x 4 6/16 Mill Run Spruce
40,000 Specials N. B. Shingles

The above is dry stock and we will quote attractive price for quick shipment.

BRITISH COLUMBIA PRODUCTS
Timbers, Flooring, Ceiling and Trim. T. & G. Quality Shingles

ONTARIO PRODUCTS
White Pine, Spruce and Hemlock

SEND US YOUR INQUIRIES

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Terry & Gordon
Wholesale Lumber Merchants

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Toronto

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

HEMLOCK

1915 CUT

300,000 ft. 2 x 4	No. 2	50,000 ft. 2 x 6	—14.
300,000 ft. 2 x 6 and up	No. 2	25,000 ft. 2 x 8	—14.
150,000 ft. 1 x 4 and up	No. 1 Sidings	2,000 ft. 2 x 10	— 10.
40,000 ft. 1 x 4	No. 1	30,000 ft. 2 x 10	— 12.
200,000 ft. 2 x 4 — 14	No. 1	100,000 ft. 2 x 10	— 14.
40,000 ft. 2 x 6 — 10	No. 1	90,000 ft. 2 x 10	— 16.
50,000 ft. 2 x 6 — 12	No. 1	1,000 ft. 2 x 10	— 20.

WE CAN SUPPLY THE SIZES WE ARE OUT OF IN 1916 CUT.

DRY SPRUCE

48,000 ft. 1 x 4 and 5 No. 1	25,000 ft. 2 x 4 No. 1.
2,000 ft. 1 x 7, 9 and 10 No. 1	1,500 ft. 2 x 10 No. 1.

The Long Lumber Company

HAMILTON, ONT.

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 8-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

HIGH GRADE LUMBER

TO THE TRADE

We are THE SOLE EASTERN REPRESENTATIVES of all the large mills in British Columbia producing the SOFT BRITISH COLUMBIA WHITE PINE.

THIS STOCK IS SUITABLE FOR ANY PURPOSE FOR WHICH PINE CAN BE USED, such as Pattern, Tank, Sash and Door, Flooring, Ceiling, V Match, Bevel Siding, and All trim.

THIS STOCK IS FREE FROM SHAKE

TO THE SHELL BOX MANUFACTURERS

We are shipping large quantities of B. C. Soft Pine, Kiln Dried, 1 x 10 x 10/16, dressed full 7/8 in. It will pay you to phone or write for prices. We guarantee quality and prompt shipments.

WE SPECIALIZE IN ALL BRITISH COLUMBIA PRODUCTS. ALSO A FULL LINE OF ONTARIO STOCKS.

LET US QUOTE YOU

Western Office
1007 Dominion Bldg.,
VANCOUVER, B. C.
GEO. R. POTTER,
Manager

MUIR, KIRKPATRICK & SHARPE
WHITE and NORWAY PINE, HEMLOCK, SPRUCE, JACK PINE

Eastern Office
1325-6-7-8 Traders Bank Building
TORONTO, CAN.

Murray & Gregory, Limited

Head Office: St. John, N. B. Quebec Office: St. Camille, B. Co., Que.

WE will now book orders for our new cut of SPRUCE and PINE from our Quebec mills. If you want some very nice stock for early fall delivery it will pay you to communicate with us promptly.

Our

Spruce and Pine Lumber, Laths and Pulpwood cannot be beaten for Quality and Manufacture

Large Mills, Woodworking Factories and Glass Works at ST. JOHN, N. B.
Also Mills at St. Camille and Lac Frontier, Que.

Address all enquiries to our Head Office, ST. JOHN, N. B.

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QUICK SHIPMENTS

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FRASER MILLS, B.C.

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Watson & Todd Limited
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DRY 1½" NORWAY

1915 CUT 1½" SPRUCE

In Good Shipping Condition
Send us your enquiries

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Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

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THE McGIBBON LUMBER CO.
OF PENETANGUISHENE
Manufacturers of and Dealers in
Lumber, Lath, Shingles, Etc.
Hemlock Billstuff a Specialty of which we have the Best Assortment on Georgian Bay.
Don't wait to write. Phone us your requirements.
All stock sized or matched if required.
Our Yards are Unequalled for Drying Lumber

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Red Pine
Spruce
Lumber and Lath

California White Pine
California Sugar Pine
and Arizona Soft Pine
Best Stock for Factory and Pattern Lumber
Ask **LOUIS WUICHET**
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Manufacturers of
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Lumber Lath Pulpwood
Head Office and Mills at:
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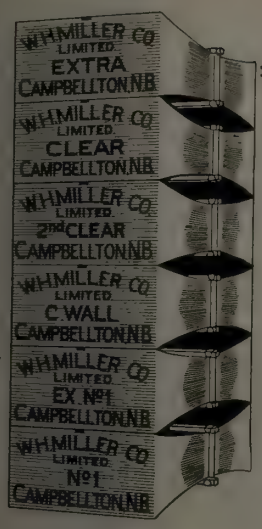
On I. C. Ry. 75 Miles East of Quebec City
Also Mills at:
Crown Lake, Powerville Riv. Manie
On Nat. Transcontinental Ry.

Let us quote you on your requirements for:

Spruce and Pine Lumber

We manufacture and export all kinds of it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New Brunswick White Cedar Shingles

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We also manufacture

Laths and Ties
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PROMPT—RELIABLE—CAREFULLY HANDLED

W. H. Miller Co., Limited

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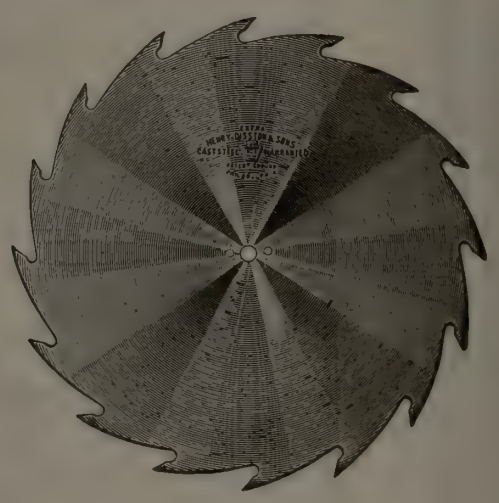
have been made from steel made by us in our own plant since 1855. More than sixty years experience in the manufacture of saw-steel coupled with a study of operating requirements extending over three quarters of a century have resulted in saws of highest excellence.

In tension—, set—and edge-holding qualities Disston Saws are as near perfection as the world's foremost saw-makers can make them.



Where quality means economy, the proper test is service.

DISSTON CIRCULAR SAWS
DISSTON BAND SAWS
DISSTON CHISEL-TOOTH EDGERS

Henry Disston & Sons, Inc.

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QUALITY HARDWOOD

Birch
Beech
Maple

If you are interested in Hardwoods, you will be interested in us.

We are manufacturing high quality Hardwood Lumber, sawing and grading according to National Hardwood Association Rules.

The Logs are cut from our own soil-right Lands, and particular attention given to quality.

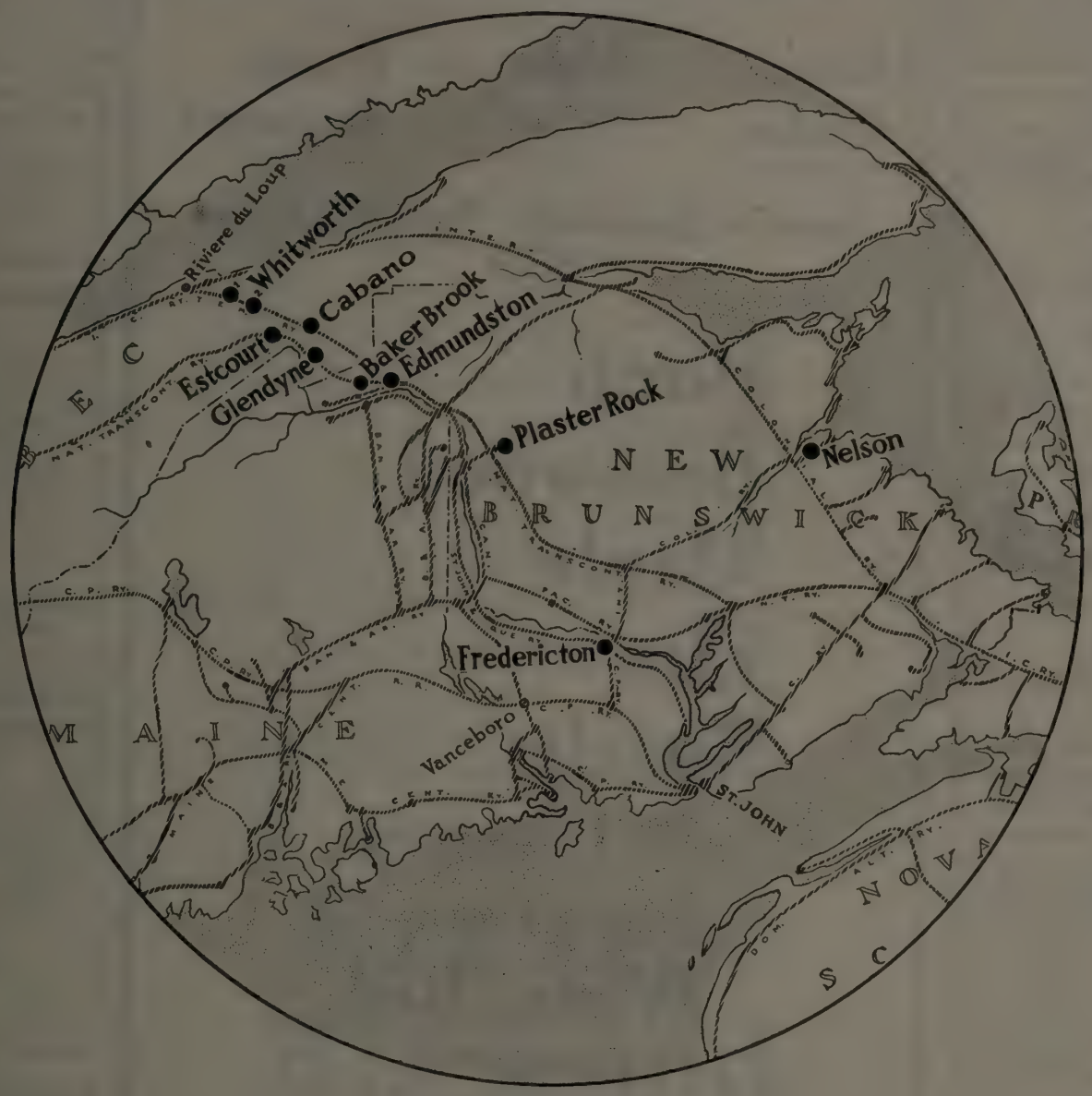
Our Mills are located on Canada Eastern Branch and Transcontinental Branch of the Canadian Government Railway, and in the heart of the best forests in New Brunswick.

Our Head Office in St. John will answer all enquiries.

Edward Partington Pulp & Paper Co.

ST. JOHN **Limited** **N. B.**

Ten Band Mills to Serve You



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Fredericton, N.B.	Railway connection		C. P. R.
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Baker Brook, N.B.	"	"	Temiscouata Ry. and N.T.R.
Glendyne, Que.	"	"	N. T. R.
Escourt, Que.	"	"	N. T. R.
Cabano, Que.	"	"	Temiscouata Ry.
Whitworth, Que. (No. 1, No. 2)	"	"	Temiscouata Ry.

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Good Grades — Right Prices — Prompt Shipments

Canadian Hardwood. National Grading Rules

Birch
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All Thicknesses

Also full line in

White, Red

and

Jack Pine

All grades and sizes.

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Manufacturers and Strictly Wholesale Dealers in Lumber

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Toronto

WE Buy, Sell and deal in all kinds of Lumber and Timber in Canada and United States: Spruce, White Pine, White and Basswood, Ash, Cedar, Douglas Fir, Beech, Birch, Walnut, Cherry, Chestnut, Cottonwood, Hemlock, Maple, Norway Pine, Short and Long Leaf Yellow Pine, Oak, Redwood, Birch, Maple and Oak Floorings, Pulpwood Ties, and Cedar Poles.

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HAEBERLE LUMBER CO.

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White Pine, Norway, Yellow Pine, Hemlock Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties,

Yellow Pine Timber a Specialty.

Interior Trim Mill Work

NIAGARA FALLS, N.Y.

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Eastern and Southern Lumber

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Advise us of your Market Prices and Stocks

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SPRUCE BIRCH HEMLOCK

Merchantable 100,000′		1″ Spruce
"	100,000′	2 x 4 Spruce
"	300,000′	2 x 5 and up to 8″ Spruce
100,000′		1″ Birch
300,000′		3″ Birch
100,000′		1″ Hemlock

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Experience—
Technical Training—
Thoroughness—

allow us to render clients correct reliable and economical ervice in estimating timber, executing topographic and boundary surveys and in forest planting. We have crews out on 400,000 acres now.

Let us handle your work also.

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FOREST ENGINEER
Timber Estimates and Valuations.
Topographical and Logging Maps.
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TRANSACTIONS ON TIMBER LANDS
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A. D. McINNIS
Is prepared to make reports, and estimates on all classes and kinds of Timber, together with Maps, and cost of operating, also sell or buy for you.
25 years practical experience in woods operations and cruising.
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GLASGOW
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WOOD BROKERS and MEASURERS
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We are Buyers of
Hardwood Lumber
HANDLES
STAVES HOOPS
HEADINGS
JAMES WEBSTER & BRO.
Limited
Bottle, Liverpool, England
London Office
Dashwood House 9 New Broad St. E. C.

"Well Bought is Half Sold"

We offer for prompt shipment, the following attractive list of Hardwoods:

28 M′ 4/4 1st and 2nd Birch.
7 M′ 6/4 1st and 2nd Birch.
9 M′ 8/4 1st and 2nd Birch.
16 M′ 10/4 1st and 2nd Birch.
19 M′ 12/4 1st and 2nd Birch.
1 car 6/4 No. 1 Common and Better Hard Maple.
1 car 3″ No. 1 Com. and Bet. Hard Maple, winter cut.
2 cars 1″ No. 2 Common and Better Black Ash.
2 cars 1″ No. 2 Common and Better Basswood.
50 M′ 1″ No. 3 Common Hard Maple.
75 M′ 1″ No. 3 Common Birch.
50 M′ 3″ Birch Hearts.

Can ship promptly. Please let us quote you.

Graves, Bigwood & Co.

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Pine and Hemlock Lumber

1026-32 Traders Bank Bldg., **Toronto, Ont.**

Mills: Byng Inlet, Ont.

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NEW and USED
WOOD TOOLS
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No. 5 New Britain, chain.
M 190 Cowan hollow chisel.
Galt upright, compound table.
Fay upright, graduated stroke.
Smart foot-power.

Sanders
24″ Fay double drum.
12″ C.M.C. disk and drum.
18″ Crescent disk.
8″ belt sanders (wood frames).

Moulders
13″ Clark-Demill four-side.
12″ Cowan four side.
10″ Clark-Demill four side.
10″ Houston four side.
6″ Cowan four side.
6″ Dundas sash sticker.

Wood Planers
36″ American double surfacer.
30″ Whitney pattern single surfacer
26″ revolving bed, double surfacers.
24″ Major Harper planer and matcher
24″ revolving bed, single surfacers.
24″ single surfacers, various makes.
20″ Dundas pony planer.
18″ Little Giant planer and matcher.
16″ Galt jointer.

Saw Tables
Preston variable power feed.
Ballantine variable power feed.
M138 Cowan power feed.
No. 3 Crescent universal.
No. 2 Crescent combination.
Ideal variety.
12′ Defiance automatic double cut-off.
Champion combination, wood top.
MacGregor Gourlay power feed cut-off.
6½′ Crescent iron frame swing.
6½′ Williams heavy wood frame swing.

Band Saws
42″ Fay & Egan power feed.
38″ Atlantic, tilting frame.
34″ Major Harper pedestal.
30″ Ideal pedestal.
30″ Jackson Cochrane bracket.

Clothespin Machinery
Humphrey No. 8 giant slab re-saw.
Humphrey gang slitter.
Humphrey cylinder cutting-off machine.
Humphrey automatic lathes (6).
Humphrey double slotters (4).

Miscellaneous
Fay & Egan 12-spindle dovetailer.
Improved Tyrrell dovetailer.
Oelschlager handle and rod machine.
Bench dowel machines, hand feed.
No. 235 Wysong & Miles post boring machine.
MacGregor Gourlay 2-spindle shaper.
Elliott single spindle shaper.
No. 51 Crescent universal woodworker.
40″ MacGregor Gourlay band resaw.
Rogers vertical resaw.
New Britain drawer lock machine.
M137 Cowan sash clamp.
Galt blind-slat resaw.
Galt blind-stile borer and mortiser.
Egan, sash and door tenoner.
16″ Ideal wood lathes (3).
No. 6 Lion universal wood trimmer.
6-Nail box nailer, Meyers patent.
20″ American wood scraper.
4-head rounding machines.
24″ wood frame equalizer.
M63 Cowan spindle carver.
16 Cowan veneer press screws.
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All sizes and lengths up to 20 feet

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100 M. feet 1 x 4 in. and up W. P. Wormy Culls dry, about 50 per cent. 10 and 12 in.
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ALSO SHINGLES AND LATH

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STAINED and VARNISHED FINISHES

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Arkansas Soft Pine is properly suitable for woodwork in fine residences, apartments, churches and offices. It is being **NATIONALLY ADVERTISED.** It is identified by a registered trade mark. Its manufacturers **STAND BEHIND IT.**

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All stock bearing the Arkansas Soft Pine Trade Mark is manufactured and sold exclusively by the following companies:

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Edgar Lumber Company, Wesson, Ark.
Freeman-Smith Lumber Company, Millville, Ark.
Fordyce Lumber Company, Fordyce, Ark.
Gates Lumber Company, Wilmar, Ark.
Southern Lumber Company, Warren, Ark.
Stout Lumber Company, Thornton, Ark.
Valley Lumber Company, Reader, Ark.
Wisconsin & Arkansas Lumber Company, Malvern, Ark
Arkansas Land & Lumber Company, Malvern, Ark.
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are saws that cut smoothly, evenly and quickly;
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Direct from Mills on C. P. R.

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Clear Fir Finish, rough and dressed.
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B. C. Red Cedar Bevel Siding.
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The
Shawnigan Lake Lumber Co., Ltd.
Head Office: VICTORIA, B.C. Mills: SHAWNIGAN LAKE, B.C.

Manufacturers of all grades and sizes of

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OUR SPECIALTY IS
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Our grade is posstively right, and prices will please

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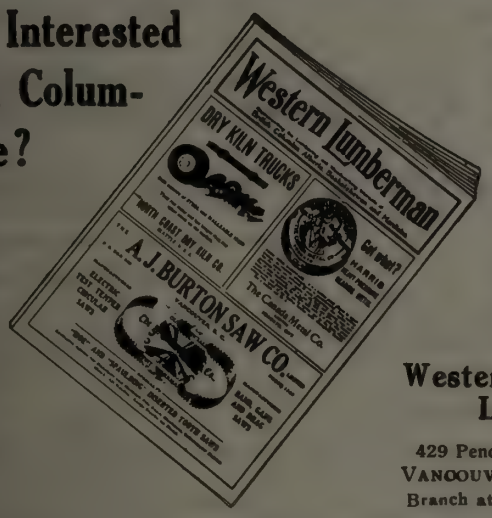
The immensity of the Lumber Industry will within a few years make this Province the most important in the whole Dominion.



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Southern Yellow Pine
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All Grades in White Pine
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250,000,000 feet constantly in stock insures filling any reasonable order promptly.
Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

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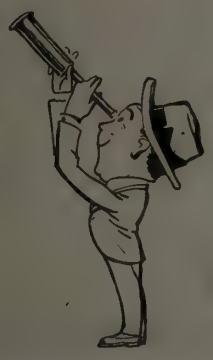

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Cut To Your Specifications Will Enable You To Win

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Horseshoe logs are from the very best timber that ever grew in a forest. We also make Boxes, Box Shooks, Wooden Pails and Tubs, Pine Lath, and Cedar Posts. Our Planing Mill facilities are unsurpassed.

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Pure wool, Waterproof Mackinaw Coats, Pants and Shirts,
the kind you have been looking for.

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The best duck that money can buy.
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ALL WELL MANUFACTURED AND AIR DRIED

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LUMBER and TIMBER

40 Million Feet Dry Stock in pile containing a complete assortment for rush shipment.

Grades— GUARANTEED —Quality

Hardwood Specialists

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1/30″ SLICE CUT VENEER

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QUARTERED WHITE OAK

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Prompt shipment of Fir timbers in all sizes and up to 80 feet in length

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Dry Stock All Thicknesses, 1" to 4", Straight or Mixed Cars

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Our Roof Trimmings Will Help You

Our Ridge Cap and Valley will make you quick, neat profits and will help you hold custom by satisfying your trade. You will find them an all-round profitable side line. Write for booklet C. L. and Price List.

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Manufacturers of

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Smith Car Wheels Endure

Proper distribution of metal in the design of the wheels ensures uniform strength.

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Let us tell you the story of car wheel casting at the Smith Foundry.

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Box Board Matchers,

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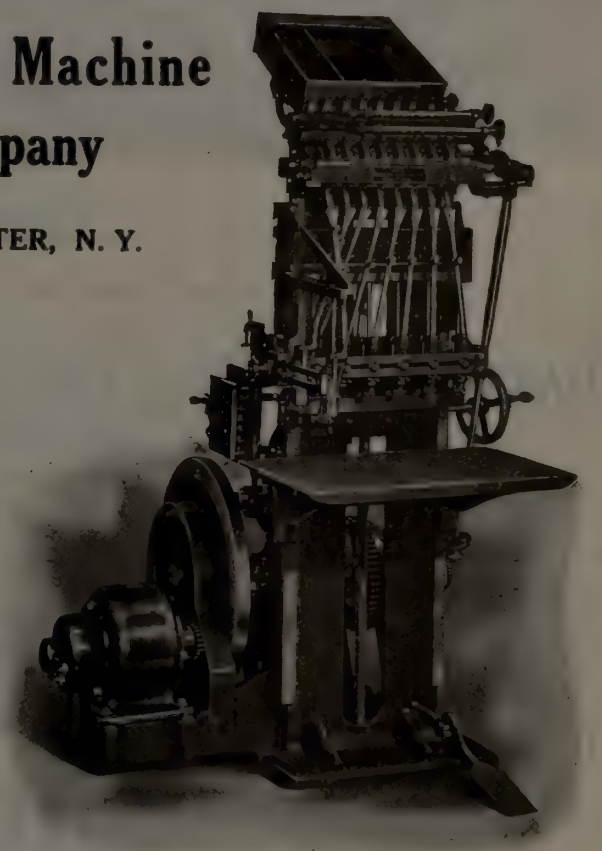

Every manufacturer of boxes; every manufacturer who has nails to drive in any article, or packages of any kind to manufacture, should write the **Morgan Machine Company** for latest developments in machinery for the Box Industry.

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We offer for Immediate Shipment

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1" and 1½" Dry Basswood

DRY BIRCH STOCK

We offer in Birch End Stock—1 x 8½" 1 x 9" and wider
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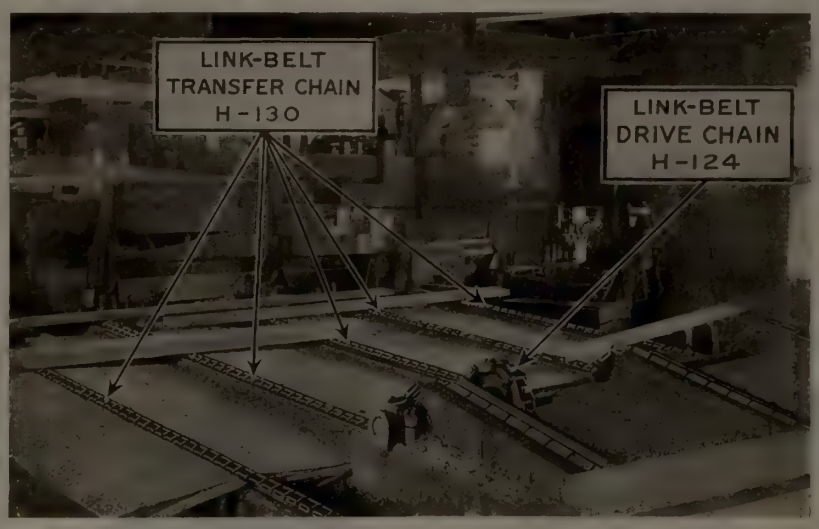
for Conveying, Elevating and Power Transmission

THIS TRADE MARK ON EVERY LINK — IS YOUR GUARANTEE OF RELIABILITY



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Cheaper and Better than Molasses

Barrels, about 700 lbs.	Pound	.4
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2 Gallon Wooden Pails, 25 lbs. each,	Per Pail	$1.50
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Prices subject to change without notice.

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to all Steam Railroad Stations in Quebec and in Ontario East or South of Sault Ste. Marie, Sudbury, North Bay and Mattawa inclusive, to all Lake Ports during season of open navigation.

Any Wholesaler will Supply You

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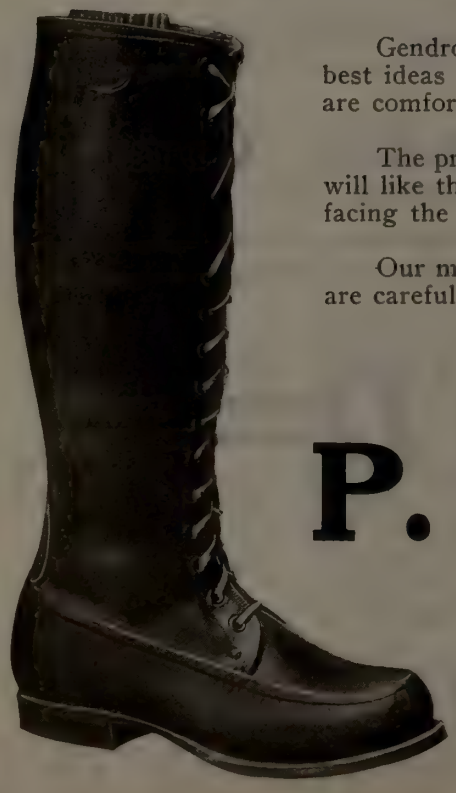
GENDRON

SHOE PACKS

THE P.T. GENDRON SHOE PACK CO. MIDLAND GENDRON MIDLAND ONT. CAN.

Made in Canada



Gendron Genuine Draw String Shoe Packs embody the latest and best ideas of manufacture. They wear, they keep the feet dry, they are comfortable under all conditions. These are the main points.

The price is reasonable. The value is away above the price. You will like these shoe packs if you try them. Hundreds of lumbermen facing the same conditions as you, are enthusiastic about them.

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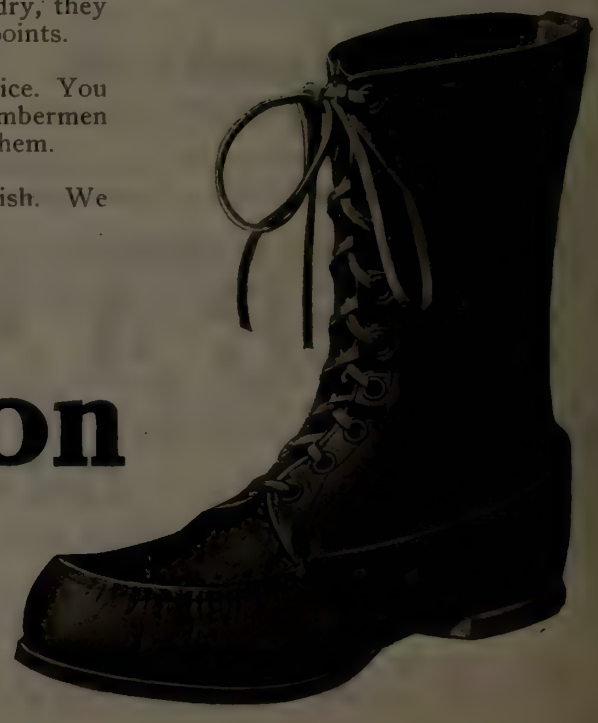
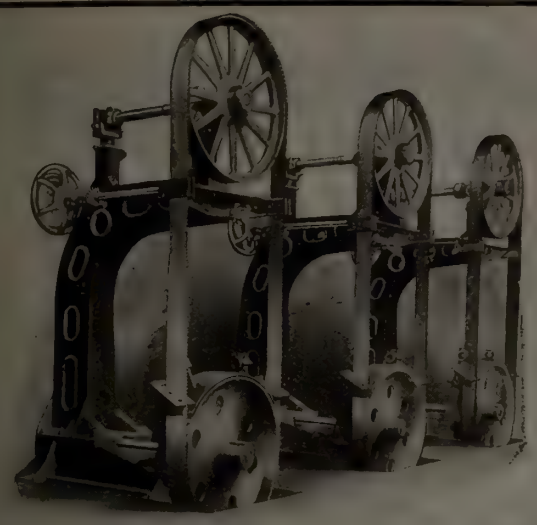
Send for our catalogue and prices.



P. T. Gendron Shoe Pack Co.

Limited

MIDLAND, ONT.



48" Slasher

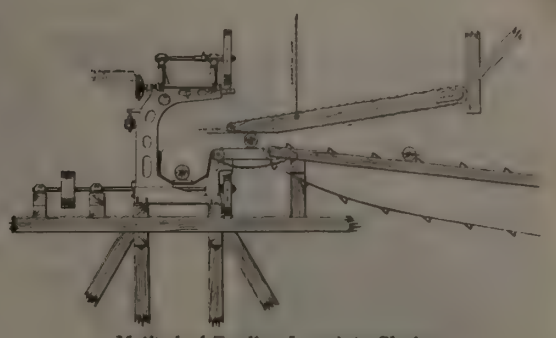
The Clark Band Saw Slasher for Cutting Pulpwood

Made for either 24" or 48" Wood

The Band Saw has 3/32" Kerf and Cuts SMOOTH.

Your saw has 3/8" to 1/2" Kerf and leaves end of wood torn and rough.

The Band Slasher takes only 1/3 as much power to drive as a Circular Saw Slasher.



Method of Feeding Logs into Slasher

Let us give you drawings and estimates for one to fit your plant

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Made in Canada

Our fifty years' experience in the design and manufacture of logging locomotives is at your disposal. Many of the largest logging operators in Canada are using our "Canadian Made" locomotives.

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The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

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Send for Catalogue and Price List.

Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants.

The Thomas Pink Company, Limited

Manufacturers of Lumber Tools

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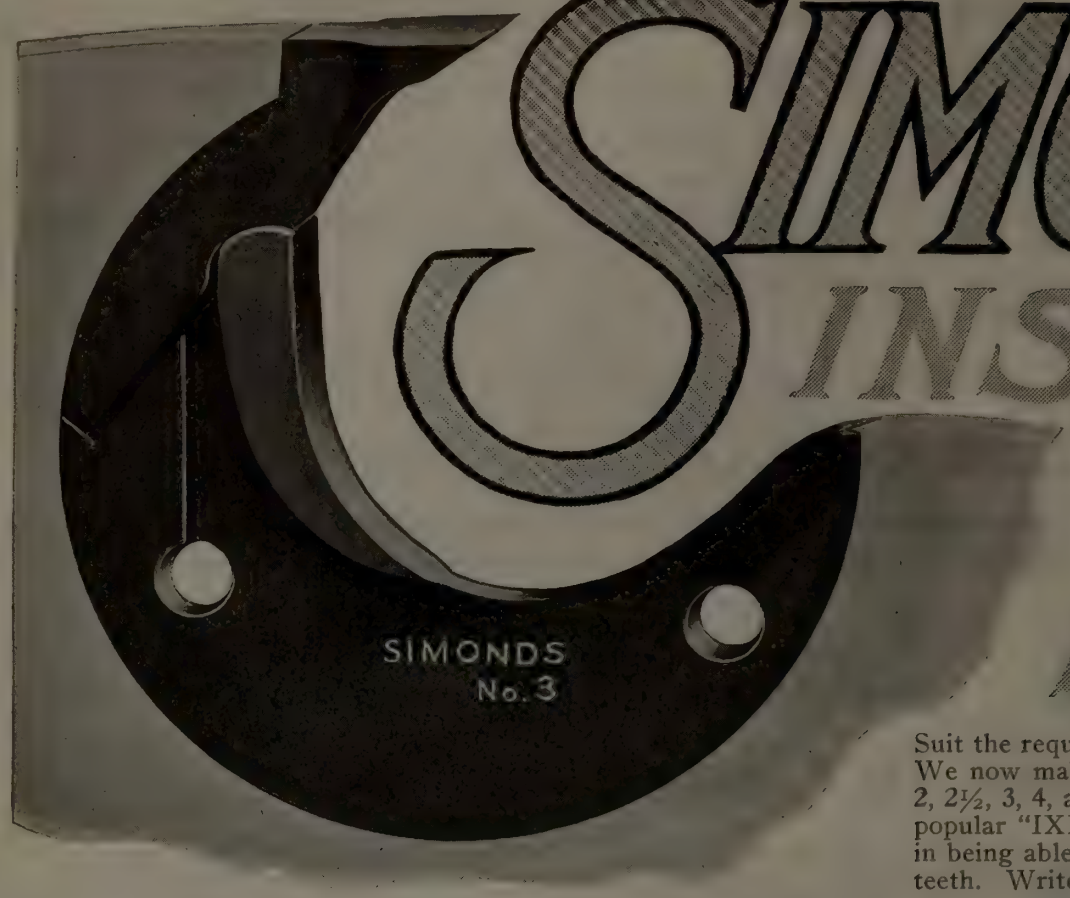
MADE IN CANADA

It's a Pink anyway you take it, and it's the best Peavey made



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Suit the requirements of your mill as to style or size of tooth. We now make the famous B, F, D, and K teeth, also styles 2, 2½, 3, 4, and 5, and are the exclusive manufacturers of the popular "IXL" Saws. The millman has a distinct advantage in being able to secure Simonds Saw plates with any of these teeth. Write us for prices.

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Camp Provisions

LET us supply them. We can give you special prices on your requirements for the present and coming season—and you will find our products give the highest satisfaction. If you haven't time to write, send a telegram (at our expense) and we'll gladly send you quotations. Two excellent lines for camp use just now are:

BARRELED PORK

—and—

LONG CLEAR BACON

Also let us quote you on

Pure Lard -- "Peerless" Shortening -- Pickles

THE WILLIAM DAVIES COMPANY LIMITED

MONTREAL TORONTO WINNIPEG

Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

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HUGH C. MacLEAN, Winnipeg, President.
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Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster General for Canada, for transmission as second class matter.

Entered as second class matter July 18th, 1914, at the Postoffice at Buffalo, N. Y., under the Act of Congress of March 3, 1879.

Vol. 36 Toronto, August 1, 1916 No. 15

Great Britain May Put a Duty on Wood Goods

One of the most important developments in connection with the public in Great Britain, as a direct result of the war, is the remarkable alteration that has taken place in connection with the attitude of the public upon tariff matters. We are accustomed to thinking of Great Britain entirely as a free trade country and to feel that the exponents of the tariff theory in regard to imports were of minor importance so far as results likely to be achieved were concerned. The war has entirely changed public opinion in Great Britain upon this all-important subject, and now practically everyone, including the old free trade party, is expressing opinions to the effect that after the war Great Britain will have to throw aside its free trade policy to a very great extent.

The effect that this is likely to have upon the lumber trade is of much importance, and from present indications it appears that the export trade in lumber and other wood goods from Canada to Great Britain is likely to be affected more definitely and advantageously than any other branch of the trade. We are impelled to express these views by an exceptionally interesting article that was published in the Timber Trades Journal, of London, England, on July 1st, and which, on account of its interest to the export trade in Canada, we reproduce herewith.

In the palmy days of party politics before the war shook up the nation and aroused us to a greater sense of national feeling, it was scarcely possible, this article says, to discuss freely and impartially any question of social or commercial reform. The party spirit had taken such a hold upon the nation that an idea or a reform adopted by one side was almost certain to incur the opposition of the other; and so it came to pass that matters, even of national moment, were considered less from the point of view of the nation's welfare than from that of party advantage. But the country is now assailed by a foe whose power was never realized, and all Englishmen have, to a great extent, forgotten the old quarrels, and are endeavoring to be ready after the war to make a start on an altogether different basis.

Probably no question aroused a more bitter feeling than that of Free Trade v. Tariff Reform. Learned professors and practical business men argued the matter for years, but so strong was the party feeling that, previous to the war, it was the rarest of occurrences to find any notable change of view from the one side to the other. Few, however, are now prepared to endorse their former views in their entirety; some of the leading free trade exponents have declared that the old conditions are no longer possible; and, on the other side, Mr. Austen Chamberlain, among others, has stated that he cannot ratify all he said on this question in past days. The recent Economic Conference at Paris shows also what a vast change has taken place. Great Britain was represented at this conference by leading lights in two formerly hostile camps, and yet unanimous recommendations were made, for the war has cut right across our old party lines, and an alteration in our fiscal policy is recognized everywhere as absolutely essential to our future peaceful development. And even those who still adhere to the belief that free trade is theoretically our best policy recognize that we have now allies to whom we are bound by the strong tie of a common enemy, that these allies have never held the views which have largely obtained in this country, and that it is therefore our duty to give way to the majority, and to render our assistance in the economic measures which it is thought will be necessary in the near future.

In war prepare for peace is becoming as great an article of faith in this country as its antithesis has been in Germany; and, as Mr. Hughes said in one of his speeches, it is necessary to act at once, or at any rate to have the ground thoroughly prepared for immediate action at any moment.

In the timber trade the question will arise whether any import duty is to be put upon wood, whether the raw material is to be taxed, or partly manufactured wood, or wholly manufactured wooden articles; and, further, whether a preference is to be given to our colonies and allies. The question opens up a very wide field of speculation, and we can only now glance briefly at some of the aspects of the subject on the broadest lines. We would not, in the first place, ask whether the timber trade, or any section of it, would be benefited by an import duty on wood manufactures (for the interests of a particular trade are not always identical with those of the nation), but whether such a change in our fiscal policy would be a national gain or loss. We quote again from Mr. Hughes, a statesman who has made a great study of these questions, and who has been specially honored by our Government:—

"Let me state what are the terms of the problems which will confront us after the war. First, there are the millions of soldiers who will return from the war and the millions of others engaged in making munitions; added to these are the men now employed who before the war could not find employment. Are you going to tell the men who fought and saved the Empire that there is no place for them, or, at any rate, no place worthy of them? Are you going to turn those adrift who are now carrying on the work of the country? And what are you going to do with the million of women workers who are now doing the work of men? Do you not see in your mind's eye the streets crowded with these millions of returned soldiers, munition workers, workers of all kinds, men and women, all suddenly confronted with the frightful consequences arising out of the dislocation of industry?"

One of the great problems after the war will undoubtedly be to find employment in this country, and we would put this aspect of the question before all others at the present time. If sawn wood is taxed, and the tax graduated and increased as the sawn wood approaches the stage of a completely manufactured article, the result, provided the duty is adequate, will be to keep out of the country the manufactured products and to increase the demand for English labor. This is, we think, the main argument which will apply in present circumstances. It would formerly have been objected that in this way we are not obtaining the goods so cheaply. Perhaps not, but cheapness in itself is no longer a fetish to be worshipped. Strength is required,

and "the real strength of a nation lies not in material wealth or amount of trade or extent of territory, but in the number and quality of its men and women."

As to details, a 10 per cent. ad valorem duty on floorings and mouldings would be more effective for revenue purposes than as a protective measure; probably 15 or 20 per cent. would be required, at any rate at first, but even this might not be sufficient to prevent the large importation of doors, frames, and other fully manufactured articles of wood. The details will require a good deal of thinking out, and as fiscal changes are imminent, timber merchants will do well to give their attention to the subject. Possibly some of our readers will favor us with their views. There will be vast readjustments after the war, and those matters which are not thrashed out beforehand will, when the necessity for prompt action arises, not receive the attention they deserve.

War's Effect upon European Timber

Aside altogether from the effect upon European markets of the demand for lumber and timber arising out of the war, it is important and interesting to note its effect upon the standing timber resources of those countries that are engaged in the struggle, and especially those that are located within the range of operations. Belgium, the major portion of which is in possession of the Germans, had some forested land which was, as it might well be termed, more of a scenic than a commercial nature. These forests have practically been destroyed. Much of the timber was used by the Germans for military purposes—in the construction of trenches, in road building, in the erection of shelters, barracks, etc.; considerable was used for firewood, and it has been stated, with what accuracy it is impossible to say, that timber not used in this way or needed in the military zone has been shipped to Germany for home consumption. Most probably this is so. As regards Belgium, it would not be at all surprising to learn, when the war is over, that there remains on Belgian soil no timber of commercial value; that her scenic forests have been wiped out, and that thousands of her roadside and street trees have been used for fuel and for other purposes by the Germans.

In Northern France, on both sides of the fighting front, great damage has been done the forests, not only by the tremendous bombardments which have marked the fighting there, and by the hail of bullets from small arms which have swept forested spaces, but by the trench builders, the road engineers, and others who needed timber for construction work. Thousands of new roads or passageways have been built for the rapid transportation of guns, munitions, supplies, and men, to thousands of points along both fronts. Many of the roads or passageways are of the type known as corduroy roads, the base being made of tree trunks, overlaid with branches, and these branches overlaid with earth. These roads alone necessitate the cutting of thousands upon thousands of trees. In the lining of trenches and the building of shelters there has been unceasing demand for more and more timber, and when it has been on hand in the shape of single trees, groups of trees, woodlands or forests it is fair to assume that it has been freely used.

In addition, the destruction by shot and shell has been tremendous. Trees that have not been blown down or cut through or shattered have been so badly damaged that they will die; others, pitted with bullet holes or wounded by other shot, are now open to disease or insect attack, while there are long stretches of forested lands where there has been no fighting not much is known, but the inference is that, owing to the unceasing military demands for timber, the annual cutting is very much greater than it was in times of peace, and this means, doubtless, that practically all timber that has matured has been cut and used, for France, like England, was in times of peace a large importer of timber.

There is no occasion for concern regarding Russian forests, for the losses due to warfare are infinitesimal when compared with her tremendous forest resources. Then, too, even in the forests where there has been severe fighting the damage done the trees is hardly worthy of note, because the forests are so dense and so extensive. Russia, with her wonderful forests, will have a great opportunity for an immense lumber business when the war is over, and if she can take advantage of it she will become the main source of timber supply for all the warring countries of Europe.

It is certain that Germany has done a great deal of cutting in captured enemy territory, chiefly in Poland and Western Russia, and that she has conserved her own forest resources in the thoroughly efficient and scientific manner in which she has for so long managed her forests, but news of what she has or has not done would doubtless be of some military value to her enemies, and so in America nothing of importance has been heard regarding her forests.

The effect of the war on the forests of the British Isles will likely be the extensive conversion of many of them into timber. The war has created imperative need of lumber, and at the same time interfered with England's main source of supply as well as made prices for what can be imported almost prohibitive. In time of peace England's timber imports were valued at about $215,000,000 a year, and this figure gives some idea of the amount she has needed since the war started.

Mill Type Construction Making Headway

The awakening of interest in mill construction which is taking place in Eastern Canada is due to a number of causes that have been working together to bring home to the public an appreciation of the exceptional value and service which they get from such construction. One of the chief factors in this connection is undoubtedly the effort that is being put forth by the British Columbia Government to interest consumers in the use of the splendid timbers produced in the Pacific Coast province mills. When the war is over and conditions again approach normal so far as the general industrial situation is concerned, we believe that the manufacturers of British Columbia timber will find a gratifying demand for their products for use in mill-constructed buildings. Our conviction on this point is based largely upon the fact that the public are already showing more than usual interest, and at the same time are being shown in a practical manner what they can do with British Columbia products.

In Canada we are following, to a great extent, the lead of our friends across the line, who have been compiling a great amount of statistical and scientific information about mill construction and have been placing it before the average reading public. An example of the practical information which is thus being made available is furnished by the extended inspection trip recently made by Mr. C. E. Paul, consulting engineer for the Trade Extension Department of the National Lumber Manufacturers' Association. The object of his trip was to investigate conditions relating to the general use of wood in construction in the New England States. He visited manufacturing plants of all kinds, from the oldest cotton mill to the modern buildings still under construction, including warehouses, freight shops, docks, bridges, etc., examining them in detail with a view to comparing methods of construction used by the architects of the East and those of the Middle West. Mr. Paul's views, as expressed in a recent interview, are interesting.

In New England, he says, is the home of the original heavy timber mill construction building, and the type as built there is entirely different from the mill construction buildings in the Middle West. This difference is not due to the fact that our Middle West buildings are of comparatively recent date, but comes from different commercial needs and from peculiar economic conditions which exist in a given type of manufacturing plant. Cotton mills and woolen

mills use machinery which can be arranged to advantage in long, narrow bays or floor panels without the posts becoming a hindrance. The floor loads in such buildings are not heavy, but stiffness and lack of vibration are sought. These conditions lead to the extensive use of the so-called "standard mill construction," with bays 8 feet to 10½ feet wide and 20 feet to 26 feet long, as recommended by the Associated Factory Mutual Fire Insurance Companies of New England. Heavy yellow pine or Douglas fir girders support a yellow pine or spruce floor 3 inches or more in thickness. This flooring is splined and laid with closed joints. A ⅞-in. wearing floor of maple or other hard wood is laid at right angles to the main flooring.

The practice of placing an intermediate layer of rough 1-in. hemlock flooring between the main floor and the surface layer is quite common in the best buildings, and provides a very stiff floor. The intermediate layer is laid diagonally on the main floor, and waterproof paper is placed between each layer.

A great many manufacturing plants and mills were visited, and but very little complaint was heard in regard to the lasting qualities of the timber used in these structures. In fact, the general expression was one of satisfaction. One cotton mill one hundred and six years old was claimed to be largely in its original condition and is in use daily. Another mill built in 1825 was supplied with girders spanning three bays without a break and all in perfect condition.

In some of the more modern mills the floors in rooms where a large amount of water is used are supported by timber girders, which are creosoted before placing, and the flooring laid with a ½-in. space between boards. No trouble was reported in the case of girders thus treated even after several years of service.

When heavy timber floors are used on steel beams supported by steel or iron columns, a 4-in. by 8-in. nailing strip is spiked or bolted to the top flange of the steel beam and the nails from the flooring are held by this strap. The steel post cap is seen but little, while the cast iron cap with cast pintle is used by nearly all designers.

One of the leading engineers made the remark that manufacturing processes were changing so rapidly and the item of space needed was of such importance that the heavy timber mill construction type of building was the logical solution of the problem when changes were likely to be necessary or additions to plant to be built.

Extremes Meeting in British Columbia

It is not on every occasion that lumbermen and foresters see eye to eye, especially in regard to a question of marketing forest products. Not very long ago lumbermen had an idea that foresters were men who wanted to preserve the forests, even at the cost of the lumbering industry and irrespective of most considerations of reasonable utilization. Foresters, to a similar extent, were unable to look upon the lumberman as a reasonable citizen, and thought of him as a despoiler of nature's timber resources. There has been a considerable coming together of these two extremes since the early days of forestry in this country, and of late years this approach towards a better understanding of one another has been comparatively rapid.

An indication of the strides that have been made in this direction is afforded by the course of events in British Columbia. It is only a very few years since one of Canada's most capable forestry graduates was placed in charge of the Forest Branch of the Department of Lands of British Columbia, yet to-day we find his department taking most enlightened steps in the direction of scientific marketing of timber resources of the province, with a view to creating a wider demand and assisting in securing better prices for the output as a whole. The forester, in fact, when put in touch with the practical requirements of the forest and with the lumbering problems of British Columbia has applied himself and the resources at his command to the question of enlarging the return from the forests so as to make the logging and lumbering industries more interesting financially to the men who put their money into them. The idea is not to promote indiscriminate conversion of timber resources, but, by making the operation more profitable and extending its market scope to enlist the co-operation of the industry. In short, the lumberman and the forester in British Columbia have come so close together in their sympathies that they are overlapping each other's fields of operation; the forester helping in the marketing of the product and the lumberman assisting the forester in establishing sound scientific and economic regulations for the conduct of the industry which will assist in the preservation of the forests.

This is a long stride in advance, and one which holds out much promise for the success of the administration of the forests in British Columbia. We only wish that we could say as much for the situation in all the other provinces of Canada. The lumbering industry and forest administration must go hand in hand, and in proportion to the extent of their co-operation must be the permanence and success of each. For a time we wondered whether the rest of the forestry fraternity would look upon this matter in the same light as the Forest Branch of British Columbia, and whether they would approve wholeheartedly of the course adopted; not that we had any doubt as to the wisdom of this course, but that we were not convinced that the forestry world itself was ready to lend its aid to an extensive plan for increasing output and widening markets. There was no reason why they should not see things in this light, but just as a simple matter of fact we wondered whether they had kept pace with the Forest Branch of British Columbia in its appreciation of the fact that unless the material taken from the forests is properly marketed the forester and the lumberman will alike suffer. Apparently the forestry profession is behind its representatives in British Columbia heart and soul, as is shown by a reference to this subject in the June number of the Forestry Quarterly.

Referring to the publicity work and other efforts of the Forest Branch of British Columbia, the Quarterly pays tribute to the efficiency of the work, and continues as follows:—

"To cap the cilmax of this remarkable activity of the Forest Branch in securing markets, the Chief Forester, Mr. H. R. MacMillan, who is responsible for developing this phase of the Forest Branch, was appointed Special Trade Commissioner of the Dominion Department of Trade and Commerce, and has been traveling for nearly a year to all parts of the world, with a view to establishing trade connection for British Columbia mill products and furnishing insight through personal knowledge into special requirements of markets.

"Of course, all this literature, which is distributed freely by the hundred thousands, is frankly propagandist and advertising matter, but, considering the source, must be truthful and authoritative, devoid of extravagant claims which a private concern might make.

"From the forester's point of view at first sight, this canvassing would appear out of his field, but as a matter of fact, application of forestry methods can only be afforded when the cost of the dead work —dead for the present—always involved in any forestry work—work for the future—is covered by the price obtainable for the present product. To find profitable markets and extension of use of minor materials particularly seems to us a most needful undertaking, especially in British Columbia, where for years the lumber industry has been suffering by its distance from markets.

"There is one result which will come to the Forest Branch from this well-directed propaganda which must not be underrated, namely, that it will ingratiate itself with the lumber industry and through that with the politicians, so that it will be possible more readily to inaugurate conservative processes of forestry practices. We congratulate Mr. MacMillan on his enterprise in going out beyond mere routine administrative work."

While the work that is being done by the British Columbia Forest Branch and its representatives in promoting the use of British Columbia timber and lumber is meeting with good results in many parts of Canada, it is only fitting to remark that probably the most successful results are those that are being obtained in Eastern Canada, under the direction of the Lumber Commissioner at Toronto, Mr. L. B. Beale. Mr. Beale has covered much of the territory in Eastern Canada already, and is receiving many enquiries and a goodly number of them are turning into orders. This applies to points throughout Ontario, Quebec, and the Maritime Provinces.

Shell Box Prices—Are They Adequate?

Lumbermen Finding the Trade Risky—Complain That Shell Box Makers Cannot Pay for Lumber and Make a Profit

Although we have heard a great deal of discussion recently in regard to the shell box business in Canada, bearing chiefly upon the prices at which contracts have been awarded by the Imperial Munitions Board, we have avoided discussing the subject to any extent, feeling that it was wise to wait until the situation had been developed more fully and the pros and cons of criticism that we have heard had been more definitely sifted out. We have heard so much criticism during the past few weeks, however, that it seems to us that the situation now calls for some publicity. Briefly, the main point of criticism that we have heard from many quarters is to the effect that contracts have been let at such low prices that there is no profit in them for the manufacturers. It may be thought by some that this is an indication of good business on the part of the Government, or rather on the part of the Imperial Munitions Board, but when the matter is analyzed it is not difficult to see that by following out such a course the Munitions Board is really cutting off its nose to spite its face.

We cannot put this matter any more clearly or forcibly than in the words of a manufacturer and wholesaler who discussed the matter with us recently. This man, representing one of the most important Canadian firms, finds that in selling material to the box manufacturers he is up against a very different proposition to any that he has had to face in the past. In spite of the fact that he is dealing with firms that are handling very large orders for the production of shell boxes, he has to be on the watch every minute of the day in connection with the credit end of the business. He is gradually eilminating many of the customers whom he took on at first, finding that it is not safe to give them credit, and that without credit they cannot handle the business.

"In the first place," this lumberman says, in speaking of the Bethlehem box, "there is the question of cost for the production of shell boxes. The cost of labor, the cost of bands, steel, etc., are all very much higher than they were for the old boxes, and the price of lumber should be higher, but we cannot get it. The man who makes a contract for the box, in the first place, cannot cut down his labor cost, and there is a close enough combination among the steel producers to prevent him from cutting down the cost of steel. The only way in which he can keep down the cost is by traffiicking around with his order for lumber until he can get it at the lowest possible price. Naturally, the first result of this is a tendency on the part of the firm from whom he buys the lumber to furnish him with an inferior article. The lumberman has to do this in order to get his cost out of the order at all. It costs just as much more proportionately to produce lumber to-day as it does to produce steel.

"Then there is another feature of the situation that is of great importance. A large portion of the orders given out for shell boxes during the past two months have gone to concerns that are being run by a liquidator, or to concerns whose credit ratings are such that they are not entitled to the regular lumber terms of credit. The consequence is that if you want to sell material to them you either have to stand out for a straight cash discount before you unload the stock or take your chance of ever getting your money for your goods. Labor has no such a thing as a credit term. It must be paid for each week. Steel concerns will not give credit. As a consequence, the box manufacturers pay for their labor and pay the steel man, while the lumber manufacturer and dealer either holds his lumber or takes a considerable risk. If the box manufacturer can make good and work out a profit—which is questioned by most of the authorities upon the subject—then the lumberman will be paid; but if the box manufacturer falls down, as it is predicted that many of them will, the lumber dealer and the manufacturer of lumber are stung.

"The question, then, arises as to what protection the lumberman can get under these circumstances. Will the Government permit him to attach moneys due, or will they throw out an application for attachment, the same as they do when you try to attach the wages of a Government employee; or, provided they permit you to attach these moneys, will they then cancel the manufacturers' contracts for boxes? In the face of the great quantity of orders that have been placed for these boxes and of the fact that so many of the manufacturers are now falling down on their deliveries and dropping out on their contracts, would it not be possible for the Imperial Munitions Board to do something in the way of assisting those who are supplying these materials, so that they may be secure as to their money? The supplies of material are just as necessary to the quick and efficient delivery of munitions and boxes as the work that has to be done in their production, and are just as worthy of consideration from the Munitions Board.

"There is another feature in connection with the production of the Bethlehem box that calls for some criticism. In the production of these boxes it is stipulated that the diaphragms are to be produced from one quarter and five sixteenth inches veneer. This material costs about three times what it would have cost to produce the diaphragms in solid wood, and it is very questionable whether they are any better in veneer. The only material effect that the use of veneers for this work has had, so far as we can see is that practically all of this material, instead of coming from Canadian manufacturers who are paying taxes and bearing the brunt of our financial troubles, is coming from veneer manufacturers in Wisconsin, who, of course, are paying a duty to our Government when the stuff is imported, but are having 99 per cent. of the duty refunded as soon as the boxes are shipped out of Canada. On the whole, is there anything fair or equitable in the manner in which the Imperial Munitions Board are treating the lumbermen of Canada in this shell box situation?"

While we have heard numerous criticisms based pretty generally upon the above points, we have not so far invited our readers to discuss the matter. We believe that it would be well now to give the subject a good deal of publicity, and we hope that a number of our readers will let us hear from them, giving us their views, whether they happen to agree with those which are expressed above or not. If the price at which shell boxes are now being ordered by the Munitions Board is not sufficient to permit of the manufacturers doing their business on a sound and moderately profitable basis, the sooner the fact is properly appreciated by the Board the better it will be for all concerned. Our definite conviction is that the Board should make a detailed study of the cost of production of its shell boxes and make sure that orders given out are upon a price base that will not increase the financial difficulties of manufacturers in Canada to-day.

From the Canada Lumberman of Thirty-five Years Ago

Quebec's Great Crown Land Sale.

Quebec, 25th October, 1880.—The most important event in the timber trade since the date of my last letter is undoubtedly the recent sale of timber limits by the Crown Lands of the Local Government. It is an encouraging sign to those engaged in lumber that the prices obtained were much higher than have been paid for many years past. Nor can these prices be attributed, in my estimation, to any sudden excitement in the minds of buyers from the competition of the auction, or even from extravagant and speculative anticipations of further improvement in trade. The attendance of the sale included all of the best-known lumbermen from the districts of the Ottawa, Three Rivers, Quebec, and St. John, N.B. The purchasers were principally found to be of the most cautious, conservative, and experienced operators of the country. Most of them had either personally investigated the limits upon which they bid or possessed confidential information from explorers employed by them. Close observers at the sale noticed that some of the lots sold were knocked down to parties who were undoubtedly buying for leading capitalists sitting near them. Several of such were present, well-known business men, who, though not actually engaged in lumbering operations themselves, have been in the habit of advancing large amounts to those actually engaged in the trade. Larger prices than would have been otherwise realized were doubtless in some degree obtained by the prevalence of the impression that the pine limits offered at this auction were amongst the last really first-class wooded lands remaining in the hands of the Government of Quebec. Three hundred and forty-five dollars a mile is undoubtedly a big price, but there are in the trade very few who would care to insinuate that the money paid for the lands in block "A" of the Upper Ottawa Agency is too high. If the reports of the railway surveying party which explored this portion of the forest some ten yetrs ago are to be credited, most of the purchasers of these lots will realize fortunes out of them. For some few years to come they can, of course. look for no return, their lumber being, in the main, quite inaccessible. The Federal Government will have to be looked to for improvements in the streams, but as the pine becomes more scarce these improvements will have to be made as a matter of course. It is, too, by no means improbable that some of these lands will be partially opened up by the contemplated extensions of the various lines of railways in the district of Ottawa.

Lumbermen's Sons Serving the Empire

W. J. MacBeth, Toronto

The accompanying portraits are of Mr. W. J. MacBeth, Toronto, a well-known lumberman, and his two sons, who are serving the Empire in connection with the war. The portrait on the left of the double picture is of Second Lieut. R. E. MacBeth, and that on the right is of Capt. W. L. C. MacBeth, M.B., M.O., for the 4th Brigade, Canadian Field Artillery.

Capt. W. L. C. MacBeth, the elder of the two, is now located with his brigade in Flanders. He went across with the first contingent, and has been in France and Flanders since September 17, 1914. He received his commission before leaving Canada. Capt. MacBeth has been located at different times in the hospitals at Boulogne, Wimereaux, and Le Traport. From the latter place he was moved to Flanders. Before taking his course in medicine Capt. MacBeth had considerable experience of the lumber business at sawmills at Bracebridge and elsewhere.

Second Lieut. R. E. MacBeth is in the Royal Flying Corps. He left Toronto on January 1, 1916, having taken a portion of his course at the Curtis Flying School at Toronto Island and completing it at Catterick Bridge, Yorkshire, England. He "got his wings" about the first of June, and was sent to Montrose, Scotland, as an instructor. While engaged in this work he met with an accident on June 16, the engine of his machine going dead while he was flying with a

Second Lieut. R. E. MacBeth, Royal Flying Corps — Capt. W. L. C. Macbeth, M.O., 4th Brigade, C.F.A.

student over the North Sea. The machine and its occupants fell into the sea. The student's leg was broken and Lieut. C. E. MacBeth was severely injured in the head. In the fall of the machine their life-belts were punctured, but Lieut. MacBeth, in spite of his injuries, managed to remove an inflated wheel from the machine and put it upon the student, to act as a life-belt. He then managed to discard his uniform and to swim almost to shore, taking the student with him. Then he found that he was so exhausted that he could not negotiate the backwash, or undertow, and it was probable that both of them would have lost their lives if assistance had not come to them from the shore. A man on shore who witnessed the accident was able to swim out and bring both safely to land.

Lieut. R. E. MacBeth was severely cut about the head, receiving a gash from the left eye to the back of the head. He remained in the hospital for a month, and then secured three months' furlough in order to recuperate.

While his two sons have succeeded in giving their services to the country in connection with the war, Mr. J. W. MacBeth has not been so fortunate. He endeavored to secure a commission in two of the forestry battalions, but although physically he is a younger man than many who have been accepted, he has not been able to secure an appointment.

Why are we not organized for War?

A Northern Ontario manufacturer, writing to the Canada Lumberman, says:

"As the season advances the difficulty of securing sufficient labor to do the work is becoming greater, and the hardwood manufacturer suffers more than those cutting pine and other soft woods. The result will be that better prices must be obtained for stocks since the cost of producing them has increased so much.

"It is almost impossible to think that the Government are interested in the business of the lumberman and other manufacturers when they take no steps to organize the country industrially, and that is what must be done if we are to keep the industries of Canada working.

"It is well known that there are many thousands of eligible men who are not enlisted, and are not working at the real work of to-day, viz., producing raw material and turning it into marketable products.

"In these trying times, when the Empire is in the crucible, we can do with half the ministers, half the lawyers, half the insurance men, and altogether without the idle, purposeless men who are not bending their backs and working their bodies to the limit to help keep up our end.

"Conscription is a hateful word to the free man, but unless something of that nature is put in force it is hard to estimate the loss of life and property Canada will suffer. The means are ready. The Government can any day order every man to present himself for examination and enlistment, and if not fit to stand against the enemy on the battlefield, he can be used to supply the place of those who are gone and those who are fit and willing to go, but will not do so, and throw away the work of a lifetime.

"Take the sporting games and their supporters. How can men take part in such play when the gallant lads, who have given their all, are dying by thousands that the land they love may continue to float the flag of freedom? It is not fair, and it is not right.

"Prospects for a reasonable cut of logs for the coming season are poor, and if the Government does not take hold of the work at once it will be too late to save the day."

The Lumber Dealer and the Substitute

A subscriber of the Canada Lumberman, after reading an article which we recently published, dealing with the question of substitutes for lumber, reports to us that there is much truth in the points made in this article. "We are so built upon our past," he says, "that we sit quiet and let the substitute fellow have his own way. Pushing the goods is what does it. Why a man will neglect our goods, which have been giving him good satisfaction, and use substitutes is hard to say, but nowadays the barn is covered entirely with steel or with stove pipe, and with coal tar and rags for roofing, instead of the wooden shingle that has given splendid satisfaction. Lately I have been asking myself why the farmers are not building now, when material is at a reasonable price, and I have been told that the answer is that they are panicky on account of the war. But they are not panicky when it comes to a question of buying automobiles. Farmers in motor cars are coming into town by the score; and, while a new barn or fence or other improvement would look in place, they are not attending to them. It seems to me that the lumberman will simply have to act as the allies have until lately—that is to say, "hang on and hope for better things."

Prairie Crop Prospects Encouraging

Mr. Geo. J. Bury, first vice-president of the C. P. R., in a recent interview, said:—"I have been putting together reports from our officials, our numerous agents, and several hundred farmer correspondents; I have talked with farmers, business men, and others throughout the West, and I can come to only one conclusion; the crop prospects at the present time are of the best. It is too early for a prediction as to the expected yield. One thing, however, I will say, comparing last year with this year, the crop prospects are better than at this time last year. True, there is not so much acreage sown to wheat, and it is almost impossible to get the acreage accurately, the estimates of decrease varying from six per cent. to twenty per cent. But even with a decrease of an average between six per cent. and twenty per cent., conditions generally are more healthy in the West than they were one year ago. Apparently more land is being broken and summer fallowed. Couple with that the same old optimistic spirit that made the West what it is, and one finds a combination that is quickly dissolving the depression that existed. The only thing we need now, is more people on the land, and I predict with a good crop this year, we will see a great influx of farmers from the south. After the war, the eyes of the people of the countries now torn by conflict will turn toward this country, and we will then see immigrants coming in great numbers."

John Hendry Passes Away

Mr. John Hendry, one of the best known lumbermen in British Columbia, died at his home at Vancouver on July 17th. The late Mr. Hendry had been failing in health for some time and his death was not unexpected. He had been living in British Columbia for 44 years and had large interests in timber and mining in many parts of the province. He was one of the outstanding members of the industry and one of the active forces in bringing about the great advances that the industry has made of late years. Mr. Hendry was a director of the Canadian Lumbermen's Association.

The late Mr. Hendry was a man of large interests in timber and mining throughout British Columbia. He was born in New Brunswick, in the district of Belle Dune, County Gloucester, on January 20, 1843, his father having come from Ayrshire, Scotland, in 1840, and established large flour and lumber mills at Belle Dune. In the summer of 1872 John Hendry went to British Columbia, but subsequently settled in Washington Territory, where he remained until 1873. In the latter year he returned to British Columbia and entered the employ of the Puget Sound sawmill. About 1875 he went to the Red River country, but only remained a short time. Returning subsequently to British Columbia, he gradually increased his business interests until, at the time of his death, or previously, he occupied the following positions: President of the British Columbia Mills Timber and Trading Company, president of the Vancouver, Westminster and Yukon Railway Company, president Nicola Valley Coal and Coke Company, president British Columbia Lumber and Shingle Manufacturers, Limited, director Western Canada Power Company, chairman Burrard, Westminster and Boundary Railway and Navigation Company, vice-president Canadian Lumbermen's Association, Canadian Forestry Association, Commissioner of Conservation of Canada, and president of the Canadian Manufacturers' Association.

Sudden Death of R. M. Bertram

Robert M. Bertram, 134 Spadina Road, Toronto, died suddenly of heart failure at Collins Inlet on July 17th. Mr. Bertram was well known among the lumber trade of Ontario, having been vice-president of the Collins Inlet Lumber Company, of Collins Inlet, Ont., with head office at Toronto. The late Mr. Bertram was apparently in good health and had gone north for a summer holiday. He is survived by his wife and three small children.

Newfounndland's Timber Resources

Sir Daniel Morris, in an address before the Royal Society of Art at London, England, recently spoke at considerable length of the timbered areas of Newfoundland. These were generally found, he said, in the valleys of the larger rivers and on the banks of the lakes and ponds. In many cases they were confined to strips from one to two miles wide. There were about six and a half million acres of wooded lands in the colony. All the known timbered areas in Newfoundland, except those lying within the three-mile limit of the shore reserved by the Government, were held under license by private parties or by companies. The conditions under which these licenses were issued gave the holder the right to cut timber for a term of ninety-nine years on payment of an annual rental of two dollars per square mile. In addition there was a royalty of fifty cents per M feet B.B., payable on all timber cut on the area, except such as was manufactured into pulp or paper. In the production of sawn or manufactured lumber there were a dozen large mills in Newfoundland, and ten times as many small ones, producing cooperage stock, barrels, shingles, and laths. In 1906-7 the value of the exports of sawn lumber reached a total of £65,000; but this had since fallen off, due, it was thought, to increasing local requirements. Water power was abundant, and leases were granted by government for terms of years of the right to use the waters of any river for driving machinery, on payment of a rent and subject to a fine of £100 for each offence of introducing sawdust or other injurious matter into the water.

The spruce lumber was of exceptional quality. It was used locally for general building purposes and for ship and boat building, and in the case of the smaller logs it provided a very superior material for manufacture into paper pulp. A very small proportion of the birch timber was utilized, the principal uses being the construction of the under-water parts of the hulls of cruisers and for wharf piles, as the wood was found to last better than most others under such conditions. It was used for various other purposes, among others that of the manufacture of furniture.

The smaller timber of Newfoundland was chiefly used for the manufacture of paper pulp, but since the outbreak of the war there had been a considerable export of pitprops to Great Britain. An enquiry had been made by experts into the cost of supplying pitprops to this market, and one of these experts had expressed the opinion that the cost need not exceed that of pitprops from the Baltic.

Sir Daniel gave a long list of the forest trees which grew in Newfoundland. Besides the black spruce and the birch already spoken of, he mentioned among others white pine, balsam fir, tamarac, sugar maple, black ash, and American elm. Several of these produced valuable woods, useful for a variety of purposes. Forest fires were the cause of a loss to the colony estimated at from £1,000,000 to £2,000,000 annually; they were very largely due to sparks from railway engines. Once an area was cleared, reafforestration took from thirty to fifty years.

Western Trade Improving

Reports received from British Columbia and prairie province points indicate that the lumber trade is showing encouraging improvement. This is to a considerable extent the result of the prosperity of the prairie province farmers. On account of the large crops harvested last year the farmers are today enjoying good credit with the banks, and are commencing to spend money to a considerable extent upon buildings of various kinds. The good crops that are now practically assured for the present year are adding their influence to this improvement. The effect upon the lumber situation is outlined in an interview recently given by Mr. Alexander Wood, manager of the Rat Portage Lumber Company. "All the mills which are at present operating," he says, "are getting as much business as they can handle. The outlook is excellent. Information we are receiving from the prairies is everywhere encouraging. Crop prospects are of the best. Lumber stocks are very low and there seems to be no question that the demand for B. C. lumber from the prairies will be well maintained. Eastern Canada is also taking a lot of lumber, and a number of the mills in Vancouver are going after trade in the United States, and have already secured good business. Our own concern has shipped a considerable quantity to American points and believe that a lucrative trade could be developed there."

Referring to the demand for B. C. timber and lumber for war purposes, Mr. Wood said that a large quantity of material was being cut in Vancouver for Old Country buyers. There was a specially strong demand for spruce for aeroplane construction. His own company had already handled a large quantity of this material, which was cut into heavy stuff and realized a good price. There was some difficulty, however, in securing a large enough quantity of the absolutely clear stock required for this purpose. "It is a mistaken notion," Mr. Wood said, "that there are unlimited quantities of spruce on the coast. The fact of the matter is that the quantity of spruce on the coast which is really suitable for high class lumber is small. The trouble with spruce is that it is a knotty timber, and you go into a spruce forest and you will find that the limbs on nearly all the trees come down close to the ground and in most cases it is not possible to get more than one good clear log out of a tree. All the orders we are receiving for spruce for aeroplane construction now specify that the boards must average from twenty to twenty-four feet in length and be perfectly clear, and anyone who knows anything about spruce knows that it is hard to get that kind of stuff out of a spruce log. The percentage of good clear lumber that a sawmill could take out of the average spruce log is very small and the balance of the material is all the more difficult to dispose of."

Discussing a large order for spruce on which the British Government recently asked for tenders, Mr. Wood said that, so far as he could learn, the order would be a very difficult one to handle, because of the scarcity of logs and the fact that the material had to be cut on the quarter, and was for delivery in the Old Country, making the shippers responsible for the freight.

Booth Papermakers Get Wage Increase

J. R. Booth has granted a 6 per cent. increase in the wages of all the papermakers employed in the mills, in compliance with a request from a committee of the papermakers' union. The wage schedule at the plant, which was formerly not at the same level as has been reached in other parts of Canada, is, as a result, as high as at practically any other plant. Owing to the number of enlistments for the war there is a scarcity of skilled papermakers all over the country, and higher wages are being demanded. Besides the wage increase there will be no Sunday work, as formerly. The Lord's Day Alliance has been insisting on the observance of Sunday at the various lumber and paper plants at the Chaudiere Falls, and has threatened to take action if the Booth plant should attempt to run its paper mills Sunday morning. As a consequence, the firm decided that it would be better to stop work at midnight on Saturday till midnight Sunday.

The directors of the Riordan Pulp and Paper Company have declared a dividend of one per cent. for the quarter ending July 31, making 2½ per cent. for the first seven months of the company's fiscal year.

The prohibition of the import of birch planks from Canada into Great Britain has been modified to some extent, and at present licenses are being granted for the importation of a limited quantity of these goods.

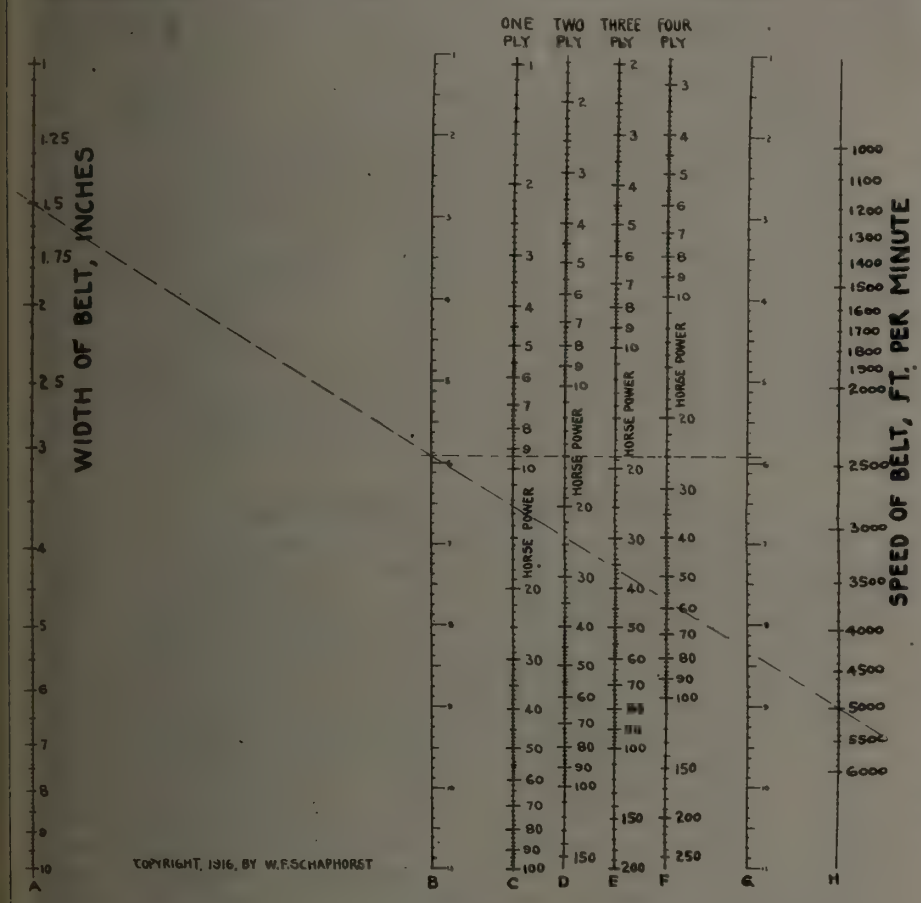
A Practical Belt Chart

This chart will be found handy for solving belt problems for nearly every ordinary condition. You can work it out by just laying a straightedge across from point to point, and the job is done.

For example: What horsepower will a 1.5-inch belt pull when running at 5,000 feet per minute? Find 1.5 in column A. Find 5,000 in column H. Connect the two with a straight line. This straight line cuts column B between 5 and 6. Find the corresponding point in column G (i.e., between 5 and 6). Lay the straight edge across as indicated by the dotted line. The points of intersection with columns C, D, E, and F give the horsepower that one, two, three, and four-ply belts will transmit.

A 1-ply belt would, therefore, transmit a little over 9 horsepower.
A 2-ply belt would transmit 15 horsepower.
A 3-ply belt would transmit about 19 horsepower.
A 4-ply belt would transmit 25 horsepower.

Of course, the chart can be used "backwards" just as easily. If it is desired to transmit 100 horsepower, for instance, with a 3-ply belt, the reader will easily discover how the process is reversed. Let us



assume that the belt is to run 4,500 feet per minute. The answer is: A 9-inch belt will be required. Try it and see if you get the correct result yourself. The final point falls between the 8 and 9-inch points, but so much closer to the 9 that the 9 should be chosen.—W. F. Schaphorst.

Securing Maximum Service from Sanding Machinery

By A. T. Deinzer

Sanding is one of the things that ordinarily cannot receive too much attention. In most factories a very high finish is demanded. As the quality of the finish depends on the way the wood is cleaned up, the necessity for good sanding is at once apparent. The manufacturer whose sander work is not giving full satisfaction will do well to visit woodworking plants in his vicinity or to correspond or talk with manufacturers of sanding machines, for I am certain he will gain information that will help him out considerably and prove profitable in every way. One hears operators say, "We have the same make of machine as Jones and Co. They are having no trouble sanding stock perfectly but we have no end of trouble with this machine. The manufacturer certainly unloaded a lemon on the old man when he ordered and paid for that piece of junk." My argument in a case of that kind is, if your machine is of the same make and style as that used by Jones and Co., it ought to do the work as perfectly as does the machine your friends are using. There is no doubt that you are handling your machine entirely different than they and as a consequence your results are also different.

Too little attention is given the feeding mechanism of many sanders. It is not uncommon to see sanders feeding the stock to the second roll and there become stuck. The operator will push on the feed end, do more or less cussing and blame the boss for buying such a "d——— machine."

The feeding mechanism must be in perfect adjustment if it is expected that the stock will travel through the machine. The operator should see that his drums are not too high nor his idle rolls too low. Indeed, neglect to take this precaution has often resulted in a ruined drum covering, in addition to spoiled paper. It is by far the safest plan to raise the drums to the desired cut and lower the idle rolls to the desired pressure while the first piece is passing through the machine. Pressure rolls that are down too heavily will cause hollow places.

One of the most common causes of scratchy stock is that of not having the front drum low enough, so that it cuts too heavily, while the back drum is not raised enough. However, all the drums may be too low and the pressure rolls too heavy, so that as stock slides along over the bars, grains of sand get in between stock and bars and cause scratches.

If waves appear, look to lost motion in the oscillators for the trouble. Vibration while oscillators are in the centre of their stroke, causes a slight depression, which disappears at the end of every stroke, resulting in close-set, regular waves. When stock or paper is burned and the feed is jerky, the rolls may be too high or the drums too low, so that the pressure soon wears out the paper and burns the stock. The same thing happens when rolls are slipping because of oil having been spattered over them, as a result of oiling up while in motion.

An irregular line left standing above the stock is usually the result of a defect or depression in the sandpaper, which is not cutting at that point. The oscillating motion of the drum causes the line to "snake" lengthwise over the stock. A nail or foreign substance in the wood will cause the same mark, by tearing out a streak of grit in the paper. The only way to correct this is to re-cover the drum.

If drums are run too slowly, sandpaper will wear more quickly and will not cut as fast and smooth as when running at their proper speed. Here is where the manufacturer of sandpaper frequently comes in for unjust criticism of his brand of paper, whereas, if the truth were known the fault would often be found in the slow speed of the machine. Remember this: To perform its work most satisfactorily the mechanism of the sander must be driven at a specific rate of speed, We already explained what will happen if driven too slow. If, on the other hand, the machine is driven too fast, the paper will glaze over and burn the stock.

Another thing worthy of some consideration is the proper care of sandpaper before being used. It is all too common in many plants to see rolls of sandpaper hung in some damp corner of the shop until used. We know, or should know, what dampness will do to sandpaper. The paper must be thoroughly dry so that the sand will not come loose from the warmth and strain of service. One will find some who will favor putting paper into a hot box before using. An objection to this is that the paper will become too dry if left in the hot box for an unreasonable length of time. Sandpaper too dry will cause trouble for the reason that it has a tendency to break and fly, for the sand will not hold as well as it would if there were enough moisture to relieve it of its harsh dryness.

The care of felt is something that receives too little attention, for proper attention will give surprisingly large returns, not alone in the saving of garnet paper, but in the quality of finish turned out. The felt should be brushed with a good quality bristle brush each time the papers are changed.

In sanding birch, oak, elm or any other hardwood with a drum sander, much depends upon the condition of the lumber as it comes to the machine. If the lumber is thoroughly dried and smoothly and evenly planed so that it does not require much stock to be removed in the polishing of the same on the sander, a much finer grade of paper can be used throughout the machine and a better finish obtained.

Most manufacturers test glues, varnishes, oils, coal, etc., when purchasing these for their plants. Why not test the sandpaper? Indeed this is possible. Experiments will not only show wearing quality, but one can determine what paper will be the cheapest to use, i.e., quality and price considered. Records should be kept of these tests, and I am certain the little time required will be well paid for both in saving of money and improved quality of the work.

The sander needs a certain amount of lubrication. So much can be said about proper lubrication that we have neither the time nor the space to properly deal with the subject in this article. Graphite and graphite greases are excellent lubricants. In fact any lubricant that has body and can be spread out comparatively thin will do the trick. Be careful when oiling the sander not to smear up a lot of stock, possibly on trucks near the machine about to be, or already sanded.

Last, but by no means least, inspect the sander frequently and see that it is leveled up properly and see that it is firmly anchored to the floor. We know only too well that vibration is the natural enemy of all machinery, especially machinery possessing fast revolving parts. So do not place the machine on a shaky floor. If it is absolutely necessary to do this then at least support the floor with timbers directly beneath, which may help some.—Yates Quality.

Pacific Coast Structural Timbers

Their Strength and Suitability for Mill Construction Described in Detail in Hand Book by O. P. M Goss

The West Coast Lumbermen's Association, 1016 White Building, Seattle, Wash., have published an excellent "Structural Timber Hand Book on Pacific Coast Woods," written and compiled by O. P. M. Goss, Assoc. M. Am. Soc. C. E., Consulting Engineer for the Association. The purpose of the book, which is carried out in a most commendable manner, is to present information relative to structural timber which will be useful to engineers, architects, and contractors. Particular attention has been given to Pacific Coast species. In addition to a large amount of valuable, descriptive and explanatory matter, the book contains all available and practical statistical information regarding the strengths and other important characteristics of Pacific Coast woods. It will be of value to all who are interested in the matters with which it deals.

While it will be impossible to give anything in the way of a summary or even a description of the book, which is a very detailed compilation of facts and figures, we are glad to have an opportunity of reproducing part of what it has to say in regard to the construction of mill buildings. "In recent years," the hand book says, "improvements have been made, in the construction of mill buildings. These improvements have been of such a nature as to reduce maintenance cost, fire risk, and insurance rates, and to insure a longer life for the structure. This discussion will be confined largely to that type of building known as the timber-brick mill building.

"There are a number of significant details which should be considered in the design of every modern mill building. The addition of these details is inexpensive, and the accruing benefits far outweigh the added cost. Some of the most significant features which should receive consideration in the design of the highest class of mill building, are as follows:—

1. All exterior windows should be fitted with wired glass in metal frames;
2. As many subdivisions in the building as are practicable should be provided, both horizontally and vertically;
3. Protect timber details where necessary with a brush application of coal-tar creosote, or other suitable preservative;
4. Install an automatic sprinkler system as a fire protection;
5. Use only large timber joists, girders and posts.
6. Use wide spacing of joists, and thick tongued and grooved or laminated floors;
7. Laminated floor timbers should be thoroughly kiln dried before being placed in the building, to prevent dry rot;
8. Provide stairway and elevator enclosures.

"The cost, durability, and insurance rates on a building and contents are factors which concern the builder who must finance the building. He will naturally endeavor to get a building low in first cost, and also low in insurance and maintenance cost. In other words, he will or should strive to get the greatest possible returns for each dollar spent. The following discussion bears on the above factors, and presents information which is of vital interest to the builder.

Durability

"The durability of a mill building may be greatly increased by a few simple operations. The decay of wood, which is hastened by the presence of damp air and poor ventilation, starts most readily on the end grain of timbers such as girders and columns. This fact should be recognized and methods of construction so modified as to prevent conditions favorable to decay. Dry lumber should be used wherever possible and in the construction of laminated floors all lumber should be thoroughly kiln dried before being placed in the structure.

"Girders or joists which rest in masonry walls should not be sealed in. An air space of at least two inches should be provided all around the end to allow proper ventilation. Two brush applications of hot coal-tar, creosote or other suitable preservative will assist materially in preventing decay. Ends of girders or joists should rest on cast iron plates or joist hangers, and the bearing surface should be protected by a piece of creosote-saturated felt or asbestos.

"Columns, when resting on concrete or brick piers, should have ends thoroughly painted with two coats of hot coal-tar creosote, and a piece of thin creosote-saturated board should be placed between column and pier. A metal plate between the pier and column end is also desirable. Creosote applied to the ends of columns between floors will also assist in preventing dry rot.

"The above details are particularly necessary in buildings which are unheated, and are desirable in all buildings. The ends of large girders and joists should never be encased in such a way as to prevent seasoning through the end surface. Seasoning takes place more rapidly through the end grain than from any other surface, and seasoned timber is safe from dry rot just as long as it is kept dry.

"The limited use of coal-tar creosote as above described should not increase fire hazard. There are, of course, other preservatives such as zinc chloride and corrosive sublimate which could not possibly increase fire dangers. These preservatives are likely to be less effective, however, than coal-tar creosote, and corrosive sublimate is a deadly poison.

Cost

"The cost of mill buildings has been well established, and diagrams included in the hand book enable one to estimate quickly the costs on varying sizes and heights of timber—brick mill buildings with floor loads up to 75 lbs. per square foot. The diagrams are based on the following unit values given by Chas. T. Main, M. Am. Soc. M. E., in the Engineering News of January 27, 1910, for the various materials used:—

"The cost of brick walls is based on 22 bricks per cubic foot, costing $18 per thousand, laid. Openings are estimated at 40 cents per sq. ft., including windows, doors and sills.

"Ordinary mill floors, including timbers, planking and top floor with Southern pine timber at $40 per M. ft. B. M., and spruce planking at $30 per M., costs about 32 cents per square foot, which has been used as a unit price. Ordinary mill roofs covered with tar and gravel, with lumber at the above prices, cost about 25 cents per square foot, and this has been used in the estimates. Add for stairways, elevator wells, plumbing, partitions and special work.

"Other detailed and very complete information is given regarding special conditions which will result in variations in the cost.

"In conclusion, the section of the hand book dealing with this subject says:—"The modern timber-brick mill building is approximately 25 per cent. lower in first cost than a fire-resisting building, and is given almost the same advantage in insurance rates. Throughout the Pacific Coast territory where timber is inexpensive, and plentiful, the difference in cost between these types of buildings will probably average above 25 per cent.

"Wood construction is safe when the proper design has been used. Its low first cost and maintenance, and its low insurance rates are strong arguments in its favor which should be carefully weighed by architects and engineers when contemplating the design of new buildings."

Commercial Uses of White Pine

The uses of white pine are so diversified that several pages could be filled with the mere enumeration of them. In the day of wooden ships white pine was highly important for masts, spars, figureheads, and decking. Boats and canoes were frequently fashioned from white pine logs. Floating docks made of white pine logs or timbers serve their purpose perfectly, decades after other kinds of wood have become waterlogged. Bridges, aqueducts, and structures of a like nature were formerly built entirely of white pine timbers, where they were not required to bear excessive strains. Many of the old covered bridges of Pennsylvania and West Virginia were built of white pine timbers, enclosed with white pine siding and covered with white pine shingles. So durable have these bridges been that it was said of some of them that "no man had lived long enough to both witness their building and their failure through decay."

White pine has always been the wood of universal excellence for constructing houses, barns, sheds, and other buildings. Early in 1880 Michaux estimated that, aside from other cities, there were half a million houses in the United States that were built of white pine wood. New York and New England States abound with splendid examples of beautiful colonial houses constructed of white pine, that have stood for more than a century, or even more than two centuries, testimonials to the wisdom of the early builders in selecting white pine in preference to the other materials equally available. Not long ago ten white pine beams were removed from a building in New York City, after doing service for fifty years. These beams were 18 inches thick, 2 feet wide, and 50 feet long, free from knots or defects, and perfectly sound, after a period equal to an ordinary lifetime. Some of the beams are now being used as temporary supports in the New York subway excavations, in a position where their light weight, strength, and length give them superiority over metal or other kinds of wood.

White pine is unequalled as wood for lath, siding, light dimension, sash, doors, blinds, planing mill products and general mill work. White pine shingles are of high order of merit. Where it is not subject to heavy wear, white pine makes a serviceable flooring. Porch columns, pumps, patterns, picture frames and penholders are all made of white pine, because the wood is less affected by moisture than other woods, neither shrinks, checks, nor warps, holds plain and gilt finish well, and its soft, even grain makes it an easy wood to work with any kind of tools.

Moulding, ceiling, panels, shelves, caskets, baskets, woodenware, refrigerators, toys, trunks, tubs, shade rollers, and skewers are a few of the common uses of white pine. On the farm and in the home, the shop and the factory, this wood has uses galore. Fences, wagon beds, parts of vehicles and machines, wheelbarrows, windmills, handles, beehives, chests, and shelves are a few of these.

For a period of 200 years large quantities of white pine were used

for such articles of furniture as bookcases, cupboards, counter tops and tables, desks, benches, stools, and chairs. While not well adapted to all of these uses, it served its purpose, and for drawing-tables and drawing boards it has no equal. It is also one of the best woods for all kinds of boxes and crates, except for the heaviest shipping, because it combines fair strength with light weight, and its light, even color and the smooth surface of the planed wood makes printing show to advantage. Much white pine is manufactured into fish and lard buckets, pails, washtubs, churns, ice cream freezers, spice containers, etc.; it is also a high-class wood for tanks and silos and barrel headings. Logs of white pine were formerly used for wooden water pipes, for which they served better than most woods. Excelsior and match sticks are two other commodities in which white pine is preferred above other woods.—American Forestry.

Stirring Up Trade When It Is Slow

The harvest time in the small grain raising sections of the country is always a period of dullness and intermittent trade for the country lumber dealers, as it is for practically every merchant in the town. What farmers' trade there is comes mostly in the evenings and Saturdays. When there is little building or repairs going on in the town a lumber yard is a dull place to be in as far as business is concerned. The promise of future business, however, is bringing in new stock to be taken care of, and the yard man doesn't think it dull for him, but the man who runs the yard considers it dull in the absence of trade to send it out again, and when he gets his clerical work done in the office he has little to do unless he goes out into the alley and helps to make the piles grow.

I don't think, though, that the yard bosses do as much of that kind of work as they used to. There are comparatively few yards to-day but that employ one or more men to do the heavy manual labor of the yard. Older dealers can remember the time when unloading and piling was a part of our regular work as managers, and even the unloading of coal as well. Many have run the yard as I did, single-handed, and done all the work. There were few dull days for us then in the matter of work, even in harvest time.

In the times of drought, however, there was little doing of anything, and the monotony of those days was worse than the hardest work. Out in the new towns, where there were no trees, the lumber yard shed gave the most shade of any place in the town, and idle business men would gather there on a hot day and pitch horseshoes or sit on the end of a shed pile and whittle; many a game of horseshoes has been played and cans of beer "rushed" on a hot afternoon in the shade of a lumber shed. A business man in those days only dreamed of taking a vacation. He never considered the question of taking it then, for he generally was too poor to afford it, and when he was busy he couldn't get away. But no matter whether there is much trade or not there is no less of service the lumberman can render to the busy farming community.

After a dull day the impulse is stronger than usual to close up the yard at six o'clock and go home. But during harvest time someone should be at the yard until dark and longer if necessary, because farmers work late in the grain field, and if they have an urgency case needing some lumber for repairs they generally use the late hours of the evening to drive into town to get them. And when they arrive at the yard and find it closed they feel an annoying disappointment that is liable to affect their future relations with that yard. I know this seems unreasonable, but it is a fact nevertheless that farmers have got an idea that business men should keep their places open at all hours to accommodate them, and it is difficult to educate them to think differently, because the exigencies of a farmer's business are such that he is compelled at times to utilize every hour of the twenty-four that is possible.

Long Hours Are Necessary.

Long hours on a farm as are necessary in harvest time mean long hours for some of the town business men if they would give him the service when he needs it the most, and so from now on through harvest and threshing time the yard should be kept open, for there is no knowing when someone will drive in, after the usual quitting time, for a few pieces of lumber or a load of coal for the steam thresher. It is not so much for the profit on what is sold in such cases as it is the value that such service will be to the yard later on when trade becomes normal again. I have gotten out of bed late at night at the call of a farmer who wanted a piece of hardwood to repair his harvester so he would lose no time in starting up the next morning. He appreciated it, and that fall I sold him a nice barn bill without any competitive figuring.

A general reputation for accommodations of this nature is one of the best assets a dealer can have in a country town. The friendship of farmers for a business man is largely based on an accommodating spirit of this kind, and is one of the best antidotes against the influence of a close figuring competitor. If a man has a strong preference for trading with you it's on account of the good treatment and service you give him. This sort of thing soon becomes known in a country community, and therefore it has a commercial value. We often wonder how it is that a Jew merchant goes ahead of the average Gentile in business. There are several reasons that are not necessary to mention, but one reason is that he is always at his place of business early and late to sell service and gather in the shekels that other merchants miss through being too independent. Indeed, his willingness to do this causes adverse criticism of him by his fellow-business men. I have never known a retail lumberman who was a Jew. There is something about the business that don't seem to suit them. It's well, perhaps, for the comfort of our present retailers that they don't' like it, for if they sat in the game lumber yards would be open seven days in the week and no limit to working hours week days.

Now, understand, I am not in favor of stretching the day's work any more than is necessary, but it is not good policy for country dealers to be too particular about closing time at certain times of the year or at any other time when service can be given by keeping open, otherwise than on Sunday, of course. I have even sold coal on a Sunday in cases where it was absolutely needed, and didn't think, either, that I was cracking the Mosaic commandment against Sunday work.

Should Keep an Assortment.

The use of wood is so universal for our requirements; there are so many things it is used for other than in building, and the lumber yard in a country town is practically the only place where it is sold. Therefore, a recognition of this should be had by the lumberman in keeping an assortment of such stock as will meet the needs of all kinds of repairs for things made of wood. It is a standing advertisement—and a good one—to have it generally known that you can get anything you want at a certain yard. In the later years of my experience in a country town I tried to do this, and I thought a good deal of knowing that it was said: "If you can't find it anywhere else go to 'Kit's' yard and he'll fix you out." There were times when I had in stock more or less of about every commercial wood that was then in use. I won't say there was much profit in it, but I am so constituted that I hate like the dickens to have anyone come to the yard for something and not find it. So I studied the kinds of implements the farmers were using, the sizes of the pieces in their construction, and I kept these sizes, as well as I could, in ash, oak, and hickory, together with inch and half-inch poplar. At one place where I was I carried a full assortment of wagon, buggy, and implement stock. This was bought in quantities direct from the manufacturers, so that I could sell the local wagon maker cheaper than he could get it from the jobber and pay local freight besides.

Oftentimes it happens that a machine breaks down when a farmer is cutting his grain or threshing, and if there is not the right kind of wood at the lumber yard to repair it some time is lost before it can be gotten. Many a time I have supplied just such a need that otherwise they would have had to wait for till it was obtained from a jobbing centre. Aside from such cases as these, implements and machinery on the farm are continually breaking or getting out of repair, and there is a corresponding need for the suitable materials. And where a farmer knows he can go to the lumber yard and get what he wants of it he is pleased, too, that he doesn't have to run around hunting for it. And if he is not a regular customer, the chances are he will continue to trade there. Some dealers don't like the carrying of this class of stock because customers demand that it be cut off at a length to suit them which is likely to leave a short end that nobody else will want. There was a time when I objected to this, too. But, before a great while, I found that I could comply with such requests and still not lose anything by it. I sold it by the lineal foot at a price that would cover the waste of a foot or two off the end of a piece. I adopted this method of selling all my hardwood excepting common plank for bridge purposes. It's mostly a matter of making up your mind to get in this class of stock for cutting up purposes. If you quote the price per lineal foot to a customer he may ask how much you will take for the whole piece. In that case a discount will likely influence him to take it without cutting. This is the way I sold all cut-off stuff of any kind of lumber. Sometimes it stretches the good nature of a dealer to be asked to cut off a piece from an extra wide select, but by charging enough for it there will be no loss in the long run. Of course, if you have any clear plank over twenty inches wide, the scarcity of such widths in white pine makes them more valuable for counter tops or sign boards. I usually laid such pieces away out of sight. In other woods, however, you can get all such wide widths you want and have some for cutting to suit the customer.

Must Accommodate the People.

The main thing of all this is the idea of accommodating people with what they want and have it generally understood that it may be obtained at your yard, and that you are competent and willing to help them select what is best for their purpose. A lot of boys used to come to my yard here for pieces to make stilts with, and for many other things boys think they can make. While it was considerable bother sometimes to get at what they wanted and wait on them, still it was a satisfaction to have the children come to me for such assistance. The manual training class of a nearby school used to come and ask me all sorts of questions about lumber and of the different kinds of wood. Sometimes the teacher would send a note by one of the

pupils asking for information not in the text-books. I know, of course, that manual training is not common in the country town schools, but the lumber dealer can, if he will, do something to develop the building instinct and mechanical faculties of the boys of his locality. Boys like to make something, to tinker round and fix things. Some develop this tendency at an earlier age than others. Some time ago I visited the manual training department of one of our schools and I was astonished to see the things made by boys whose ages ranged from ten to fourteen years. It was fine, too, to see the zeal and enthusiasm they put into their work. I thought at the time what an opportunity a country town lumber dealer had to educate the boys in his town to use lumber and teach them the many interesting things about the different woods in his yard. It would be a good idea for him every now and then to give an informal talk to the students of the high school class. Not only the boys, but the girls, too, would be greatly interested in an informing talk of this kind. Get the boys to making bird houses, sleds, little wagons, doll houses for their sisters, little things useful for their mothers, and any other little things that suit their fancy.

But, of course, the larger number of country town boys have no money to spend to buy lumber, and many parents cannot afford to get it for them; therefore, you may think of this idea as being impractical. Now, if you are a believer in advertising and practice what you believe in this regard, would it not be well to divert from the sum you set for this expense an amount representing the cost of, say, a thousand feet of common boards to give away to the boys for this purpose, letting them have it, of course, under such restrictions as you deem wise, such as requiring them to show what they have made with it. This lumber you furnish need not be of the regular lengths. You can obtain a lot of "shorts" from the mill that will answer the purpose and do as well as longer stuff and at less cost. If you give the boys the material there is no question but that the parents will furnish them with the tools to work it and other furnishings needed also. I would also include the country small boy as well in the proposition. A few small prizes offered, too, would stimulate and help keep up the interest. Then, again, on this line you could set a day for having the boys bring in what they had made, have a public display of the assembled exhibits in some vacant storeroom in town and invite the public to come and inspect what the little folks had made of their own designing and handicraft. If you advertise this public display in the local paper, and have it some Saturday, I"ll warrant you will be astonished at the large number of people who will come to view it. It will beat any movie show in town that day, for no matter how crude the design and workmanship of any of the little articles shown they will touch the feeling and elicit the interest of every father and mother who comes to see it. At the close of school here last month the rooms of the manual training department were crowded all day with the parents of these pupils and others of the community interested in school work.

It may seem a whole lot of bother for a business man to undertake just to minister to the pleasure of a lot of other people's children, and on the face of it no possible financial returns for the outlay. "What's the good of it all to me?" is the natural question I know that will be asked by those who are content to keep along in the rut of the usual and ordinary. I"ll tell you the reason why I have thought this plan out and given it here as I have.

One of the problems of the retail lumbermen to-day is advertising, and the appreciation of the need for it is spreading among the country dealers. But the great drawback to their doing it is they don't know how to do it in a way that will bring the returns they expect from their efforts. They are conscious that they don't know how to write ads for themselves, and this acts as a deterrent against their trying it; therefore, they muddle along and get business in the usual way they were brought up to do. Now, I believe the scheme I have suggested is one that any dealer of ordinary intelligence and gumption can carry out and make a success of. There is no possible question about its attracting attention and arousing the interest of the community, for it is one of the fundamental facts of the social fabric that the main interests of people are wrapped up in their children, and whatever attracts the children is sure to interest their parents, especially if it is something that will give the children pleasurable occupation and benefit.

It is self-evident, also, that the friendship of every man, woman, and child in the community is something to be greatly desired, and when secured by the lumber dealer or any business man is a valuable asset and assistance in the growth of his business. The more you can get people to talk about you in a friendly and praising way the greater the attraction your yard will have for them when they want to buy anything you've got to sell. Business secured in this way is of the most enduring kind because it is actuated by the personal goodwill of the buyer. When you do an act that is a social benefit you advertise yourself, and when people think of building materials they think of you. So, then, if you can't write advertisements for the paper do something that arouses the interest of the children and you will attract the attention of the parents.—C. H. Ketridge, in the Mississippi Valley Lumberman.

The Danger Spots in Connection With Sales and Deliveries —How They Can Be Avoided

By M. L. Wuescher

A claim, in its final analysis, is the result of a mistake or misunderstanding. To treat this subject intelligently it is necessary first to determine definitely at what points claims develop, and their causes.

A careful study of the matter brings forth the fact that usually the causes of all claims develop at three given points:—

First—In taking the order from the customer by the salesman.

Second—Execution of the order by the mill.

Third—Inspection and tallying of stock on receipt of car by the customer.

In order to treat this broad subject in a logical manner, let us first consider the causes of claims, originating at the time the salesman solicits and accepts the order from the customer.

Experience teaches us that the usual causes of claims at the first point, or at the time of taking the order by the salesman, can be classified as follows:—

Making errors in the description or in the price of lumber in transmitting the order to the mill, and by not having all data pertaining to the order written into the order rather than in an accompanying letter.

Inserting wrong routing or incorrect rates in the order transmitted to the mill.

Making special agreements with the customer regarding stock and not sending sufficient information to the mill covering the transaction.

Not advising the mill on orders for special stock for what purpose it is to be used, if possible to ascertain this information, and in the case of orders for special worked stock not accompanying same with blue print, whenever possible.

Selling lumber on comparison.

Salesmen not being entirely familiar with conditions at the mill and its operation.

Liability of misunderstanding between customer and salesman, in the description of lumber or prices, in soliciting and accepting orders over the telephone.

How They Could Be Minimized or Eliminated.

Claims from the above causes could be minimized or practically eliminated if the salesman would pay close attention to the following:

All salesmen should have a standard and uniform method for writing up the order. This order should include all instructions, special routings, correct rate, and any other information, rather than to put same in an accompanying letter.

Salesmen should also be familiar with the routings and rates applying to their territory. In case the customer desires special routing the salesman should be very careful to see that the routing specified will not increase the rate to the point of destination.

Make no special agreements with customers as to the class of stock to be furnished, unless you advise the mill wherever it is possible, the use for which the material is intended. If the stock is worked special, accompany the order whenever possible with a blue print showing the correct working.

Lumber should not be sold on comparison with stock manufactured by other mills, for, in the event of a claim, there is no mutual ground for settlement, or an arbitrator on whom you can call.

All salesmen should be familiar with the conditions at the sawmill.

When an order is accepted over telephone be sure a confirmation is immediately sent you, and compare same with the order sent the mill.

Execution of the Order by the Mill.

Experience also teaches us that claims usually develop during the execution of an order at the mill from the following causes:

Errors in grade.

Errors in tallying.

Shortages.

Mis-manufacture of lumber.

Poor planing-mill work.

Errors in invoices and price.

Difference of understanding between the sales office and the shipping department.

Shipping lumber during unfavorable weather conditions.

Shipping green lumber.

Putting wrong routings in bills of lading.

Mill being forced to use equipment not adapted to order, especially during car shortages.

Not shipping proportion of the correct lengths.

Inspection of Stock on Receipt.

The customer and his assistants who receive the stock are only human; therefore, are liable to mistakes. The principal causes of claims and disputes originating with the customers may properly be classified under the following heads:

The human element, or the natural difference of opinion between

the employes of the customer and the employes of the mill, particularly in rallying and grading, for grading is not an exact science, and a reasonable variation of opinion between the inspectors should be recognized.

Rough handling and breakage of lumber when unloading same from the car.

Natural disposition of purchaser to compare the lumber of one manufacture with the lumber of another.

Actual mistakes in tallying and checking the lumber.

Extremely technical inspection by the buyer of lumber on a declining market.

Delay of shipment of the car beyond the time promised by the mill.

The settlement of disputes or claims must necessarily be done on an impartial and equitable basis, and should on their conclusion be satisfactory to both the customer and the mill. However, salesmen settling claims with customers should continuously bear in mind that they are in the employ of the manufacturer, and should guard his interest very carefully.

When a claim is filed by a customer, full and complete information should be submitted to the mill immediately, not simply advice that the car has been refused or that a claim has been made on part of the shipment.

Information for an Adjustment.

In order to handle the adjustment in a most efficient and most business-like manner, the following information should be furnished the mills:

Car and order number.

Condition of delivering equipment, with seal numbers, if any.

General condition of the load.

Full and complete report as maintained by the customer.

Full report of stock in accordance with your best judgment, including grade marks.

If stock has been unloaded, whether or not any of it has been sold or re-manufactured and the manner in which it is being taken care of, whether stacked in the open or under cover.

Best adjustment that is acceptable to the customer, with recommendations as to whether or not it should be accepted by the mill, and, if not, what other disposition you can make of the lumber.

All of this can be incorporated in one letter, so that definite, prompt, and final action can be taken by the mill without endless correspondence.

In conclusion, all salesmen should remember that claims mean monetary loss to the mill, and if by following some of the foregoing suggestions claims can be avoided, it will be much easier for salesmen and beneficial to the mill, to assist in forestalling disputes rather than to effect their settlement.

Sales of Lumber to South America

A report describing the markets for lumber in Chile, Peru, Ecuador, Colombia, Venezuela, Trinidad, and Curacao has been issued by the Bureau of Foreign and Domestic Commerce of the United States. It is entitled "Lumber Markets of the West and North Coasts of South America," Special Agents Series, No. 117.

Chile and Peru are the two big markets, although the lumber imported by those two countries is almost exclusively Douglas fir. Ecuador is unique in using practically no imported lumber, but would be a promising field if the tariff were low enough to permit American lumber to enter at a lower price. Practically all the lumber imported by Colombia and Venezuela comes from the United States, but the amounts are small—2,000,000 board feet annually for Colombia and 3,500,000 feet for Venezuela. The limited use of wood in both countries (total consumption only 13,000,000 feet in Colombia and 8,000,000 feet in Venezuela), in comparison with cement and other materials, points to the need of a lumber-advertising campaign, through which these markets might be greatly extended, says the report.

Among the topics treated in the report under the various countries are the domestic resources and industry, the lumber imports and their distribution, the species, dimensions, costs, prices, uses, etc., of imported lumber, business conditions, and suggestions for expanding American trade. Supplementary data are given concerning special wood products—furniture, matches, cars and ships, ties, poles, boxes and shooks, wood pulp, barrels, flooring and ceiling, and sash, doors, and blinds. There are also lists of lumber importers and dealers, lumber yards, deposits, mills, wood-pulp consumers, principal mining industries, nitrate, oficinas, and railroads of Chile, and sawmills importers, and dealers of Peru, Ecuador, Colombia, Venezuela, and Trinidad. This report completes the record of the investigations conducted by the bureau into the lumber trade of South America, a similar report for Argentina, Uruguay, and Brazil having been published some months ago.—U. S. Commerce Reports.

Though the Canadian National Exhibition only dates back to 1879, the first Exhibition, from which the C. N. E. grew, was established in Toronto in 1846.

Miscellaneous Items of Interest to Lumbermen

Mr. Henning Helin, technical manager of the Wayagamack Pulp & Paper Company, has been elected a director of the company.

Canada's exports of forest products during the twelve months ending April for the past four years were valued as follows:—1916, $51,629,899; 1915, $42,705,384; 1914, $42,797,161; 1913, $43,646,733.

Readers may be surprised to learn that there are manufacturers still using flint and who do not seem to want to consider garnet. Agreed that flint is sharper at first, but is it not a fact that being less hard it soon wears dull?

An interesting order of which were were advised recently while calling upon a Toronto wholesale firm is one they received for red pine deals for India. The stock was 4-inch, 3-inch, and 2-inch, unsorted, and amounted to 100,000 feet.

The timber returns for the month of May, issued by the B. C. Minister of Lands, show that the total scale of sawlogs for the province amounted to 94,771,871 ft. b.m., in addition to 335,573 lin. feet of piles and poles, and 20,388 cords of ties, shingle bolts, etc.

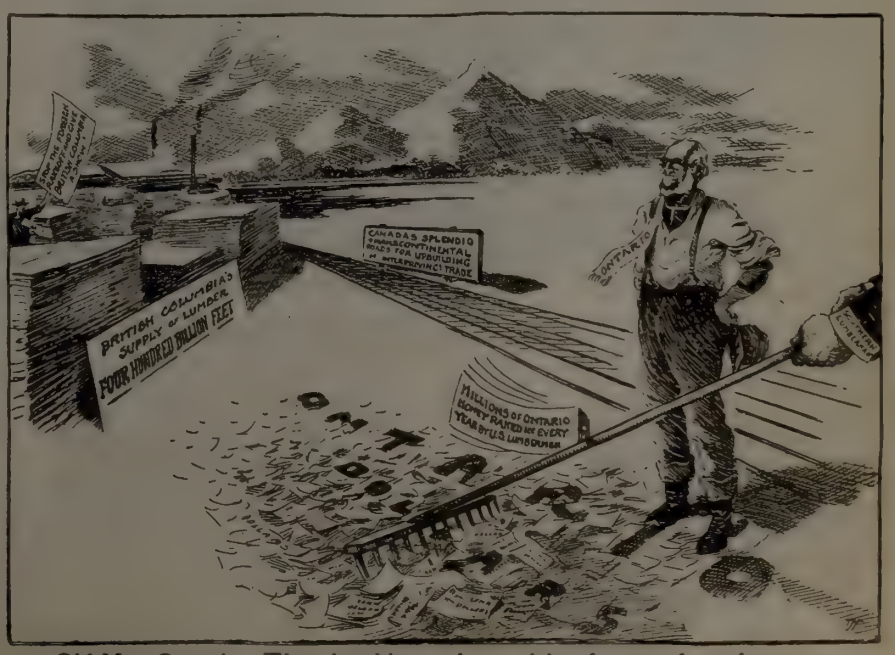
A New York cable report states that the International Paper Company has plans made for a 200 ton newspaper mill to be erected in Canada. It is officially stated that this mill will produce newsprint, round wood pulp and a surplus production of sulphite pulp.

Reports received by Inspector Geo. D. McKay, state that a number of the larger B. C. Coast logging operators are closing down their operations for about four weeks during the last two weeks of July and the first two weeks in August, in order to prevent a glut of logs.

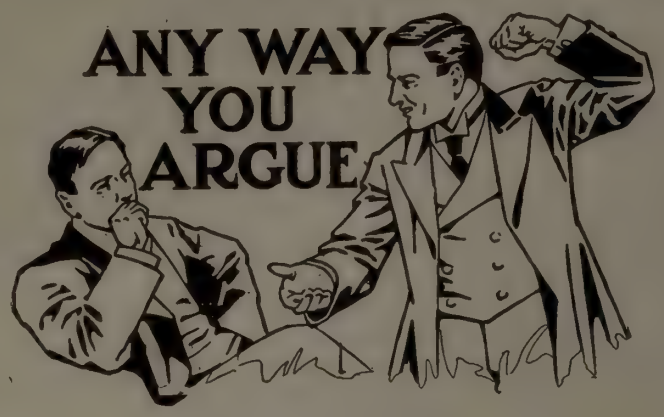
In a letter received recently from A. I. Beaton, Lieut.-Colonel, Assistant Engineer-in-Chief of the South African Railways, he says:—"We are going to experiment with some of your timber for sleepers—"Douglas fir. If they prove satisfactory there should be a great market here for them."

A report received at Ottawa from Trade Commissioner Sontum, of Christiania, Norway, says that the export of woodpulp by Sweden to Great Britain may again be allowed. While Norwegian prices for bleached sulphite for export are $186.67; easy bleach, $160 to $173.33; strong, $146.67 to $160, and kraft soda, $133.33 per long ton, net cash to makers, f.o.b. Norwegian ports, in Sweden prices keep about $66.67 lower.

Crown Timber Agent E. W. Beckett reports from New Westminster that the small mills in the Fraser Valley are exceptionally active this season and that the lumber business is showing greater signs of prosperity than at any time during the past three years. Many shingle mills also are springing up at points where merchantable cedar is available in Canada, and are buying stocks extensively from farmers.


BRITISH COLUMBIA'S SUPPLY OF LUMBER
FOUR HUNDRED BILLION FEET
CANADA'S SPLENDID TRANSCONTINENTAL RATES FOR UPBUILDING OF INTER-PROVINCIAL TRADE
MILLIONS OF ONTARIO MONEY PAID TO U.S. EVERY YEAR FOR LUMBER
ONTARIO

Old Man Ontario—There's a big market waiting for you down here, son. British Columbia—I'm a coming right after it.



"There's One Best Way"

There's one best way to buy and sell special lots of lumber, second-hand machinery, timber lands, etc., and that is by inserting a small advertisement in this department.

Every mail brings word of big results from these small ads. Last week a large lumber firm sold their entire 1916 cut, several million feet, through an advertisement on this page

What Have You to Advertise?

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch, each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Wanted—Quotations on 1¼ in. and 1½ in. Hard Maple lumber. J. H. Connor & Son, Limited, Ottawa, Ont. 15-16-17-18

Wanted—1-in. Dry Beech. Must be plump in thickness, sufficient to dress to 7/8 and 1/16. Please quote prices. State quality and what year cut, at once. Shurly-Dietrich Co., Ltd., Galt, Ont. 15-15

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Birch Wanted

WANTED—10 Cars 2½ in. No. 1 Common and Better Birch for Fall delivery. Buffalo Hardwood Lumber Company, Buffalo, N.Y. 14-17

Wanted—Lath

Please quote us your best cash price on the following, either delivered Cleveland, Ohio, or F.O.B. Mill, giving rate to Cleveland:

⅜ x 1½ — 4 ft. No. 3 White Pine Lath.
Same—Red Pine.
Same—Spruce.
⅜ x 1½ — 4 ft. No. 2 White Pine Lath.
Same—Mill Run White Pine Lath.
Same—Spruce.

THE AMERICAN LUMBER CO.,
1502 New England Building,
12-15 Cleveland, Ohio.

For Sale–Lumber

For Sale

2 000 Cedar Poles 25 to 45 ft. long; 4,000 Cedar Fence Posts 4 in. and up, 8 ft. long; 2,000 No. 2 Cedar Ties, 3 in. face and up. Lynch & Ryan Lumber Co., Marmora, Ont. 12-15

For Sale

One car 3-in. Practically Clear White Oak, all 12 ft.

Two cars 1½, 2, 2½, and 3 in. No. 1 Common and Better Dry Red and White Oak, all Ohio stock.

The Probst Lumber Company,
15-18 Cincinnati, Ohio.

For Sale

3 cars 1 in. Cull Black Ash.
3 cars 1 in. Cull Spruce Boards.
8 cars 2 in. Maple, No. 2 and 3 Common, about 20 per cent. No. 2. All old dry stock.
3 cars 7/8 log run Elm, sawn round edge.

A. H. CUMMINGS & SON,
15-15 Coaticook, Que.

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
875 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que.

For Sale–Machinery

Saw Mill Machinery For Sale

Two (2) New Waterous Band Mills.
Two (2) 2½ A. Log Carriages.
Two (2) Gun Shot Steam Feeds.
One (1) Dittbener Band Re-saw.
One (1) New Champion Edger No. 405.
One (1) Standard Two-saw Trimmer.
One (1) Overhead Slat Slasher.
Lath Mill Machinery.
Rolls and Drives.
Transfers.
One Refuse Hog.
Sorting Table.
Filing Room Machinery.
Live Rolls, Boxes, Shafting and Driving Chain.

All of the above is new and was never used

For particulars write to Bayl ss Pulp & Paper Company, Binghampton, N. Y., U.S.A.

Machinery can be seen at any time at Beaupre, P. Q. 14-15-16-17

Saw Mill Machinery

Complete equipment for 40,000 capacity mill, including belts, conveyors, etc., with or without boilers and engines. For sale cheap to quick buyer.

St. Maurice Lumber Company,
15-15 Gaspe Harbor, P.Q.

Machinery For Sale

A small "Ad" under this heading, telling of what machinery you have for sale, will immediately put you in touch with buyers. Send us a list of machinery items and we will quote you on a small "Ad." Send the list now, before you forget about it. 1-t.f.

FOR SALE

Woodworking Machinery

1 Woods No. 32 Matcher; 1 Goldie 10-in. Moulder; 1 Goldie 24-in. Matcher; 1 Cowan 42-in. Sander; 1 Jackson Cochrane 36-in. Sander; 1 Egan 36-in. Single Surfacer; 1 McGregor-Gourlay 2-drum 30-in. Boss Sander; 1 Egan 30-in. 2-drum Sander; 1 CMC 8-in. 4-side Sticker; 1 McGregor No. 212 30-in. Double Surfacer; 1 No. 180 Berlin 30-in. Double Surfacer; 1 American No. 26 Hardwood Matcher, with boring attachment and end matcher; 1 Ballantyne 12-in. Sticker.

P. B. Yates Machine Company, Limited,
13-t.f. Hamilton, Ont.

Machinery For Sale

Woodworking Machinery for sale, consisting of Planers, Band Saws, Hardwood Flooring Machines, Mortisers, Buzz Planers, Shapers, Mitre and Tennoning Machines, etc., also Steam Boilers and 300 H.P. Steam Engine, Shafting, Pulleys, and large quantity of leather belting. Also a complete Sawmill outfit, a large stock of Rough and Dressed Lumber, Sashes, Doors, etc., manufactured and in process of manufacture. Reply to the Tobin Manufacturing Company in Liquidation, Bromptonville, P.Q. 12-15

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

Young man, four years experience in sawmill office as stenographer and bookkeeper, desires change. Good references. Box 424, Canada Lumberman, Toronto, Ont. 14-16

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

A few good saw mill men wanted, good board and lodging, steady work until snow flies.

JOHN B. SMITH & SONS,
15-15 Callender, Ont.

RELIABLE EXPERIENCED MEN WANTED to scale, grade or tally pine lumber at saw mill, Midland, Ont. Only competent men considered. State full particulars.

Holt Timber Company, Ltd.,
15-15 Midland, Ont.

Business Chances

Timber Tract and Mill

Valuable Timber Tract, British Columbia; nearly 10,900 acres; 60,000,000 feet of timber; on railroad. Local market for mine props. First class mill, 30,000 feet daily capacity. Very attractive proposition. George W. Grant, P. O. 1676, Calgary, Alta. 13-16

Business Opportunity

Make your opportunity knock at the door of every Lumberman in Canada by placing a small "Ad" about it in this column. Our rate is $2.10 per inch per issue. Now is a time when monied men are seeking good bargains. What have you to offer? 1-t.f.

Business Opportunity

Wanted immediately a high-grade, experienced man to take charge of all or part of a pine logging and manufacturing operation of good size in Ontario. A fine place for the right man. State full particulars needed for arriving at judgment in first letter. Please do not apply unless you can make good. Box 426, Canada Lumberman, Toronto, Ont. 15-16

Timber Limit For Sale

Thirty-six square mile limit, North Shore, License allows cutting all kinds of timber. Contains Hemlock, Birch, Spruce, Pine, Cedar Ties and Poles, Pulpwood and Hardwood. Railroad runs through part of berth. Cheap operation. Splendid opportunity for small mill. Apply Box 423, Canada Lumberman, Toronto, Ont. 13-t.f.

Saw Mill

For sale on Muskoka Lakes, saw mill complete; daily capacity 20,000 feet. Good trade connection; plenty of timber available. Rare opportunity. Must be sold. Owner deceased. Terms reasonable. Box 418, Canada Lumberman, Toronto, Ont. 12-15

For sale or to rent—The long-established business of The Amherstburg Planing Mills & Lumber Yards. Buildings are fully equipped and contain 15,000 feet of floor space and dry kiln. Splendid prospects. Apply to

The J. R. Park Estate,
15-16 Amherstburg, Ont.

For Sale—Modern Saw Mill

and 300 Million feet of standing timber in British Columbia, most advantageously located on beautiful lake and main line of Transcontinental Railroad having advantage of $3 per thousand feet in freight rates to best markets on the Continent. Logging and manufacturing conditions ideal and very economical. A fortune for the right parties. Will sell on easy terms and may accept other desirable property in part payment. Principals only.

A. C. FROST COMPANY,
Corn Exchange Building,
14-17 Chicago, Illinois.

Miscellaneous

Several carloads of sawdust.

GEORGE A. OLDREIVE,
15-15 St. Thomas, Ont.

For Sale—Well equipped small seagoing tug, name "Shirley." Marine boiler, condenser, steam anchor winch, etc., 55 ft. x 15 ft. beam. Draft 7 ft. Can be seen at Quebec, care of J. L. Lachance Limited. 15-16

Complete Logging Outfit

En bloc or in part, for sale, consisting of sleighs, chains, snow plow, cookery outfit, saws, axes, blacksmith's outfit, etc. Located in Northern Ontario. For particulars apply Box 100, Canada Lumberman, 119 Board of Trade, Montreal. 15

Market for Building Timber in Netherlands

At a meeting in Amsterdam of an association of employers and workmen in the building industry, gloomy reports were made regarding the supply of timber for building purposes. Holland has more woodlands than most foreigners suppose, but they are far from sufficient to supply the needs of the country for building timber, and without imports from other countries few houses could be built in the Netherlands.

In the opinion of the association of builders the situation is serious. Timber is now imported from Germany, Sweden, and Norway. The quantity obtainable is small, and most of it is of inferior quality. Continued supplies from Germany can not be relied upon, the association believes, as the German Government has need of the surplus timber and will pay a higher price than this country has paid.

The building association gives warning that unless relief measures are taken the supply of wood most needed for construction work will be exhausted within a few months and great stagnation and unemployment in the building trades may be expected. Already several woodworking factories have ceased operations.

This situation suggests that American manufacturers and exporters of building materials might profitably give renewed and special attention to the Dutch market, with a view to both the present and the future.—U. S. Commerce Reports.

Cost of Waste Disposal

A great deal has been said concerning the quantity of wood wasted in milling operations, in the form of sawdust, edgings, blocks, and scraps of various kinds, and the public is fairly familiar with this subject; but investigations have now been made which claim to show what it costs to dispose of this waste. It is asserted that every thousand feet of lumber sawed in the United States is called upon to pay from eleven to twenty-two cents to meet the cost of getting rid of waste material. The average figures show a cost of seventeen cents per thousand feet, but in some mills it runs as high as twenty-two cents and in others as low as eleven. The yearly total is about $6,000,000 for the whole United States.

These figures are furnished by the Forest Products Laboratory at Madison, Wis., and it appears that this investigation was the first ever conducted in a thorough manner to determine what it costs to burn the refuse matter at sawmills.

Union Lumber Co.
Limited

White Pine Cuts

MILNET (Sellwood Jct.)—1915 cut

100,000—2 x 4 and up 10/16—No. 3 cuts and better
50,000—6/4 x 4 " " " "
50,000—1 x 7 " " " "

SPANISH—Bone Dry

18,000—2 x 4 and up 10/16—No. 2 cuts and better
(80 per cent. No. 1 cuts and better)
17,000—5/4 x 4 and up 10/16—No. 2 cuts and better
(66⅔ per cent. No. 1 cuts and better)

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

The Best Lath Market

WE NEED 100 MILLION LATH
annually and can use
SPRUCE, BALSAM, JACK PINE,
RED PINE, WHITE PINE or HEMLOCK

—Specifications—

⅜ x 1½—4 ft.—50 pcs. per pack
No. 2 and No. 3 grades preferred.

Write us when you have Lath to offer. Will contract.

Cannon River Lumber Co.
"Lath Specialists"
Webster Bldg. CHICAGO, Ill.

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

Review of Current Trade Conditions

Ontario.

Probably the most important feature in connection with the lumber trade of Ontario at present is the fact that the manufacturers in the northern sections of the province are up against the wall in regard to the labor problem. From all parts of the province the same story comes, namely, that the manufacturers cannot find a sufficient number of men to enable them to load their cars, and at the same time keep their mills running. Each day that passes the situation is becoming more critical, and it has already resulted in a considerable reduction in output. Unless some relief, which at present cannot be figured upon, is experienced an extensive curtailment is probable. The effect of this upon the retail trade is rather difficult to anticipate. Everything naturally depends upon the demand experienced by the retailer. Even with a moderate amount of trade, however, it seems to-day that the reasonable course for the retailer to pursue is to anticipate the requirements of his trade and place orders in advance, as a scarcity of stocks at mill points and a scarcity of labor for loading cars will make it unusually difficult to get stocks in the fall if there is an improvement in trade, or even if trade goes along on a quiet basis.

So far as the actual volume of trade is concerned to-day, most of it is concerned with the shell box business. The demand for white pine continues strong. Red pine production this year is likely to show a decline of quite 30 per cent., as compared with last year. The trade in spruce is fair, and the price advances which took place early in the spring are steadily maintained.

The demand for British Columbia shingles is active, and prices continue firm at $2.40 for XX, $3.35 for XXX, and $3.70 for XXXXX. The demand for XXXXX is improving gradually, the trade having taken kindly to the decision of the manufacturers not to make any more XXXX.

The large war orders that were given out recently for shell boxes have resulted in a good demand for the lower ends of hardwoods. It looks as though stocks of low ends will be practically off the market before long. The consumption has already almost wiped out dry stocks, and will soon be right on top of the new cut in the lower grades. In the upper ends there is the usual midsummer lull. Outside of the shell box business the trade is quiet, with the exception of basswood, stocks of which are scarce. The moulding trade is using up large quantities of basswood. Those who have been enquiring into the available stock of basswood report that a shortage already exists. The major portion of the trade are only now waking up to this fact.

Eastern Canada

Advices from St. John, N. B., state that the export trade to Great Britain has practically come to a standstill for the time being, as English buyers have stopped making purchases of deals for future delivery. No prices seem to interest them at present and they are apparently waiting until the freight situation clears up. It is reported that stocks of deals in Great Britain are heavy and that the demand is light. At St. John, the stocks of deals are fairly extensive and are increasing, as a result of the lack of forward business. The local trade is also very quiet, building operations being almost nil. Prices for low grade stocks are easier and stocks of refuse are extensive at all north shore points. Laths continue unsteady and shingles show no change. The American market is also unsteady, but is expected to improve as a result of the passing of the Mexican war cloud.

The hardwood market at Boston continues steady. The demand for eastern spruce has improved a little during the past fortnight and quotations are stiffer, but there has not yet been any actual advance in the base quotation on frames. Retailers apparently have come to the conclusion that they need not look for any further decline and are placing orders. An advance in spruce quotations to $26 is expected in some quarters. Curtailment of production has been successful in assisting the market. There is an improved call for random and the tendency is upward; the range is as follows: 2 x 3 inches, $20.50 to $21; 2 x 4 inches, $21 to $21.50; 2 x 5 and 2 x 6 inches, $20.50 to $21; 2 x 8 inches, $23.50 to $24; 2 x 10 inches, $25.50 to $26.50; 2 x 12 inches, $26.50 to $27.50.

The hemlock market at Boston is not as firm as it was a month ago, having been adversely affected by the weakening of the southern yellow pine and North Carolina pine markets. The full range of quotations on eastern hemlock boards, stock lengths of 10, 12, 14 and 16 ft. clipped, is still $21 to $22. There is a fair demand for shingles at Boston and the outlook for trade during the balance of the present season is good. Sales of good brands of white cedar extras are reported lately at $3.55, and few good makes, if any, can now be had at less than $2.50. Clears are bringing from $3.10 for poor ones, up to $3.30 for the best. Most of the current business is on a basis of about $3.20. There is a fair trade in red cedar shingles at about $3.85. The lath market is quiet, many retail yards appearing to be well stocked.

United States

Reports received from many lumber producing sections of the United States indicates that the railroad companies are again coming into the market and placing heavy requirements. They are specially active in their demand for ties, ordering more than they have for many months past. It is also reported that the French Government are in the market for six million yellow pine ties. A heavy curtailment movement has been inaugurated throughout the south, reducing the output by more than 25 per cent. Heavy storms and floods in the gulf coast and south Atlantic districts have also increased the curtailment. Prices in general have not come back to their high point of a few months ago when the decline started, but apparently the downward tendency has been checked and the move is now in the other direction. The strike of longshoremen and dock workers on the Pacific coast for the purpose of introducing the closed shop, irrespective of the fact that they are highly paid for unskilled labor, has almost put an end to coastwise lumber shipping in Washington and Oregon.

Northern pine mills report a good demand and that practically all stocks in shipping condition are moving out. Northern hemlock and hardwoods are in a similar situation. At Chicago, the northern pine trade shows no change. The demand is only fair, being best for the lower grades for box manufacturing purposes. There is a moderate business in Norway and spruce. At Buffalo, the demand for northern pine is smaller than it was a few weeks ago, largely on account of the holiday season. The best demand is for the lower grades and prices are holding firm. The demand for northern pine at North Tonawanda is less active. Some of the docks are piled with stock which it has been impossible to move on account of unsatisfactory labor conditions. Some dealers are considering the advisability of bringing in negro labor. There is not much change in the hemlock situation at Chicago. The best demand is for merchantable and No. 1 stocks. It is expected that the improved crop situation will stimulate the demand for hemlock from country yards. At North Tonawanda, the hemlock market is not so strong as it was earlier in the season. Prices are unchanged. The hemlock market at Buffalo continues firm, especially for the better class of stock.

Hardwoods at Chicago continue quiet and are expected to remain so during the rest of the midsummer season. The outlook is good for an active fall trade, both in northern and southern stocks. There is a good demand for fancy woods, such as walnut and mahogany, which are moving at good prices. The leading item of northern hardwoods is still birch. At Buffalo, the best market in hardwoods is for mahogany. Plain and quartered oak are rather neglected and prices are easier than they were a few weeks ago. There is a fair demand for maple and ash, especially in thick stock, and prices are holding firm. There has been a general seasonable decline in trade.

Great Britain

The latest reports from Great Britain tell of a considerably lower basis of prices, both in the c.i.f. and spot markets. The general feeling, as a result, is that trade has reached a much safer level. Unquestionably there is a better tone than during the past few weeks. Nevertheless, although values are far below what they were a short time ago, they are still high enough to permit of further large drops in price per standard, and this risk, although not considered to be a really immediate one, is always present. Apparently the war situation is regulating the volume of trade very closely and the possibility of important changes in the military situation is inducing the majority of the trade to play safe and not tie themselves up with large commitments until the future appears more definite.

Arrivals on consignment are not depressing the market in Great Britain at present. Many of the vessels recently chartered on speculation are being diverted to other markets. C.i.f. prices continue to show reductions, following the course of the freight market pretty closely. The situation in connection with Swedish battens is an interesting example. In March and April good stock of this kind from the lower gulf was valued at about £30 per standard. Buyers can now import for about £5 per standard less, and yet are not eager to purchase. As to the permanence of the drop in price, many opinions prevail. As a matter of fact, a depression in spot prices is generally

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

felt at this time of year when the first arrivals of Baltic and White Sea stocks come upon the market.

Deliveries at London docks continue fairly good, but do not represent the actual quantity going into consumption. Apparently yards are storing considerable holdings on their own premises. Consumption is practically all for special purposes connected with war work, the building trade having practically disappeared and municipal requirements being reduced absolutely to the minimum. Stocks in London at the end of June showed very few changes as compared with those of a month previous. Forward buying at London is slow and is not expected to improve until the freight situation becomes clearer. At Foy, Morgan & Company's latest auction sale 3rd bright Ottawa yellow pine from Montreal, 3 x 11 in., 12 to 16 ft., sold at £30 5s. Third bright Ottawa spruce from Montreal, 3 x 10 in., 9 to 16 ft., sold at £27 10s. Unsorted spruce from St. John, 3 x 9 in., 3 to 18 ft., brought £25 10s. Hemlock from Halifax 3 x 9 in., 8 to 16 ft., sold at £21 10s, and another lot of 3 x 7 in., 7 to 17 ft., from Halifax, brought £19 15s.

At Liverpool, the trade situation has been disturbed by the drop in freights. The demand has fallen greatly. The spruce market is not so steady, although the demand is still fairly strong. The supply, however, has exceeded the demand and stocks are heavy. At Manchester, prices are a bit easier, especially for soft woods. Spruce is selling at £30 for 7 in. and 8 in., and about £32 10s for 10 in. and 11 in.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Trade—No English Buying

St. John, N. B., July 21; (Special to the Canada Lumberman):—During the past two weeks practically all sales and shipments from this port have ceased. The English buyers refuse to purchase any deals for future delivery at any price, preferring to wait until the freight situation clears up; until such times as a stationary rate will be established. This may occur in the near future or may be delayed for some time. The war will regulate this question entirely. Stocks of deals on the other side are said to be heavy with little or no business offering. A considerable quantity of deals are held here by the shippers, and no shipments being made causes the stocks to increase rather than decrease. All the shippers have many millions piled in lighters, which deals come into St. John on cars from interior mills and are loaded from cars to scows as the owners cannot afford to pay demurrage on cars. It is said that at least ten million feet are piled in lighters awaiting shipment, besides the stocks piled at mills on wharves. No price can be quoted. There is none.

Locally, the market is extremely dull, very little building is being carried on and carpenters are complaining that there is very little work to be had. What the balance of the year has in store remains to be seen. Prices for low grade stocks are easier. Large quantities of refuse are held here and all along the north shore. Factory prices are unchanged, but many times it is said of late they are shaded.

Laths remain as unsteady as long lumber. Shingles are unchanged as far as the local manufactured article is concerned.

The American market is very unsteady but is said to have regained slightly from its slump of ten days ago. War troubles seemed to have caused very much uneasiness with our friends below the border, but now that the question has been set aside, a better feeling should arise, and as hot weather changes to cooler, a stiffening of prices should be felt. The present prices which are being offered for American goods would not leave any profit to the shipper at St. John whose logs, in fact, cost more than the sawn lumber would now leave.

The slackness of the market now being felt here will no doubt be of short duration; at least we hope so.

Logs are coming forward out of booms in goodly quantities, the rafting operations should be finished by the middle of August, about two-thirds of the cut of logs have now been rafted.

Improvement Noted in Montreal Trade

Montreal, July 26.—(Special to the Canada Lumberman.)—A slightly better demand for local account is in evidence, and from now until the fall this condition is likely to continue. Several lumbermen look for a decided hardening in values later on, basing their opinion on the view that the next cut will be considerably restricted owing to the shortage of labor, while the advance in wages, camp supplies, etc., will have a material influence in increasing the cost of getting out lumber. A large number of men hitherto available for lumbering have joined the colors, and those who remain can command a substantial increase in wages. Montreal companies not connected with the lumber trade report that it is very difficult to secure men, owing partly to the inducements offered by the concerns making munitions and partly to the scarcity of foreign labor.

Some good orders for British Columbia fir for the Maritime Provinces have been placed in Montreal.

The sash and door business has picked up a little. Box makers, too, are fairly busy. An order for 30,000 nine-pounder boxes has been given out here, and the Imperial Munitions Board offered further and larger orders, but at such prices that the contracts were refused. Some firms have learned by experience that there is no money on the basis offered by the board; and, with continual rises in the price of hardware, etc., the chances are that a loss will be incurred. Manufacturers want the business, but they decline to take it on values which are below actual cost. In some instances, where contracts have been let at absurdly low prices, makers have, it is stated, fallen down, and the orders have had to be replaced at higher rates.

Shipments to the United Kingdom have been restricted owing to a break in the Lachine Canal, preventing barges from reaching the harbor. Repairs were rushed, men working day and night. Rates have shown an upward tendency, being in the neighborhood of 300s. per standard. So far tonnage has been more abundant than was generally looked for, and it is now announced that the Government has released three more vessels—the Northland, Southland, and Canada, of the White Star Dominion Line—which have been engaged for many months in the Mediterranean service.

The pulp and paper sections are again buoyant. Many enquiries for sulphite cannot be entertained on account of supplies having been sold for a long time ahead. Prices for such pulp as is available are very high. Ground wood is also a strong market, and there is no difficulty in selling all the production. News print contracts are being renewed at advancing prices. The demand is excellent, and indications are in favor of this condition prevailing for many months. There are, of course, contracts running at a comparatively low level of prices, but those which are terminating can only be renewed at the higher values now existing. One result of the active market in pulp and paper is the building of other mills, which will come into operation next year. The Canadian pulp and paper industry is expanding at a good rate, especially in the Province of Quebec, and 1917 will see a substantial addition to the output.

Shipping Activity at Parrsboro

Parrsboro, N. S., July 21; (Special to the Canada Lumberman):—During the past fortnight a Norwegian steamer and two tern schooners have sailed from this port for the United Kingdom with cargoes of deals and scantlings aggregating 2,860,490 feet. Within the same period three schooners sailed for United States ports with lumber. Their cargoes comprised 493,850 feet of spruce and hemlock boards and scantling and 165,000 laths.

A steamer and a ship (both Norwegian) and three tern schooners are now loading deals here for trans-Atlantic ports. They will carry about six million feet.

The four-masted schooner being built at Port Greville will be launched about the middle of August. The other schooners along shore will be later getting off, but will all load for the United Kingdom.

Glasgow Market Report

Cant & Kemp, Glasgow, Scotland, in their quarterly timber market report, under date of July 4th, say:

The quarter now ended marks a distinct change in the conditions which have prevailed since the war began. The eagerness of buyers to purchase goods arriving—which has been a marked feature for some time past—has now practically ceased. The uncertainty of the freight market is the cause of this change. Lower freights have been accepted recently by shipowners, and buyers are no longer purchasing freely, as they feel that the risk of further freight reductions compels them to purchase only from hand to mouth. Business is consequently very difficult, and, until the freight position becomes clearer, is likely to remain so. The consumption of all classes of wood goods is practically confined to direct or indirect Government requirements, as the high costs do not permit of ordinary work being carried on.

In spite of the prohibition of hard woods, the goods which have been shipped prior to the date of the proclamation, and now arriving, are meeting with a slow sale. Consumers were well stocked, and

J. & D. A. Harquail

Company, Limited

Manufacturers of Lumber

Extensive New Brunswick and Quebec timber limits, abundant with Virgin Spruce, Pine and Hardwoods.

Twenty years' experience in Milling and Manufacturing, together with a practical knowledge of Building and Architecture, is why our Customers tell us that the Dressing, Grading, and Manufacture of our Stock is just a little better than they expected.

Large stocks of 1 in. Spruce Lumber always on hand.

Try a car of our Air-dried Dressed Spruce.

We also make a Specialty of Kiln Dried Stock.

Our personal attention given to every detail.

Write, wire or phone us for quotations.

Established 1894 ***Incorporated 1908***

Campbellton, New Brunswick

have now to contend with a shortage of employees through enlistments.

Shipbuilders continue well employed with Government work, the result being that for the half-year just ended the total launches for the Clyde amounts to 16 vessels, measuring 58,063 tons, as against 129 vessels of 267,677 tons for the same period in 1914. The yards, however, are all busy, and a good number of enquiries are reported for mercantile vessels. Wagon builders have been very busy on repair work, but no new orders of any account have been placed for rolling stock. Any parcels of wagon oak planks arriving meet with a ready sale at good prices.

Quebec Waney boardwood.—Stocks have increased, but the enquiry is very limited, being next to "nil."

Quebec red pine.—The stock of timber is "nil." The small stock of deals is sufficient for the present demand.

Quebec oak.—The stock is very much reduced. High prices can be obtained for first-class parcels.

Quebec elm.—The stocks are light and values rule high. Good parcels would meet with a ready sale.

Ash.—The stock is not heavy, but quite ample for the demand. Quotations are: 5/6 to 6/6 per c. ft. for first-class parcels of logs, and from 4/ to 6/ for planks and boards, according to quality and specification.

Birch.—The stock returned is light, but considerable quantities have arrived, which do not yet appear in this return. The demand for consignment parcels is weak, as buyers have mostly contracted for their needs, and are not inclined to buy at present prices. Quotations are: Logs, 4/6 to 5/6; planks, 3/6 to 4/ per c. ft.

Quebec yellow pine deals, etc.—The stocks are much heavier, and chiefly in brokers' hands. The demand is very restricted, and shipper's prices are not easily obtained. Quotations are: Firsts—Broads, 6/6 to 7/; regulars, 6/ to 6/3; undersized, 4/9 to 5/. Seconds—Broads and regulars, 5/ to 5/6; undersized, 4/ to 4/3. Thirds—Broads and regulars, 4/ to 4/6; undersized, 3/8 to 3/10½. Fourths—Broads and regulars, 3/9 to 4/; undersized, 3/6 to 3/7; good sidings, 5/6 to 6/6—all per c. ft., according to specification.

Quebec spruce deals. — The stock is much increased, but the demand has fallen off. Quotations are: 9-inch and up, 3/10 to 4/2; 8-inch and under, 3/5 to 3/9 per c. ft.

Lower port pine and spruce deals.—This stock is also heavier, and quotations are: 9-inch and up, 3/8 to 4/; 6 to 8-inch, 3/3 to 3/7 per c. ft.

Liverpool Trade Conditions

Smith & Tyrer, Ltd., Liverpool, Eng., in their monthly market report, say:

Hardwoods.—Prices are well maintained, and stocks are getting low. Spruce deals have suffered a setback owing to the reticence of the buyers. The serious fall in freights has contributed largely to the weakness of the situation. Hemlock is difficult to move. Birch, both logs and planks, is very slow; and, although the prohibition on planks has been provisionally withdrawn, there is no revival of the demand. Pine, notwithstanding light stocks, is weaker. Pacific Coast woods.—Although more space is available, business is on the dull side.

London Market Report

Churchill & Sim's' wood circular, under date of London, July 5th, says in part:

The month's importation to London has been about on the lines of the 1915 totals, except that, from the White Sea, shipments were accelerated this season owing to the number of steamers loaded over the ice in the late winter and early spring months. In spite of a somewhat increased supply, there has been no great addition to the stocks stored in the London docks, deals being still in small compass, while battens and rough and prepared boards are rather more plentiful. The demand has been none too satisfactory, and the total deliveries from the port for the half-year show a decline of some 13,000 standards, of which June is responsible for 3/4,000 standards. Circumstances have combined to make importers very chary of committing themselves to further purchases, even at the lower prices now current, the principal factor being undoubtedly the decline in the Swedish rates of tonnage and the disappointing volume of enquiry for stock.

From the St. Lawrence there has been imported: Pine deals, 39,000 pieces, against 16,000 pieces in 1915; spruce, 287,000 pieces, against 126,000 pieces in 1915; birch planks, nil, against 6,000 pieces in 1915; and from New Brunswick, etc.: Pine deals, 4,000 pieces, against 3,000 pieces in 1915; spruce deals, 328,000 pieces, against 1,134,000 pieces in 1915; birch planks, 28,000 pieces, against 50,000 pieces in 1915.

A few pine deals have arrived, but there is little change in the position of the stock, and prices have only been slightly affected by the general apathy of the demand. Some large quantities of red pine were sold during the month, at values which showed some weakness, directly traceable to the lower quotations which the decline in freights has made possible. The supply of spruce to the London market was only about one-third of the 1915 total to date, but prices are lower and buyers nervous of further weakening in the immediate future. This may cost to pass, but the position will want careful watching, the general position of whitewood being a strong one, and tonnage demands in other trades may, at any moment, completely alter the complexion of the market.

Liverpool and Manchester Stocks

The following report upon Liverpool and Manchester stocks for the month ending June 30th, 1916, is furnished by H. W. Lightburne & Company, Liverpool, and their St. John, N. B., representative, John E. Moore & Company, Ltd

Spruce and Birch
Month Ending June 30th, 1916.
Liverpool

	Import			Consumption			Stock		
	1914.	1915.	1916.	1914.	1915.	1916.	1914.	1915.	1916
N.B. & N.S. Spruce & Pine, Stds. ...	4,910	1,610	2,990	2,500	1,770	1,010	8,070	5,210	7,990
Birch Logs, Loads	340	240	220	300	20	160	680	260	420
Birch Planks, Stds.	267	121	164	339	73	91	369	115	376
Manchester									
Spruce, Stds.	12,320	9,970	3,860	3,630	2,400	1,740	17,200	10,350	9,040
Birch Logs, Loads	840	780	0	220	120	160	1,160	660	320
Birch Planks, Stds.	230	103	212	97	55	73	630	152	466

Stocks in Manchester and Liverpool Combined
Spruce

	1912.	1913.	1914.	1915.	1916.	
Manchester	11,640	8,400	17,200	10,350	9,040	
Manchester	11,640	8,400	17,200	10,350	9,040	
Liverpool	11,610	6,970	8,070	5,210	7,990	
	23,250	15,370	25,270	15,560	17,030	Stds
Birch Logs						
Manchester	720	540	1,160	660	320	
Liverpool	1,240	600	680	260	420	
	1,960	1,140	1,840	920	740	Loads
Birch Planks						
Manchester	564	485	630	152	466	
Liverpool	928	636	369	115	376	
	1,492	1,121	999	267	842	Stds.

Salesmen's Hotels, Expenses and Wages

In the earlier days of lumber salesmen, except in a few of the larger cities, there was usually but one place in a town providing accommodations for travelers, and many of them were undeservedly dignified with the title of hotel, as frequently the soft side of a board would be about as comfortable as the mattresses and pillows, and the meals served were not such as the most vivid imagination would picture as marvels of excellence.

You would sometimes reach a small town late at night in the winter season in the North, as I have, to be ushered into a cold sleeping room with no means of heating it (unless perchance the chimney or stove pipe happened to pass up through it), with only an old-fashioned washbowl and pitcher standing on a small stand or commode, a little mirror hanging over it, probably badly cracked or broken in several places, a bed, and usually one very uncomfortable chair; and you disrobed by the faint and flickering rays of an old, ill-smelling oil lamp. On getting into bed you felt you had enough blankets and comfortables over you to prevent your ever getting up without help; but you eventually got warm enough to fall asleep. In the morning you found your moustache frozen to the bedclothes, and on arising, after a hard struggle with the frost and the load of bedding, you also found the water in the pitcher frozen so you needed some kind of a weapon to break the ice before you could perform your morning ablutions.

All of this you obtained for 50 cents, and you felt like charging it up in your expense account at about four dollars. Your breakfast would sometimes cost you two bits and sometimes a half-dollar; frequently it was dear at either price. In those days lumber salesmen had to be rugged and strong physically and their digestive organs always in good working order. Gradually, however, conditions changed, better accommodations could be had, and to-day it is only in the isolated and very small places that comfortable hotel accommodations cannot be obtained.

In late years it seems to me too many salesmen seem to think they must arrange their route so they will reach some good-sized city every night, thereby often neglecting good opportunities to obtain business in some of the small places, sometimes referred to as "tank towns." Again, many think they must stop at the best hotel in a city and have a choice corner room, no matter how much it costs their employers, seeming to think such a course is necessary to maintain their standing, prestige, or dignity, when, as a matter of fact, not one in a hundred of those they call on care two whoops which hotel

Camp Groceries

You can always be sure that we have at all times a good supply of everything that is needed by the cooks in the camp.

Buying in large lots, we can quote the lowest market prices which are prevailing at the time of inquiry.

We solicit a share of your business requirements and will gladly quote and send samples on request.

H. P. ECKARDT & COMPANY

WHOLESALE GROCERS

Church St. and Esplanade, TORONTO

The Power of Gravity is Free— Use it to handle Your Lumber

Our Steel Ball Bearing Gravity Lumber Carrier conveys boards, siding, flooring in bundles, timbers, etc., upon a grade of 4% (4 ft. fall in 100 ft.) The sensitive bearing moves the lumber.

Write us

Canadian Mathews Gravity Carrier Company, Limited

484 Richmond Street, West, TORONTO

they patronize or what kind of a room they have, and, in a large majority of cases they can find good, comfortable accommodation for much less cost to their house.

Hotel prices have certainly advanced materially in recent years, most of them now being operated on the European plan which always means a higher cost to the traveling public, and the salesman cannot avoid the greater expense if he would; furthermore, I believe a traveling salesman should patronize hotels where he can get comfortable quarters and good things to eat, because if he is to make a real salesman of himself and become a valuable man to his employers he must be well housed and fed, but he should always bear in mind that his firm pays his expenses and will judge as to his real worth, at least to some extent, by his expense account, which is materially affected by his hotel bills.

Again, by arranging his route so he will be at the best hotel in the larger places every night he may think he will meet more of his fellow-salesmen, have a chance to "swap" yarns with them, have congenial company going to some "show,' or perhaps have a little game of "draw," but if he indulges in that pastime to any great extent, even though the money won or lost may not affect his financial condition, it will mean irregular hours, loss of sleep, usually too much smoking, and perhaps other disconcerting practices which will seriously interfere with that mental alertness so necessary in these days of keen competition, and therefore frequently be the cause of his failure to get the customer's signature "on the dotted line."

A salesman should always be at his best, mentally and physically, if he is striving for and expects good results. Furthermore, he will really find that the most successful salesmen—the ones who get the best pay—will try to get away from all the demoralizing influences mentioned, and will spend an hour or so about every night writing to the general office, giving a report on those they called on that day, as well as any matter of general interest that may have occurred; writing to customers they expect to visit during the next few days, calling attention to some items of stock they know each particular customer uses, especially if something their firm has a good supply of; sending in what orders they secured, accompanying them with full and complete information regarding any that may be a little out of the ordinary and therefore require some special attention at the general office. He will also find that these successful men don't plan to get to the big places every night, and, when they are there, don't go to the swellest hotel in town, but to some comfortable place where they can have every needed convenience at much less expense; nor do these successful men always try to get back to their headquarters Friday night each week, even if there is to be a good ball game Saturday.

A much mooted question among salesmen is how much should be spent on customers by way of entertainment, cigars, etc., with the idea of influencing them to give you more of their business. Personally, I do not believe the average lumberman you call on in your ordinary every day work expects or wants you to do very much along this line; in fact, there has been a marked change in this respect during the past ten or fifteen years, and I believe you will meet with better success in the long run if you sell your goods on their merits, backed up with the character and reputation of the firm you represent and your own personality. During the lumber convention season, when you meet lumbermen attending the meetings of their associations, whether customers or those you would like to sell to, you are then mingling with them on more of a social footing, and at such times it seems more in keeping with the fitness of things to show them some social courtesies and attentions, to what extent and in what way depending on the circumstances, surroundings, and the men you want to entertain.

It is not necessary to be extravagant, but if you possess the happy faculty of doing the right thing at the right time and in the right way, you will secure a strong hold on their friendship and goodwill that will quite likely result in closer and better business relations.

Salesmen's Wages.

The question of "Salesmen's Wages" is a big and a broad one, because there are so many elements entering into a determination as to the real worth of a salesman to his firm.

Some salesmen have the ability to get a big volume of orders, but sometimes only at the lowest market prices, or the lowest they are authorized to make, while others, not so strong on volume, always get the top-notch prices; then there are others commonly classified as "order takers" or "pedlars," who just drift along, seemingly without much ambition to become a real live one.

Undoubtedly the best salesman is the one who is thoroughly conversant with the good and bad qualities of the particular kind of lumber he is selling so he can convincingly recommend it for such purposes as it is best adapted for, thereby obtaining and holding the full confidence of those he sells to and avoiding pitfalls too many encounter by recommending their material as good for all purposes; the one who not only has a complete knowledge of the product he is selling, but who by constant, intelligent study, research, and observation also acquires at least a fairly good knowledge of the competing woods, and likewise secures every bit of information and data he can about the numerous substitutes for wood so he can point out their weak points; the one who thoroughly believes in what he is selling and the firm he represents; therefore, is completely and constantly filled with the spirit of loyalty to his employers and always doing his very best to guard and promote their interests in every legitimate way; the one who is always optimistic and can meet the world with a smile instead of a frown, even when business is dull and orders are scarce. The chronic pessimist never yet accomplished any of the big things in the world, either in commercial or public life. The one who never deems it necessary to "knock" a competitor, but attains one of his chief pleasures in praising the good qualities of the material he is selling; one who is strictly honest, aggressive, of strong and pleasing personality, full of intelligent hard work—in short, a hustler, and who has the necessary nerve to decline an order if price is unsatisfactory or there is anything called for which cannot be furnished by his firm; the one who is conservative in his expense account without being stingy, and who is always alert to grasp every opportunity presented whereby he can bring about better conditions for the trade, his firm, and himself; one who also has the stamina, when investigating or adjusting a complaint, to tell the customer he is wrong, when such is the fact—in other words, to stand for a square deal for both the customer and the mill and to see that both get it, is the salesman who is always welcome and successful.

You may say I am describing a rare "bird," but there are salesmen who possess most of the qualifications mentioned, but I must say in passing you will very rarely find such a one looking for a "job" so long as his employer recognizes his worth and treats him fairly.

Some of the brightest minds connected with the selling end of the business have agreed that to be fair and equitable to the salesmen some kind of plan must be worked out—call it "bonus," "profit sharing," or what you will—that will more equitably recompense the salesmen in accord with their actual worth. The Burroughs Adding Machine Company, the National Cash Register Company, the Dictaphone Company, some of the largest commercial jobbing houses in different lines, and several of the large manufacturers of forest products have adopted some plan along these lines, and so far as I am able to learn, none of those who have tried it have ever discontinued it, although sometimes modifying it as conditions justified. What I have said applies with equal force to the sash and door salesman as well as to the lumber salesman, and everyone is entitled to fair and just consideration when fixing his compensation. If a man in any position is fairly and justly worth more to his firm than he is paid he ought to receive it, and if he is simply an "order taker" he will sooner or later eliminate himself from the payroll of any first-class concern.

It has been well said that "Men are valuable just in proportion as they are willing and able to work harmoniously with others for a common good." There is one other thought I would like to pass along to all salesmen, and that is to always remember that the things that make our business is our reputation among those who can buy our goods. Also remember the result in every industry is a survival of the fittest—that is, the most reliable, the most aggressive, the most efficient.

I think it fitting to close this rather rambling talk with one of Walt Mason's little poems, modified somewhat to fit the occasion, entitled:

The Welcome Man.

"There's a man in the world who is never turned down wherever he chances to stray; he gets the glad hand in the populous town, or out where the farmers make hay; he's greeted with pleasure on deserts of sand, and deep in the aisles of the woods; wherever he goes the welcoming hand—he's

The One Who Delivers the Goods.

"The failures of lift sit around and complain the gods haven't treated them right; they've lost their umbrellas whenever there's rain, and they haven't their lanterns at night. Men tire of failures, who fill with their signs the air of their own neighborhoods; there's a man who is welcome wherever he goes—he's

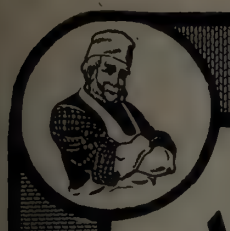
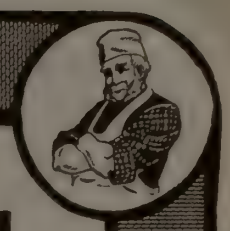
The Man Who Delivers the Goods."

Bristol's Wood Goods Imports

Imports of wood goods into the port of Bristol, England, for the calendar year 1915 and previous years were as follows:—

	1911.	1912.	1913.	1914.	1915.
Wood Goods—Deals ....Loads	44,411	40,689	28,402	53,759	79,500
Timber ... . "	358	685	2,394	554	1,200
Other kinds ... . "	2,940	1,050	488	594	831
Total wood goods '... ... .. "	47,609	42,424	31,284	54,907	81,531

Lieut.-Col. J. B. White, of the Riordon Pulp and Paper Co., Montreal, is returning to Canada from England in connection with the formation of a second Canadian Forestry Battalion. In a letter from Lieut.-Col. White he speaks of the splendid timber which is now being cut in the Old Country, and also states that the Canadian Foresters have been exceptionally well treated in all parts of the country.

Always Have Good Sweet Bread

You can't get your bread too good for the men. Lumbermen are just as quick to appreciate the fine flavor of

CREAM OF THE WEST FLOUR

The Hard Wheat Flour that is Guaranteed for Bread

as men doing any other kind of work. Try a shipment and give them a treat.

We also make a special line of feeds for horses around the lumber camp. Crushed Oats, Mixed Crush Feed or Chop, that will keep them in the best of condition for strenuous work.

THE CAMPBELL FLOUR MILLS CO., LIMITED

TORONTO PETERBORO

MONTREAL—W. J. McAuley, B-24 Board of Trade Bldg.
QUEBEC—Paul F. Gauvreau, 84 St. Peter St.
HALIFAX—H. E. Rains, 112 Lawrence St., Halifax, N. S.
C. E. Chote & Co.

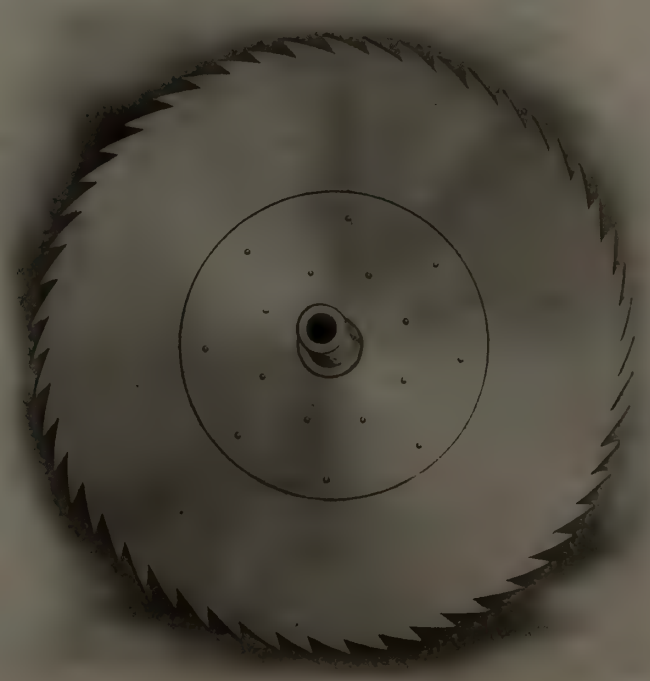
R. H. Smith Co., Limited

ST. CATHARINES, ONT.

Saw Manufacturers

Goods of Quality

Our repair department will give you the best and quickest service.



Solid
Inserted
Shingle
Gang
Crosscut

SAWS

English Market Conditions

A report form Halifax, N. S., says:—"The English market for Nova Scotia lumber continues low. Our deals now secure only between £20 to £22 for spruce, and as low as £17 and £18 for hemlock, Our lumbermen and shippers are now holding off to some extent in the hope of higher prices. Freights are still low and charters are not as frequent as heretofore. Shipments are normal but these are principally on charters which were made when freights were 400 shillings and not 275 to 285 shillings, as now. Whereas in the past shippers had to take steamers at their owners' prices, bottoms in some cases are now offered by the owners, as the lumber people are not anxious to charter for shipments to a falling market. A slight rise in freights can be anticipated for the autumn.

"There is not much business in the American market for our lumber. Freights are still high. Prices paid by American buyers for spruce per 1,000 feet are $20 to $22, according to specification, and for laths per 1,000, $3.75 to $3.85. Sawing is brisk throughout the country. The portable mills will probably finish operations this month, but the stationary mills will operate until the end of September and perhaps later. The English embargo on hardwood planks having been lifted some shipments have been made, but the market is not strong, according to reports.

British Government Wants Canadian Timbers

A despatch from Vancouver, B. C., states that the Government timber office is calling for tenders for 4,000,000 feet of Douglas fir in 12 x 12 sticks and 1,000,000 feet of 3 x 9 in. timber, to be shipped on railroad cars and delivered at the ship's side in Halifax. A large order is also open for the supply of spruce to be used for aeroplane manufacture. Although the British Government is prepared to pay $200 to $225 per thousand feet for the spruce, the order is said to be larger than can be supplied from Vancouver. This spruce is to be cut on the quarter, with the grain at an angle of 45 degrees across the section so as to secure the maximum of strength. In its subsequent manufacture the spruce is made into hollow rods, each rod consisting of two thicknesses of laminated wood, making it both light and strong.

Canada's Foreign Trade in Wood Goods

Canada's imports of wood and manufactures of wood for the twelve months ending April, 1916, were valued at $8,696,065, as against $13,465,189 for the preceding twelve months. The 1916 imports were divided as follows:—from the United States $8,294,666; from the United Kingdom, $151,531.

Canada's exports of wood goods for the twelve months ending April, in 1916 and 1915 were valued as follows:—

Articles Exported	Twelve Months Ended April. 1915.	1916. Total.	1916. To United Kingdom.	1916. To United States.
	$	$	$	$
Logs	1,229,405	1,077,909	45,264	1,032,305
Lumber—Deals, pine	1,150,510	1,246,375	1,170,784	45,221
Spruce and other	6,506,475	9,541,345	8,675,154	272,325
Laths, palings and pickets	1,956,035	2,492,026	11,268	2,467,637
Planks and boards	19,007,009	24,245,799	2,131,788	20,580,669
Shingles	3,019,323	3,608,878	.....	3,631,530
Timber, square	528,477	475,127	400,037	15,090
Wood blocks for pulp	6,667,671	5,824,505	.....	5,824,505
Wood pulp	9,319,450	10,835,255	336,041	9,853,096
Wood and mnfrs. of—Total	52,764,845	63,540,428	14,972,293	45,160,733

Cuba's Lumber Imports

The quantity and value of lumber imported into Cuba during the fiscal years 1914 and 1915, was as follows:—

Country of Origin	Fiscal Year, 1914 Amount Feet	Value	Fiscal Year, 1915 Amount Feet	Value
United States	129,823,000	$2,240,273	79,719,000	$1,287,412
British West Indies	1,408,000	18,982	2,789,000	26,316
Canada	12,357,000	207,257	13,111,000	236,852
Germany	1,000	52	.....	.....
France	26,000	810	1,000	22
United Kingdom	1,246,000	17,106	1,980,000	21,188
Norway	1,811,000	33,155	.....	.....
British India	220,000	2,947	.....	.....
Canary Islands	4,000	63	.....	.....
Total	146,896,000	$2,520,646	97,600,000	$1,571,790

From the above data it will be seen that while the total imports for 1915 show a decrease of $948,856—as compared with the preceding year—Canadian contribution increased $7,333. The lumber imported from the Dominion is chiefly confined to spruce.

Alfred Dobell & Co.'s Liverpool Report

Alfred Dobell & Co., Liverpool, Eng., in their monthly timber market report, under date of July 1st, say:—

Spruce Deals.—The disinclination to buy is still in evidence, the result partly of a slackening in the demand and partly of the easing in freights—whether the latter feature is not of a temporary nature remains to be seen.

Douglas Fir.—Only small liner parcels have arrived, and practically all these went direct into consumption. There is very little enquiry for forward shipment, nor does the freight situation encourage it.

Trinidad Market Report

Gordon, Grant & Company, Limited, Port-of-Spain, Trinidad, in their market report under date of July 1st, says:—The arrivals since our last, are the Schooner Bessie Whiting with 485,900 feet, and the s.s. Cratheus with 73,000 feet pitch pine. The schooner Gladys B. Smith from Halifax with 103,000 feet N. S. white pine has also arrived. Prices remain firm, and likely to advance, due to the high cost of freights at present ruling.

Jamaica's Imports of Wood Goods

Imports of wood, etc., into Jamaica during 1914 and 1915 were as follows:—

	1914 Quantity	1914 Value £	1915 Quantity	1915 Value £
Wood, White Pine ... feet	899,518	6,746	589,308	4,423
Wood, Pitch Pine ... "	9,073,178	63,512	4,432,957	21,031
Wood, Shingles ... No.	516,450	1,283	418,660	1,046
Wood, Hoops and Shooks ...	.....	31,900	42,425	.....

Wilson Bros., Ltd., Announce a Change

Wilson Brothers, Ltd., Collingwood, Ont., advise us that they have entered into an amalgamation with the Collingwood Hardwood Lumber Company and R. Feigehen, and will carry on their business as formerly under the name of Wilson Brothers, Ltd., manufacturing all kinds of interior finish and hardwood veneer doors all to detail, also stair building, and hardwood flooring in maple, beech, birch and oak. Wilson Brothers' hardwood flooring is known throughout Canada for its excellent quality. The motto of the company is "Grade First, Price Afterwards; Not Price First and Grade Afterwards." As a result of the amalgamation the company will be in a position to carry on more extensively the wholesale business formerly done by their new associates. Having their own hardwood limits and sawmill, they will be in a position to quote on and to supply all kinds of building material, bill stuff, and heavy hardwood lumber. Their dry kiln has a capacity of 150,000 feet, which enables them to supply kiln-dried lumber when required. Being manufacturers from the tree to the finished product, they are in a position to save the middleman's profit, which, along with their excellent shipping facilities, places them in an advantageous position in regard to competition.

Conservation of Fish, Birds, and Game

A report just issued by the Commission of Conservation, "Conservation of Fish, Birds, and Game," directs attention to the great value of these resources to Canada. The volume is a report of the proceedings of a conference of the Committee on Fisheries, Game, and Fur-Bearing Animals of the Commission, and contains a fund of information regarding the present condition and the necessity for protection of Canada's fish, birds, and mammals. Canada is taking a prominent part in the international movement for the protection of wild life. A migratory bird treaty between Canada and the United States is under consideration. Through the influence of the Commission of Conservation and other interests bird reservations are being created, where the birds may find safe nesting and breeding places. The fur-bearing animals of Northern and Western Canada are being rapidly exterminated. This is clearly shown by the present report. To secure their more adequate protection, the commission is advocating the amendment of the Northwest Game Act, to place responsibility for its administration upon the Dominion Parks Branch, which already protects the animals in the Dominion national parks. The future of the fisheries of Canada is dealt with in an able manner. That they are of great present value is recognized, but there is also a potential value in our oceanic and inland waters which, upon development, would mean the creation of new industries. To meet this condition the commission is suggesting vocational training and simple demonstration stations for the fishermen, that they may take advantage of the most practical and modern methods of their calling. The report is replete with illustrations applicable to the subject matter.

Coniferous timber has been found to be better suited than any other for the production of ethyl alcohol.

If You Want to Minimize Operating Costs in Your Saw Mill or Woodworking Plant—apply JEFFREY Labor Saving Methods to Handling Your Materials

We are Headquarters for Log Haul-Ups; Elevators; Conveyors for handling Lumber, Pulp Wood, Refuse, Saw-Dust, Coal and Ashes, Boxes, Barrels, etc.; Power Transmission Machinery; Chains of all types; Sprocket Wheels, Gears, Bearings, Collars, Couplings, Log Jacks; Storage Battery Locomotives for hauling Lumber, etc,

Cable Chain with Wooden Flights at Intervals
The Standard Equipment for Handling Refuse

CATALOGUE NO. 160-6

will materially assist you in the selection of material to put your plant in first-class condition. Your request for a copy will receive prompt attention.

The JEFFREY MFG. Co.

Canadian Branch and Warerooms

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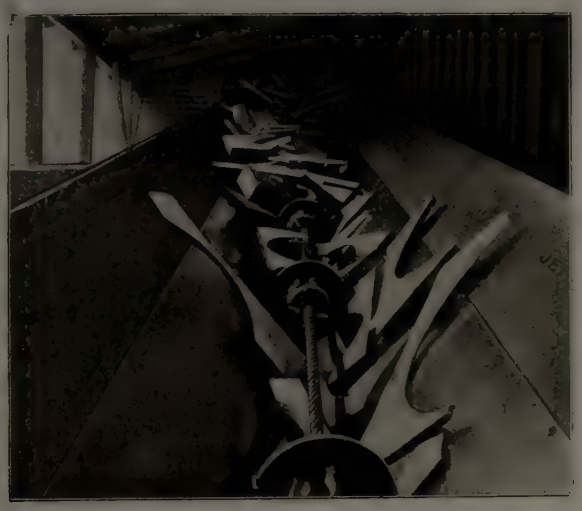

On Extra Long Conveyors for Handling Refuse, our Special Brands of Wire Cables with Cast Discs are Recommended

Jeffrey Standard Long Link Welded Steel Haul-up Chain with Semi-Steel or Cast Steel Spurs.

Jenckes Boilers

We make a Specialty of

Horizontal Tubular Boilers

for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

Sherbrooke Montreal Cobalt So. Porcupine St. Catharines Toronto Vancouver Nelson

The Graton & Knight Mfg. Co. plant today.

Important Additions to Graton & Knight Plant

In the fall of 1914 the Graton & Knight Manufacturing Company, oak leather tanners and belt makers, Worcester, Mass., decided to commence the erection of the largest addition that they have ever made to their extensive plant. The time was rather unpromising for such extensions, but their foresight has been amply justified by the results. The Graton & Knight Manufacturing Company's business has been steady and solid from the time of its inception, 65 years ago. The company now occupy a plant consisting of twenty buildings which are so joined together that, in the aggregate, they represent one enormous building having over half a million square feet of floor space.

The two latest additions, known as buildings "D" and E," are of concrete construction, and have a total floor area of about 110,000 square feet. These buildings have made it possible for the concern to install some improvements which they had been developing and have also enabled them to increase their production as the business warrants.

The first floor of building "D," known as the new "Beam House," is 225 feet long and 115 feet wide, and has enabled the concern to double its capacity for preparing hides for the initial stages of tanning. The arrangement throughout is designed so as to keep the hides moving in one continuous direction from the moment they are brought to the beam house from the connecting hide cellar. The hides are thoroughly cleaned, soaked, the flesh and hair removed and then sent along to the tan yard. The entire construction is of concrete and steel, concrete floors and walls, vats and pits, and everything possible has been done to promote the convenience and comfort of the workmen.

The three floors above the beam house are 225 feet long and 70 feet wide. The second floor is used as one of the "setting out" rooms. From this floor the hides, after being washed, bleached, split, oiled and smoothed, or "set out" by the latest type of machinery are conveyed to the stretching room located on the floor above. The fourth floor is used by the lace leather department and is equipped with machinery of special construction made and designed by the company.

Building "E" is 225 feet long by 65 feet wide, and is four storeys high. The first floor is used for storing hides. On the second floor is located the electrical department and the extensive supply room. The third floor is used as a general maintenance department with carpenter, machine and pipe fitting and stock rooms, where belting strips are sorted and matched and where an extensive stock of finished leather is maintained.

The company have also put up a number of smaller buildings during the past year. A completely new heating and power plant has been erected.

The buildings, although of fireproof construction, are equipped throughout with a sprinkler system and there are innumerable fire doors, staircases and fire extinguishers throughout. The employees are provided with plenty of light for their work, over 40 per cent. of the total wall area being of glass.

The search for new uses of wood is widespread and far-reaching; but the Turks have scored last. The army which they sent to Egypt to fight British and colonials at the Suez Canal was supplied, in part, with wooden bullets. They had been painted a metallic lustre, and the unfortunate soldiers doubtless supposed the cartridges were standard. We captured large quantities of these wooden pegs which passed for bullets when they came from the contractors' factory. The poor Turk gets it coming and going!

Latest additions to plant of The Graton & Knight Mfg. Co.

NEW ZEBRA, WOOD, WESTERN UNION, and PRIVATE CODES USED.

Telephones:
1391 Long Distance.
400 Private Branch Exchange.

Cables:
"HILLAS," HULL

W. N. HILLAS & COMPANY

WOOD BROKERS

FOR EVERY CLASS OF TIMBER

***Head Office:* HULL, England**

To the Lumber Companies of Canada:

You have the Goods. Place your Lists with full particulars in our hands. We are in daily touch with all the Buyers in the United Kingdom.

PLEASE NOTE.—We pay cash against all documents, and take the whole of the Delcredere risk on Buyers.

Telegrams and Cables: "SPARTEOLUS, CENT, LONDON."
Telephone No.: 536 BANK (3 Lines).

W.V.BOWATER & SONS

LIMITED

Paper Makers, Agents, Wholesale and Export Stationers

159 QUEEN VICTORIA STREET, - LONDON, E.C.

Bowaters' Wharf, 84 Commercial Road, Lambeth, S.W.
Morden Paper Works, Greenwich, S.E.
Glasgow Office:—33 Carrick Street.

Specialties:

FINE and COMMON NEWS on Reels and in Sheets

ART and IMITATION ART PAPERS

Printings, Browns, Mill Wrappers, Krafts, Strawboards, etc.

China Clay, Machine Wires, Belting, "Immadium" Beater Bars, Refiner Bars. Doctor Blades, Pump Rods, Bearings, etc., etc., for Papermakers.

Large Stocks of Every Class of Waste Paper for Papermaking Purposes.

Extra Profit

You can make an extra profit from the waste materials around the saw mill. Install a small Soda Pulp Plant to take care of Slats Tops, Bottoms and waste wood. There is a great demand for Canadian wood pulp in Great Britain. We can dispose of all the pulp you can supply. We have handled ninety per cent. of the Canadian Pulp supplied to Europe since 1899.

WRITE FOR FULL DETAILS

Becker & Co.

Limited

34-40 Ludgate Hill

London E. C. Eng.

Great Britain Demands More Canadian Wood Pulp

THE EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS-DIEU-RIEN
MONTREAL - Canada
Head Office at Montreal.

SPRUCE
ROUGH or DRESSED

Saw Mills at
MONT LAURIER, QUE.
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Dressing Mills at
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Herman H. Hettler Lumber Co.
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We now have in pile a complete assortment of

WHITE PINE and LATH

from early Spring sawing ready for immediate shipment. All widths piled separately including a few cars of 7″ and 9″.

EXCELLENT PLANING MILL FACILITIES

Please write or phone for prices.

CEDAR
Shingles

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Limited
Board of Trade Building, MONTREAL

Pine, Spruce
Hemlock
Hardwoods, Lath

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber. Lath and Shingles
Offices—500 McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

The Cutler Bay Lumber Company have withdrawn their office from Massey, Ont., and will not operate in the woods during the coming winter.

Plans are in progress to rebuild the planing mill belonging to F. C. Smith, Harrow, Ont., which was recently destroyed by fire, at a cost of $10,000.

The basket factory belonging to Bibby Bros., Dundas, Ont., was recently destroyed by fire. The amount of the loss is not known. The owners will rebuild.

Mr. A. D. Little, the well-known commercial chemical expert of Boston, Mass., reports that a large paper mill will be erected either at Port Arthur or Fort William by prominent manufacturing interests with whom he is associated.

Work is about to start on the erection of a sulphite mill to cost $200,000 for the Ontario Paper Company, Thorold, Ont. W. J. Trimble, Thorold, Ont., is the general contractor. The plant will include two towers, each 116 feet high with elevators.

Further particulars are now available in regard to the sale of the Hope Lumber Company's plant and limits, which was announced in our issue of July 15th. The property has been purchased by the Hope Operating Corporation, which is composed of G. A. Mitchell, of White, Gratwick and Mitchell, North Tonawanda, N. Y., president; Jas. J. McFadden, of McFadden & Malloy, Renfrew, Ont., vice-president; L. S. DeGraff, of A. Weston and Sons, North Tonawanda, treasurer; and Jas. L. Crane, of White, Gratwick & Mitchell, North Tonawanda, secretary. The Corporation was organized in June last with capital of $1,250,000. We understand that the price paid for the property was in the neighborhood of $750,000. The deal includes the transfer of the sawmill at Thessalon, logs on hand, and three timber berths which, it is estimated, will furnish a cut of 25,000,000 feet of white pine annually for eight or ten years. The main office of the company will be at North Tonawanda, N. Y., with a branch office at Thessalon, Ont., and logging office at Dean Lake, Ont.

Eastern Canada

The Belgo-Canadian Pulp & Paper Company, Limited, intend to open a retail branch at Shawinigan Falls, Que., for their lumber and sawmill department.

The sawmill and machinery belonging to D. Audet, Magog, P. Q., were recently destroyed by fire, incurring a loss of $8,000. There was some insurance.

The Smith Lumber Company, Woodstock, N. B., have resumed operations at their mill, after having been closed down for a time in order to remodel the plant.

C. A. Spencer, Limited, wholesale lumber dealers, Montreal, have opened a yard at Mile End, Montreal, for the purpose of sorting lumber in transit. The company recently moved to much larger offices at 500 McGill Building.

A fire at the sash and door factory of Paul Demers, Van Horne and Waverley Streets, Montreal, resulted in damage to the shavings room; damfire started in this department, which is situated near the boiler room; damage was caused by fire and water, and this is now repaired. The loss was covered by insurance.

Western Canada

The Congo Lumber Company's yard at Avonlea, Sask., was recently destroyed by fire.

Wake Bros., lumbermen, Minnedosa, Man., have sold their business to the Valley Lumber Company.

The lumber mill belonging to the Scrim Lumber Company, Vancouver, B. C., was recently destroyed by fire. The loss is estimated at $10,000.

The Alberta Lumber Company, Vancouver, B. C., will erect a two-storey mill building at Vancouver. The building will be 210 feet long by 50 feet wide and the estimated cost is $100,000.

The Canadian Exporting Lumber Company, Limited, has been incorporated with head office at Victoria, B. C., to carry on business as timber and lumber merchants, sawmill, shingle mill and pulp mill owners, loggers, etc.

The Roy & Moffatt Logging Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $10,000, to carry on business as loggers, shingle manufacturers, timber merchants, sawmill proprietors and timber growers.

The Manitoba Power, Pulp & Paper Company, Limited, Winnipeg, Man., have plans nearly complete for the erection of a sawmill, pulp and paper factory and electric plant, at Grand Rapids, Man., to cost $2,000,000. Surveys are now being made for sites. The sawmill will be put in this year and the

pulp and paper plants will be put in next spring. The capacity of the pulp and paper mills will be 100 tons a day. Mr. D. B. McDonald is interested in the company.

The plant of the East Kootenay Lumber Company at Jaffray, B. C., was destroyed by fire on July 16th. The planing mill and timber yards were saved as a result of a rain storm which came at an opportune time. The loss includes five C. P. R. box cars and the sawmill.

The Capilano Cedar Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $10,000, to carry on business as manufacturers and dealers in sawlogs, timber, lumber and wood of all kinds, timber merchants, sawmill owners, loggers, etc.

B. Jahn, a Hindu, who has been operating a shingle mill at Sperling, B. C., has commenced the erection of a sawmill at the same place. He expects to have it in operation about the middle of August. The mill will turn out about 20,000 feet daily and will be operated chiefly on spruce and hemlock.

Sealed tenders are being received by the Minister of Lands for British Columbia, until August 9th, 1916, for the purchase of License X485, to cut 1,490,000 feet of cedar, hemlock, balsam and spruce and 510 poles on an area adjoining Lot 780, Gilford Island, Coast District, Range 1. One year will be allowed for the removal of the timber.

The Retail Lumbermen's Purchasing Agency, Limited, has been granted an extra-provincial license to carry on a general lumbering business. The provincial office of the company is at 704 McIntyre Block, Winnipeg, Man., and the head office is at the Credit Foncier Building, Vancouver, B. C. Henry K. Agnew, Vancouver, B. C., is attorney for the company.

It is estimated that 200,000 people from the United States annually visit the Canadian National Exhibition.

Mr. H. J. Tetreau, formerly secretary-treasurer of the Papineauville Lumber Company, Papineauville, P.Q., has been appointed assistant manager of the Eagle Lumber Company, Montreal.

Experts of the Forest Service estimate that the farm woodlots of the United States contain from two hundred to three hundred billion board feet of lumber and from one to one and a half billion cords of wood.

On July 22nd the steamer Matatua, owned by Shaw, Saville & Albion, Limited, of London, 6,488 gross tons, which left Quebec with a cargo of 5,100,000 feet of spruce for overseas, ran ashore in St. Mary's Bay, on the Newfoundland coast, during a dense fog.

Canada's exports of forest products for the month of May during the last three years were valued as follows:—May, 1916, $4,174,038; May, 1915, $3,487,103; May, 1914, $3,296,455. During the twelve months ending with May the exports of forest products were valued as follows:—1916, $52,316,834; 1915, $42,896,032; 1914, $43,054,053.

A British Columbia official who is in close touch with the logging situation reports that there is an ample supply of logs on hand for the present season, and more are being cut than can be used. He did not expect any general curtailment of production in the logging camps. The good crop reports from the Prairie Provinces had removed the temptation to reduce the output of logs.

Receipts from the United States national forests for the fiscal year 1916 reached the high-water mark of approximately $2,820,000, according to figures just compiled. This is $341,000 above the 1915 total, which, in turn, exceeded any previous year. Officials say that the gain was due to increased demand for all classes of forest products. There was a decided growth in the revenue from all sources, the largest being that of $203,000 in timber sales.

The E. B. Eddy Company, Hull, P.Q., has decided to eliminate the three small chimneys which were formerly used as smoke escapes at the plant. Instead the waste and smoke will be taken off by a chimney which will be built to a height of 125 feet. Construction has been commenced. There have at various times been complaints on the part of citizens of both Ottawa and Hull in regard to the sulphite fumes which pervade the air when the wind is favorable.

The manager of a large manufacturing concern at Vancouver, B.C., in a recent interview about trade conditions, said: "The volume of business which we did in the first five months of 1916 was 300 per cent. greater than that of the first five months of 1915. Trade conditions at present are good, and all the indications are that they will continue good for some time to come. Most of the mill men I know have told me within the last few days that they are stacked up with orders which will keep them busy for six months at least." Referring to conditions on the prairie, he showed a letter from an agent in Winnipeg to the effect that the crop situation was good and a strong demand for lumber was expected to develop, which would warrant an advance in lumber prices.

We handle

Everything in Lumber

We can offer at very attractive prices, if interested, the following:

50 M 1" No. 1 Common & Better Birch
140 " 1" Good Pine Sidings
50 " 1½" No. 3 Barn & Better Strips
80 " 3"x11" Red Pine
42 " 1" A. Sidings
90 " 1½" S.C. Sidings
98 " 1¼" " "

Have also considerable dry stock for shell box making in 1" x 9" and 10" Pine and Spruce.

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SHELL BOX STOCK
White and Red Pine, Spruce
Hemlock, Birch, Maple
Railway Ties, Fence Posts, Etc.
Prompt shipment. Satisfactory stock. Good service Write for Prices.
A. F. B. AUSTIN, Manager

Your Blower System

If you contemplate installation of a new blower system or an extension of your present one, write us, as we have a unique proposition to offer. There is no heating, clogging or shaking with our system.

Prices on application

The Toronto Blower Co.
156 Duke St., Toronto

Selecting Factory Lumber

By T. C. James

To many who have made a study of machine wood-working from the technical side, as pertaining to machine work itself, it may sound odd for a man to come along and assert that half the battle for success in machine wood-working depends on selecting the stock that is to be worked; that is, on the selection and buying of lumber for factory and mill work. The buying of factory lumber is generally done by the office end of the institution; in some plants the men that work the lumber are never consulted about it. In others, however, they are consulted and asked for advice about how this or that kind of lumber will work up, or how this grade works or the other grade. If both ends of the business work properly together, the purchasing department will give due consideration to the welfare of the machinery department in buying stock.

There are several cases that have thrown some peculiar sidelights on this subject. On one occasion the lumber being used in a factory was very easy and nice to work, but it became scarce and so high in price that the management desired to try substituting a lower grade. A car or two was purchased for experiment, and created a storm of protest from the men handling the lumber. It was harder to work, harder to nail, heavier to handle, and more disagreeable generally; almost every complaint imaginable was dinned into the ears of the purchasing department.

Mixed in with this din, however, was very little specific, supportable complaint against the substituted lumber; the complaint was that it disarranged and altered the work. It seems, however, that the lumber really gave fair service and was eventually used, and the people working it got over their prejudice against it. In this case there was a certain amount of unreasonable prejudice by the men doing the work; they didn't show due consideration for the welfare of the institution by regarding the fact that there was a chance to save several dollars per thousand by making the substitution.

There are other instances where the office end and purchasing department show fully as much disregard for the men at work. When they go out to buy lumber they buy it either because it is cheap, because they have a fad for certain things, because they like some traveling salesman, or for various causes other than a proper consideration for the men working the lumber.

What many wood-working plants do, and what every one should do, is compare notes and combine interests, that the lumber may be bought at the lowest practical cost, to give the best returns and work up to fair advantage without being unreasonably burdensome on the men doing the work. The importance of this point is emphasized, too, because of the fact that the great burden of the lumber is in low-grade stock, and everybody is striving for ways and means to utilize this stock advantageously in planing mills and factories and get enough out of it to justify working it out.

That is one of the important considerations, and, in connection, it is a wise man or combination of men that can figure out just what lumber will work best in a given factory; not only what specie and what particular grade of wood, but also there enters a consideration of the nature of the defects that cause the lower grades and their relation to the work. There also enters some matters of width and thickness and general working up to get the lumber in such shape that it will fit in best with each factor of the work.

One of the prominent manufacturing concerns of the country, that utilizes a good many million feet of lumber a year, maintains a number of sawmills of its own. Talking on this subject one day, the manager said they didn't operate their own sawmills because they could produce lumber cheaper than they could buy it or because they expected to make money directly out of the sawmills, but quite largely because with their own mills they could have the lumber cut and trimmed to just such sizes and shapes as would work best in their factory, something they found impossible in connection with the average sawmill from which they bought lumber. This pertained not only to dimensions, but to methods of sawing; also to the kind of defects that might be trimmed out and left at the mill instead of being shipped to the factory, thus saving freight.

One day a bright traveling salesman developed an idea which he has used industriously to good advantage, and that was to study the requirements of the different factories and also study the products from the different mills he represented. Pretty soon he discovered that probably one factory could use the low-grade lumber from the one sawmill to much better advantage than another, because of the nature of the defects. Some of the defects rendering it low-grade were such as practically ruined it for one factory, whereas the defects in the lumber from another mill could be trimmed out and a much larger percentage of it utilized.

Right here in this idea is the keynote for selecting lumber. One should study the products from the different mills when opportunity offers, and observe the nature of the defects that cause the low-grade and how well they work out in the factory. That is, how much of the stock can be utilized after the defects are trimmed out. Of course it can never be carried out to an ideal point, but it can be made to help a whole lot. One factory may be cutting its stock one way and another factory another, and as a result the kind of lumber most suitable for one may not be suitable for another. By proper selection and conference with the salesmen and mill men supplying the lumber, however, a lot of good work can be done along the line of supplying that which is best for each factory or mill, all within a given grade and specie. This not only benefits the factory and mill, but also helps along the good cause of using up to better advantage the burdening surplus of low-grade lumber.—The Wood-Worker, Indianapolis.

With the Forestry Battalion

A letter recently received from a private in the 224th Forestry Battalion which is operating in Great Britain gives an interesting idea of the conditions under which the Battalion is working. Writing from Stover Camp, Heathfield, Devon, England, the writer says:—"This is a busy camp. There are about 225 men here, all busy doing regular bush work, cutting trees, making logs, and installing a new sawmill. This one is all Canadian made. The mill we are using now was brought from Scotland and is small and out of date. When we get the new Canadian mill running, we will show them how to cut lumber. The trees are not so large as in Canada, but are good enough for making ties. I like it fairly well over here, but the climate is not so good as in Canada. It is very changeable, rain and cold and warm, but not often warm. We have had only two warm days since we landed in Liverpool. We are fairly well fed and not worked too hard. We sleep and eat in tents, seven men to each sleeping tent. It is cold here at night, but we have four heavy double blankets each, which are sufficient to keep us comfortable." Stover camp is about ten miles from Plymouth.

Interned Germans and Austrians to Work in Mills

Owners of lumber and pulp and paper mills in Eastern Canada, particularly those in Northern Ontario and Quebec, expect to benefit from the Government's decision to release the greater portion of the interned enemy aliens who have hitherto been confined in camps at Kapuskasing, Ont., and Spirit Lake, Que., as well as other places. Already some 2,000 Germans and Austrians have been released, it is reported, and a considerable proportion of them have found employment in lumber and paper mills.

View from Pacific Highway

Opposite End of Above View

FOR SALE

This plant complete in every respect, with all necessary outside general equipment, including additional buildings not shown here. Built in 1912-13. First-class state of repairs. Capacity 100,000 feet—ten hours. Plenty of power, steam and electric. Generate own electric power. Planing Mill run by electricity. Motors Direct Connected. Insurance rate 2 per cent. Water and Rail shipping facilities. Right to cut 400,000,000 feet timber. Stumpage basis can be had.

Can be purchased for half of its present value. Price and terms, Apply

J. A. McKERCHER,
(for Mortgagees).
912-913 Metropolitan Building,
Vancouver, B. C.

Logging Spur and Booming Grounds

View from Wharf.

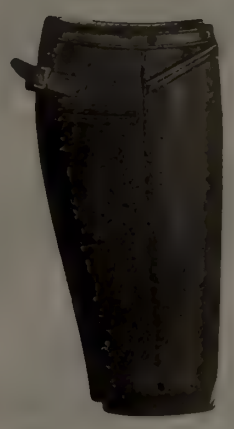
Lumbermen's and Railroaders' Clothing

Guaranteed Pure Wool Mackinaw Coats, Pants, Shirts, Mitts, Socks, Underwear, Etc., of the Highest Grades.

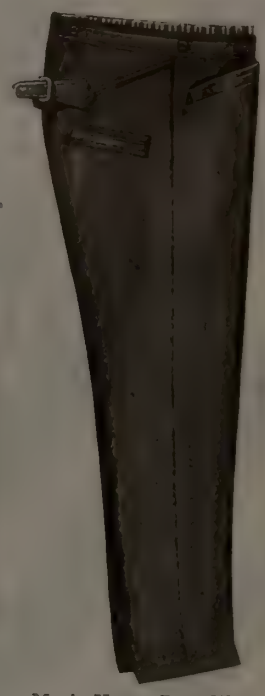
Bird's Pure Wool Mackinaw Coats with high seven inch collar, close fitting with tab at throat. Sizes 36 to 46.

Smart Woods Home-made, Hand-knit Wool Mitts, as cut. Generous sizes, perfectly proportioned. For use with large fitting pullovers.

All-Wool Long Stockings, as cut. Black or fancy striped or checked.



Bird's Pure Wool Mackinaw Knickers, as cut. Top and hip pockets. Strap or wool cuff. Sizes 32 to 44. Black shades.



Men's Heavy Pure Wool Mackinaw Pants, as cut. Black, Khaki and Olive Green shades. Generous sizes, well made.

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RUBBER GOODS FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable.

Hose for Steam, Water, etc., in various grades, made especially to give satisfactory and economical service under different conditions.

Fire Hose One or more of our twenty brands of Fire Hose will be found, not only in the best equipped Factories, Mills, etc., but in almost every Fire Department in the Dominion.

Gutta Percha & Rubber, Limited

TORONTO MONTREAL WINNIPEG REGINA SASKATOON CALGARY EDMONTON VANCOUVER

KLIM

SPELL IT BACKWARD
PURE SEPARATED MILK
IN POWDER FORM
FOR ALL USES
WHERE MILK IS NEEDED

The Canadian Government

knows all about Klim and, therefore, uses it exclusively in all soldiers' camps. Many lumber companies know about Klim and they all insist on having it. Here are six reasons—

Why You Should Use It

Klim is in dry powder form.
Klim is not affected by heat or cold.
Klim is cheaper than fresh liquid milk.
Klim is about half the price of Condensed Milk.
Klim is about a third the weight of Condensed Milk.
Klim has the flavor of fresh liquid milk.

Your Men Will Like It

Does this not prove to you that you should use KLIM the Lumberman's Milk.

Packed in ten pound tins, six in a case, costing $10.20 per case.

A pound makes a gallon.

Your Wholesale Grocer has it.

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Johnson's Horse Liniment No. 1	Per Gal.	$5.50
Johnson's Horse Liniment No. 1	Quarts, Per Doz.	16.00
Johnson's Horse Liniment No. 1	Pints, Per Doz.	9.00
Johnson's Horse Colic Remedy	Per Gal.	6.00
Johnson's Horse Colic Remedy	Quarts (8 Doses each) Doz.	17.00
Johnson's Horse Colic Remedy	Pints (4 Doses each) Doz.	9.00
Johnson's Veterinary Healing Ointment (Gall Cure)		
....2 lb Tins	each 2.25 Doz.	24.00
¼ lb. Tins	Per Doz.	3.50
Johnson's Concentrated Condition Powders, 1 lb. Pkgs.	Doz.	4.00
Johnson's Horse Worm Powders, 1 lb. Pkgs.	Per Doz.	2.50
Johnson's Purging Balls	Per Doz.	2.50
Johnson's Antisepting Dusting Powder (For Drying and Healing Sores)	Per Doz.	8.00

Our Family Van Remedies are as follows:—

Pine and Tar Cough Syrup	Big 4 Liniment
Purgative Pills	X Ray Liniment
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Porous Plasters	Headache Powders
Stomach Bitters	Sarsaparilla
Laxative Cold Tablets	All Healing White Ointment

All Drugs and Patent Medicines at Market Prices.

Mail orders solicited — Prompt shipments made.

A. H. JOHNSON WHOLESALE DRUGGIST

Collingwood, Ontario

The Glue Book

What it Contains:

Chapter 1—Historical Notes.
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Price 50 cents

Canada Lumberman & Woodworker

347 Adelaide St. West, Toronto

Sanitary Steel Bunks

Double Deck Bunk No. 171

Black Japan Finish. 1½ inch angle-iron frame supported by strong steel braces. "Alaska" patent twisted link fabric attached to frame by oil-tempered helicals at each end, making very strong, resilient and comfortable bed. Height of ends, 60 inches; height of lower spring, 13 inches; height of upper spring, 52 inches; length, 76 inches. Sizes: 4-6, 4-0, 3-6, 3-0, 2-6. Shipping weight, 145 pounds.

Good sound sleep for your men will repay you many times over in increased vigor and work.

No chance for vermin in these steel frames. Can be erected or taken down in a few minutes. Packed flat for shipping. ***Last a lifetime.*** We guarantee every bed for 20 years. They are strong and much more comfortable than wooden bunks.

Mattress is strong, durable, light—filled with clean, curled wood fibre.

Special prices for lumbermen. Write us for further information.

The Parkhill Manufacturing Co., Limited

Successors to the Alaska Feather & Down Co., Ltd.

Montreal

"Alaska on an article means *high-grade every particle*"

Lumbermen's Choice
Hoe Chisel Tooth Saws

Experience counts in every industry. When any company concentrates the highest skill obtainable on one product for nearly 90 years, is it any wonder that product is accepted as the best? Lumbermen in every part of the civilized world are using Hoe Saws. Over 100,000 are now in use.

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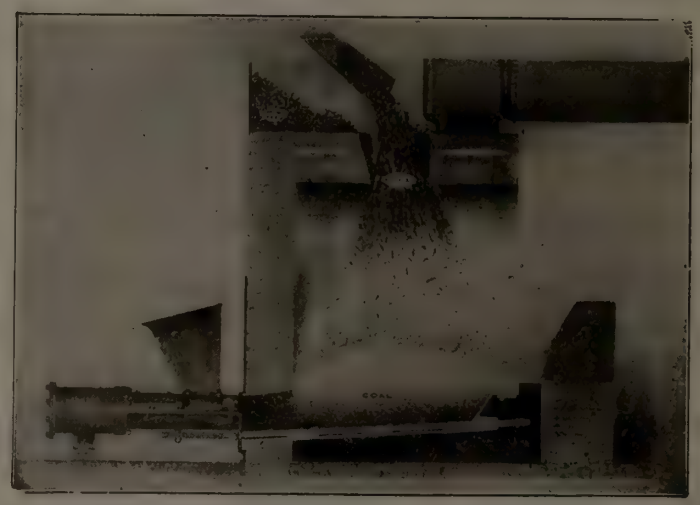
TURN YOUR REFUSE INTO FUEL

The disposal of waste in a saw, planing or pulp mill used to be an item of expense. By the installation of Jones Underfeed Stokers this waste can be used as fuel. The use of the Stoker equipment consumes as illustrated, the refuse and by the mixture of a small amount of coal a steady steam pressure is maintained. If you should run out of refuse or the mill conveyers break down, the change to coal fuel can be made instantaneously without any fluctuation of the steam gauge. One large pulp and paper mill reduced its coal bill 99 o/o with Jones Underfeed Stokers and the utilization of its mill refuse. Every mill cannot make such a colossal saving as this but substantial economy can always be effected with Jones Stokers.

What are the conditions in your mill? Let us talk to you.



Arrangement of Jones Underfeed Stokers in Dutch Oven for burning paper mill refuse in conjunction with coal.

JONES UNDERFEED STOKER CO., LIMITED

National Trust Building, TORONTO

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Deputy Minister.

Department of the Interior, Ottawa,
December 20th, 1912.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing ...	27 00	29 00
1 x 8 common and dressing ...	27 00	29 00
1 x 10 common and dressing ..	31 00	32 00
1 x 12 common and dressing ..	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ...		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft. ...		16 00
2 x 4 to 12, 10 and 16 ft. ..		20 00
2 x 4 to 12-in., 12 and 14 ft. ...		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
8x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain..		31 50
Fir flooring, 1 x 4, edge grain..		35 00
Fir flooring, 1 x 4, flat grain ..		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 25
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00	
Ash, white, No. 1 common	45 00	
Ash, brown, 1sts and 2nds, 4/4	50 00	
Ash, brown, common and better	40 00	
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00	
Birch, 1st and 2nds, 4/4	44 00	
Birch, No. 1 com, and bet., 4/4	35 00	
Birch, 1st and 2nds, 6/4 and 8/4	46 00	
Birch, 1st and 2nds, 10/4 and 12/4..	60 00	
Birch, 1st and 2nds, 16/4	62 00	
Basswood, 1sts and 2nds, 4/4	40 00	
Basswood, No. 1 com. and bet., 4/4..	35 00	
Basswood, No. 2 and 3, common	18 50	
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00	
Basswood, 6/4 and 8/4, com. and bet.	38 00	
Basswood, 4/4, No. 2 com. and bet...	30 00	
Soft elm, 1sts and 2nds, 4/4	40 00	
Soft elm, No. 1 com. and bet., 4/4	32 00	
Soft elm, No. 2 and 3 common	17 50	
Soft elm, 6/4 and 8/4, 1 and 2	42 00	
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00	
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00	
Soft maple, 1sts and 2nds, 4/4	33 00	
Soft maple, com. and bet., 4/4	25 00	
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00	
Hard maple, 1st and 2nds, 4/4	40 00	
Hard Maple, common and better, 4/4	33 00	
Hard maple, 12/4 & 16/4, 1sts and 2nds	50 00	
Red oak, plain 1st and 2nds, 4/4....	66 00	
Red oak, plain, No. 1 com., 4/4.....	40 00	
Red oak, plain No. 2 com. 4/4.....	32 00	
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00	
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00	
White oak, plain 1sts and 2nds, 4/4.	68 00	
White oak, plain, No. 1 com., 4/4....	40 00	
White oak, plain, No. 2 com., 4/4....	32 00	
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	66 00	
Red and White oak, plain, No. 1 com. 5/4 and 6/4	43 00	
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00	
Red and White oak, plain, 1sts and 2nds, 8/4	72 00	
Red and White oak, plain, No. 1 com. 8/4	48 00	
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00	
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00	
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00	
White oak, ¼ cut No. 1 common	57 00	
Hickory, 1sts and 2nds, 4/4	70 00	
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00	

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up $52 00		54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ...	29 00	30 00
Pine, No. 1 dressing shorts ...	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ...	23 00	24 00
Pine, 1-in. x 5-in. s.c. strips ...	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips ...	24 00	25 00
Pine, 1-in. x 7-in. s.c. strips ...	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	26 00	27 00
Pine, 1-in. x 10-in. M.R.	28 00	29 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11' ...	17 50	18 00
1"x 3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12 ..	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16' ...	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles:		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet.....	80	85
According to average and quality, 30 to 35 feet	50	60

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00

Birch Planks

1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00

Cuts and Better

4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00

No. 1 Cuts

1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	00 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00

No. 2 Cuts

1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in.. 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in.	25 00
1-in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00

No. 1 Barn

1 inch	31 00	45 00
1¼, 1½ and 2-in.	36 00	45 00
2½ and 3-in.		45 00
4 inch		50 00

No. 2 Barn

1 inch	28 00	36 00
1¼, 1½ and 2-in.	30 00	36 00
2½ and 3-in.		38 00

No. 3 Barn

1 inch	21 00	28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00	25 00

Box

No. 1, 1, 1¼, 1½, 2-in.	22 00	25 00
No. 2, 1¼, 1½, 2-in.	19 00	23 00

Mill Culls

Mill run culls, 1-in.		19 00
1, 1¼, 1½ and 2-in.		20 00
No. 2	17 00	18 00

Lath

No. 1, 32-in. pine	1 80
No. 2, 48-in. pine	4 35
No. 1, 48-in. pine	4 85
No. 3, 48-in. pine	3 85
Hemlock Lath 48 in.	3 80

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1. E.			
	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8..	14 00	17 00	20 50	21 50
2 x 10	18 00	18 50	21 50	22 50
2 x 12	18 00	19 00	23 50	23 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	21 50
2 x 4, 10, 18, 20	23 50
2 x 6, 8 to 16	21 50
2 x 8, 8 to 16	21 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	29 50
2 x 10 and 2 x 12; 8-16 ft.	26 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	28 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	30 50

No. 1 Common Boards

4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50

Flooring

4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00

Shiplap—Finished

6 inch	22 50
8, 10 and 12 inch	23 50

Siding

6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00

Lath

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	27 10
3 x 8 in.; 8 to 16 ft.	24 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.....	27 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	29 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	20 50
2 x 4 in.; 12 and 14 ft.	21 50
2 x 4 in.; 10 and 16 ft.	22 50
2 x 4 in.; 18 and 24 ft.	23 50
2 x 4 in.; 22 and 24 ft.	24 50
2 x 4 in.; 26 to 32 ft.	26 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.....	23 00
2 x 10 and 2 x 12 in.; 18 and 20 ft. ..	25 00
2 x 10 and 2 x 12 in.; 22 and 24 ft. ..	26 00
2 x 10 and 2 x 12 in.; 26 to 32 ft. ...	28 00
2 x 14 in.; 10 to 16 ft.	28 00
2 x 14 in.; 18 and 20 ft.	30 00
2 x 14 in.; 22 and 24 ft.	31 00
2 x 14 in.; 26 to 32 ft.	33 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	24 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	25 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	26 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	27 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft. ...	27 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	27 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	28 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	28 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ..	23 00
No. 2 Shiplap, 6 in.	22 00
No. 2 Shiplap, 8, 10 and 12 in.	23 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 85

LATH

Fir lath, ¾ x 1½ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ½ x 1½ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

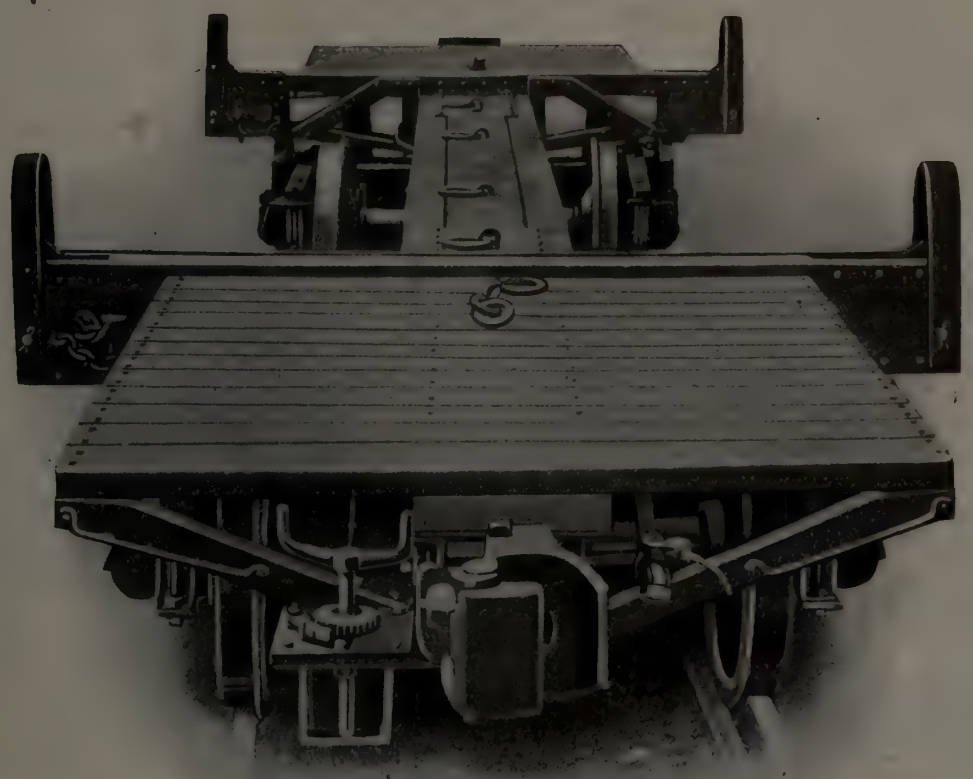
Wholesale Selling Price

Uppers 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	25 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00

(Continued on page 60)

NATIONAL

LOGGING CARS



NATIONAL Steel Logging Cars give exceptional service under all conditions found in the Lumber Industry. We have analysed every known condition of logging and have produced a line of cars that not only give every satisfaction but eliminate every trouble encountered in the safe and economical handling of logs.

The Logging Car Dept. is in a position to give good service on cars of all capacities.

Full particulars supplied upon request.

National Steel Car Co., Limited

Montreal Office:
SHAUGHNESSY BLDG.

Works and Operating Offices:
HAMILTON, CANADA

CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	62 00
No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	37 - 39	24 - 26	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

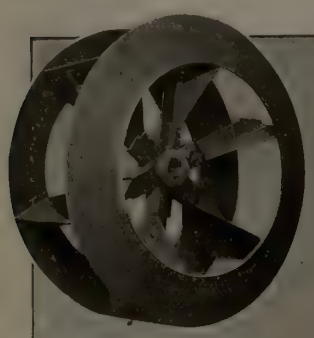
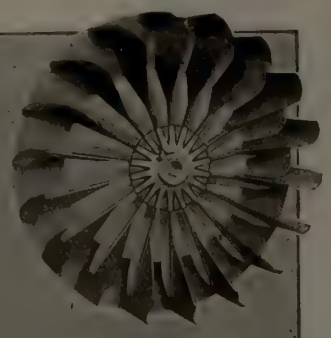
4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in...	98 00
Selects, 1 to 2 in.	88 00
Fine common, 1 in.	68 00 70 00
Fine common, 1¼ to 2 in.	72 00 74 00
No. 1 Cuts 1 in.	55 00
No. 1 Cuts 1¼ to 2 in.	60 00 64 00
No. 2 Cuts, 1 in.	40 00
No. 2 Cuts, 1¼ to 2 in.	48 00 50 00
Barn Boards, No. 1, 1 x 12	46 00 50 00
No. 1, 1 x 10	37 00 38 00
No. 1, 1 x 8	36 00 37 00
No. 2, 1 x 12	38 00 40 00
No. 2, 1 x 10	35 00
No. 2, 1 x 8	34 00
No. 3, 1 x 12	31 00 32 00
No. 3, 1 x 10	29 50 30 00
No. 3, 1 x 8	29 00
Canadian spruce boards	23 00 25 00
Spruce, 10 in. dimension	27 00 28 00
Spruce, 12 in. dimension	28 00 29 00
Spruce, 9 in.	25 00
Spruce 8 in. and under dimen.	27 00
10 and 12 in. random lengths, 10 ft. and up	26 00 27 50
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00 22 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00 22 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50 23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	22 00
1⅝-in. spruce laths	4 10 4 15
1½-in. spruce laths	3 75

New Brunswick Cedar Shingles

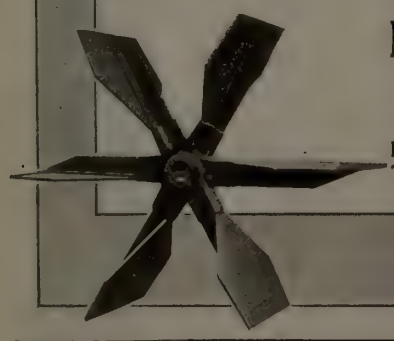
Extras	3 50 3 60
Clears	3 10 3 15
Second clears	2 30 2 40
Clear whites	2 10 2 20
Extra 1s (Clear whites in)	1 60
Extra 1s (Clear whites out)	1 50
*Red Cedar Extras, 16-in. 5 butts to 2-in.	3 75
Red Cedar Eurekas, 18-inch 5 butts to 2-in.	4 25
Red Clear Perfections, 5 butts to 2¼	4 80
Washington 16-in. 5 butts to 2-in extra red clear	3 65

Handle Your Planer Waste
with
Sturtevant
Planing Mill Fans

For more than 50 years we have been studying the pneumatic removal of dust and shavings and have now adopted five different designs of Slow Speed Wheels which successfully fulfill every need encountered in a planing mill. Let us recommend the one best suited to your needs.

Ask for Catalog 155-C.



B. F. Sturtevant Co.
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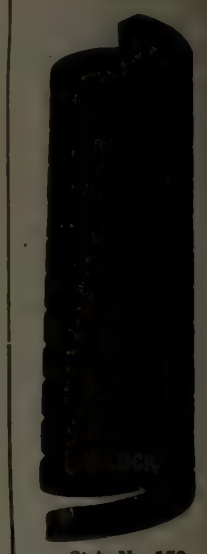
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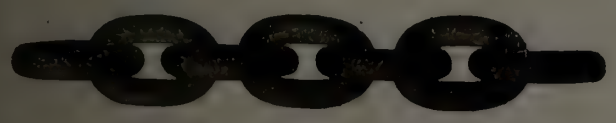

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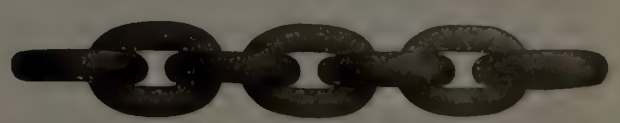

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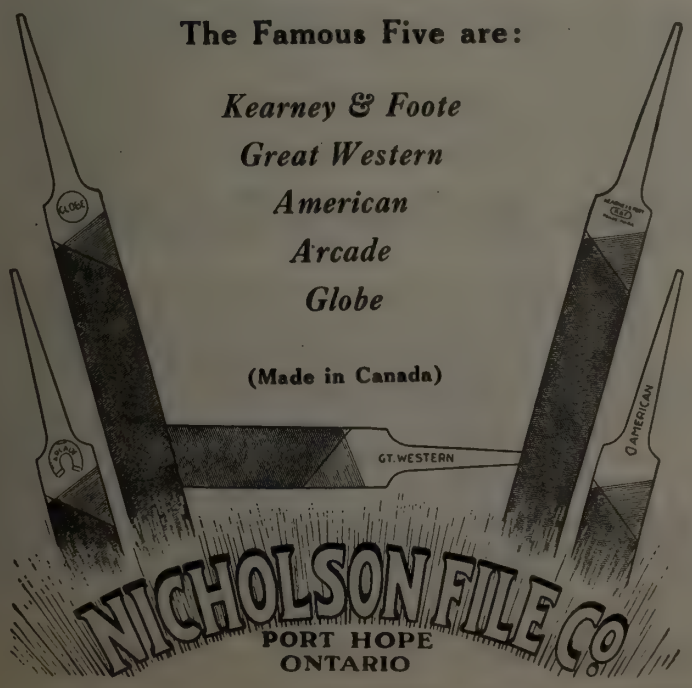
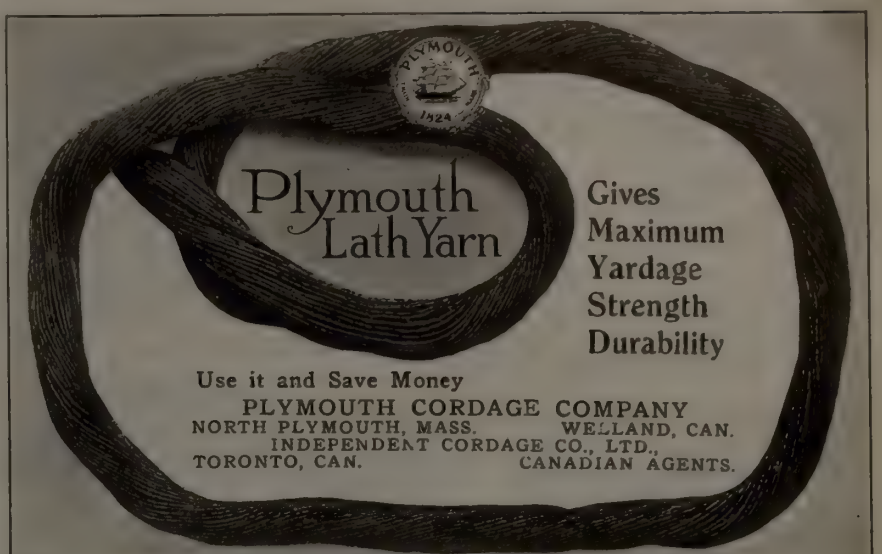


NICHOLSON FILE CO.
PORT HOPE
ONTARIO



MAKERS ALSO OF MANILA ROPE FOR EVERY PURPOSE

FIRE BRICK

Differs in Quality and Variety

For instance, a certain quality or kind of brick that gives satsatisfaction when used in a Refuse Burner, may show up poorly if used in a Dutch Oven.

It all depends on getting the right kind and the right quality for your particular needs.

Just tell us what you want it for, and we'll send a fire-brick that was made for that very purpose.

We Manufacture the Following Well-Known Brands

"Elkco" "Elk Steel," "St Marys," "Keystone" and "Rotex"

Write for a copy of our Catalog.

"Refractory Efficiency Engineering"

Elk Fire Brick Co. of Canada, Limited

HIGH GRADE FIRE BRICK and CLAY

Sun Life Bldg., Hamilton, Canada

Books For Sale

SPECIAL PRICES

The Preservation of Structural Timber, by Howard F. Weiss. Published in 1915 by McGraw-Hill Book Company. 312 pages, illustrated. Price $3.00.

Scribner's Lumber & Log Book, 1915 Edition, Price 35c.

Baughman's Buyer & Seller, 75c.

Utilization of Wood - Waste (Second Revised Edition), by Ernst Hubbard. Published in 1915 by Scott, Greenwood & Sons. 192 pages, illustrated. Price $1.50.

Canada Lumberman

347 Adelaide Street West

TORONTO

SHINGLES
Bartram Brothers
Campbell-MacLaurin Lumber Co.
Canadian Western Lumber Company
Christy-Moir Company
Fesserton Timber Company
Fraser Limited
Gillespie, James
Harris Tie & Timber Company
Long Lumber Company
Mainland Lumber & Shingle Co.
McGibbon Lumber Company
Miller Co. Ltd., W. H.
Muir, Kirkpatrick & Sharpe
Terry & Gordon.
Timms, Phillips & Company

SHINGLE & LATH MACHINERY
Dunbar Engine & Foundry Co.
Hamilton Company, William
Long Manufacturing Company, E.
Payette & Company, P.
Waterous Engine Works Company

SHOE PACKS
Gendron Shoepack Company, P. T.

SILENT CHAIN DRIVES
Canadian Link -BeltCompany

SNOW PLOWS
Pink Company. Thos.

SODA PULP PLANTS
Becker & Co.

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Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Cameron & Company
Chicago Lumber & Coal Company
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Muir, Kirkpatrick & Sharpe
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Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Hobart & Company
Long Lumber Company
Mason, Gordon & Company
Muir, Kirkpatrick & Sharpe
Southern Lumber Company
Stout Lumber Company
Valley Lumber Company
Wilson Lumber Company
Wisconsin & Arkansas Lumber Co.
Wuichet, Louis

SPARK ARRESTERS
Canada Wire & Iron Goods Co.

SPRUCE
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Bartram Bros.
Bourgouin, H.
Brown Corporation
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Federal Lumber Company
Fesserton Timber Company
Fraser Limited
Fraser-Bryson Lumber Company
Gillies Bros.
Grant & Compbell
Hart & McDonagh
Laferte, J. A.
Long Lumber Company
Mason, Gordon & Company
Muir, Kirkpatrick & Sharpe
Murray & Gregory
New Ontario Colonization Company
Partington Pulp & Paper Co., Ed.
Quebec & St. Maurice Industrial Co.
Spencer, C. A.
Terry & Gordon.

STEEL CHAIN
Canadian Link-Belt Company
Columbus Chain Company
Jeffrey Mfg. Company
McKinnon Chain Company
Waterous Engine Works Co.

STEAM PLANT ACCESSORIES
Waterous Engine Works Company

STEAM APPLIANCES
Darling Bros.

STEAM TRAPS
Cole Co., Geo. W.

STEEL BARRELS
Smart-Turner Machine Co.

STEEL DRUMS
Smart-Turner Machine Co.

STOKERS
Jones Underfeed Stoker Company

TAPS and DIES
Pratt & Whitney Company
Waterous Engine Works Company

TIES
Austin & Nicholson
Fesserton Timber Company
Harris Tie & Timber Company
Long Lumber Company
Muir, Kirkpatrick & Sharpe
Spears & Lauder
Terry & Gordon.
W. H. Miller Co., Ltd.

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Cant & Kemp
Farnworth & Jardine
Hillas & Company, W. N.
Smith & Tyrer Limited

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Sewall, James W.
McInnis, A. D.

TIMBER CRUISERS
Campbell Lumber Company. L. E.

TIMBER LANDS
Lacey Co., Jas. D.

TRANSMISSION MACHINERY
Canadian Link-Belt Company
Jeffrey Manufacturing Company
Waterous Engine Works Company

TUGS
West & Peachey

TURBINES
Hamilton Company, William
Smith Company, S. Morgan.

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Canadian Western Lumber Company
Hoffman Brothers Company
Webster & Bro., James

VENEER MACHINERY
Perrin, William R.
Philadelphia Textile Machinery Co.

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Fleming Bros.

WATCHMEN'S CLOCKS
Signal Systems Co.

WATER WHEELS
Hamilton Company, William
Smith Company, S. Morgan

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Canada Wire & Iron Goods Co.

WOODWORKING MACHINERY
Canadian Blower & Forge Company
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WOOD PULP
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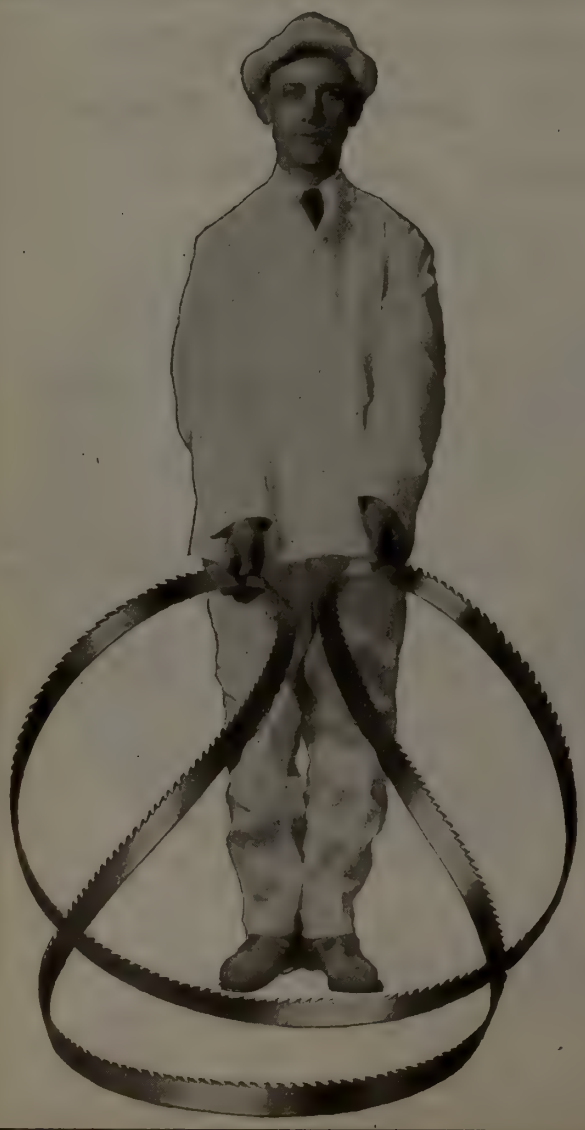
Becker & Co.
Miller Co., Ltd., W. H.
New Ontario Colonization Co.
River Ouelle Pulp & Lumber Co.



ATKINS
BAND and RE-SAWS

We have achieved an enviable reputation for supplying SAWS which stand up to their work longer, with less re-fitting than any other SAWS in the world. If there is any doubt in your mind, we stand ready to prove it to you.

A Perfect Saw for Every Purpose

Send for our 248 page book on Saws. The most valuable and interesting Saw book ever published. Tells you just what you want to know about SAWS, MACHINE KNIVES and SAW FITTING TOOLS.

ASK FOR BOOKLET "C L"

E. C. ATKINS & COMPANY INC.

Makers of Sterling Saws

Factory—HAMILTON, ONT.

Vancouver Branch—109 Powell St.

J. J. TURNER & SONS

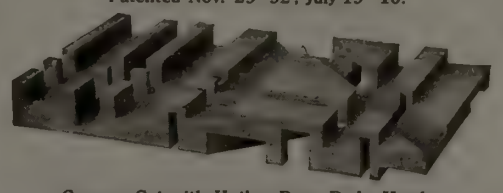
PETERBOROUGH, ONT.

Government Contractors and the largest Manufacturers and Dealers in Canada of

Lumbermen's Tents, Bed Ticks, Grey Blankets, Nose Bags, Waterproof Goods, Steel Ranges and General Camp Outfits.

Write for Catalogue. **Prompt shipments.**

Patented Nov. 29 '92; July 19 '10.



Grooves Cut with Huther Bros. Dado Heads

Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

Write for New Illustrated Catalog.

HUTHER BROS. SAW MFG. COMPANY, Inc.

1103 University Ave.
ROCHESTER, N. Y.

INDUSTRIAL LOCOMOTIVES

A locomotive to justify its cost must start the required load and keep it going.

The right amount of the right material must be provided in the right place.

Each and every part must be sure to fit not only the locomotive for which it was made, but every other locomotive of the same size and design. Spare parts must be instantly available, made so well as to go into place without a machine shop.

We have a number of standard sizes of locomotives in stock and can make immediate delivery.

MONTREAL LOCOMOTIVE WORKS, LIMITED,

DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

The Peter Hay Knife Co., Limited

GALT, ONTARIO

MANUFACTURING WOODWORKING

Machine Knives, Circular Cutters and Mortise Chisel

NO. 40 HEAVY DUTY STEEL SAW CARRIAGE

Long's "Quality" Carriages were the first saw mill machines built by the Company. They were the machines that earned the reputation for dependability in service, that has placed "Long" Machinery in its present enviable position, at the head of its class. There is a "Long" carriage, in a weight, and at a price, to suit every purchaser. Catalogue on application.

The carriage illustrated is our heavy duty 3 block No. 40, the knees of which recede 40" from saw line. The carriage can be furnished in any number of head blocks or axles.

This mark on your saw mill machinery is an indication that your lumber manufacturing equipment is the best and most economical money can buy.

The E. Long Mfg. Co. Ltd., Orillia

"Waterous Forged" Sawmill Chains

Good materials, first class workmanship, and a proper appreciation of what is expected from the chain, is the basis of our chain manufacture.

For these reasons Waterous Chains are especially suitable for sawmill work. Every link is carefully tested during making and before shipment, and great strength and reliability are guaranteed.

For Heavy Duty

For heavy duty we recommend our short and long link Coil Chain built in sizes up to 33 lbs. per foot weight. Our flat and round link Bull Chain also is very useful for operating with log jacks, and on rough wood and refuse conveyors.

We build an all-steel Haul-up Chain on which the largest and heaviest logs can be handled.

These chains are all carefully selected for size and strength so that only ***those most suitable for your work*** will be supplied. This service of selecting the best chain for your use and installing it to give the best results in your mill, is at your command.

We have had fifty years' experience in this work and can give you advice that is worth while.

Chain Accessories

We build sprockets and idlers, drums and end spools to fit any style and size of chain. Our list of extensible tooth sprockets is especially complete. For nice running sprockets that are easy on the chain, we can recommend our make.

Send for Chain Catalogue No. 1081—A post card will do.

Waterous Engine Works Co., Limited

Head Office: BRANTFORD, Canada

"FROST KING" METAL

$5,000,000.00
worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. **Price 30c per lb.**, Fort William and East; West of Fort William **35c per lb.**, delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

The Low Head Plant
with
SMITH HYDRAULIC TURBINES

has established a reputation for real service that is second to none in the field of water power utilization. It is the result of all-round efficiency, hydraulic as well as mechanical, and has been attained by the careful consideration of every feature entering into the design of turbine equipment.

Our thorough investigation of the conditions peculiar to any proposition assures a practical and economical solution of the problem.

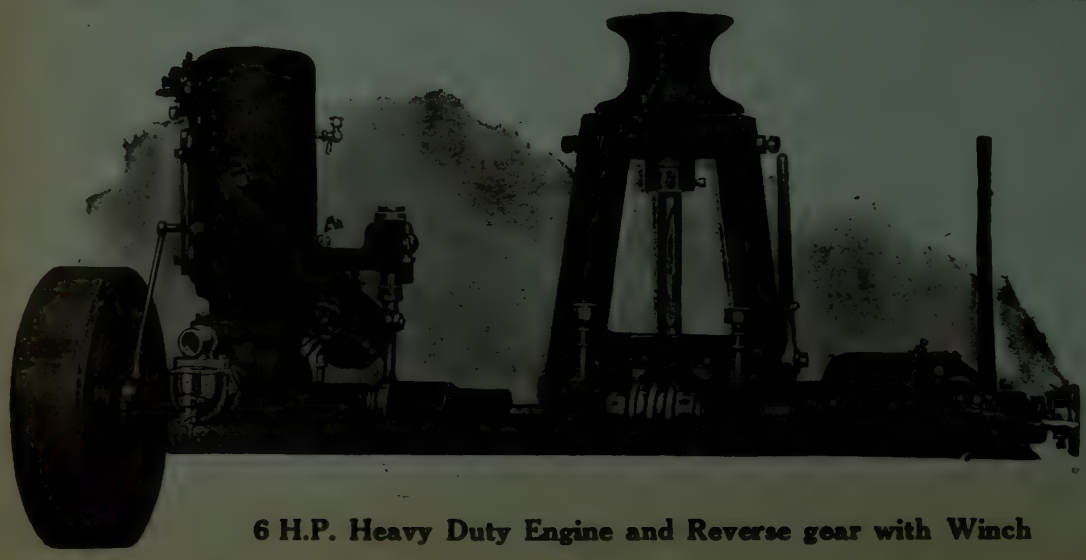
Write for Bulletin F

S. Morgan Smith Co., York, Pa.

H. B. VanEvery—CANADIAN REPRESENTATIVE
405 Power Bldg. - - - Montreal, Can.

Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.
Limited
General Mill Supplies MONTREAL



6 H.P. Heavy Duty Engine and Reverse gear with Winch

River Driving Costs

will be decidedly lower this year if you use Adams Gasoline Towing Machinery in 25 ft. punts for carrying supplies and handling booms and logs. One man does the work of ten. We have both machinery and complete punts for prompt shipment. It will pay you to write us now. Gasoline engines all sizes, 2 to 25 h.p.

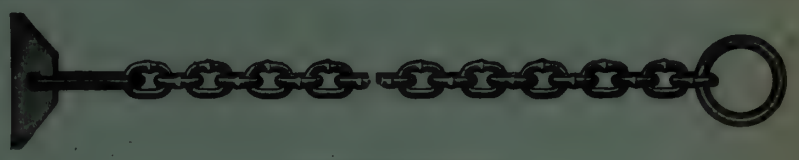
Adams Launch & Engine Co.
Penetang, Ont.

Canada Lumberman & Wood Worker

EVERY dollar you spend for Dart unions to make the connections on your piping will return you two for one in saving and service.

That's why Dart unions are guaranteed two for one. Your jobber sells them.

Dart Union Co., Limited, Toronto



Made in all styles

Electric-Welded Boom Chain

We also specialize

Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

The Cole Steam Trap

MR. ENGINEER: Let us give you a hand in running your plant efficiently. What we have done for others, we can do for you.

Its Duty In Your Plant

Send us a pencil sketch of your plant, and we will show by blue print where your trouble lies and how to stop it. At least, ask for booklet which explains.

Geo. W. Cole Company, 838 Dundas Street, Toronto

GENUINE "TURBROS"

Balata Belting

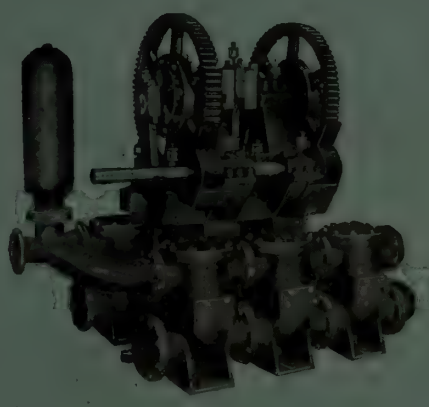
Waterproof and Stretchless.

The best belt for sawmills.

Manufactured and guaranteed by

Turner Bros. Canada Limited

Montreal



Better Pumps

At Reasonable Cost.

Write to

The Smart - Turner Machine Co., Limited

HAMILTON, CANADA

The Morrison Lumber Measuring Register

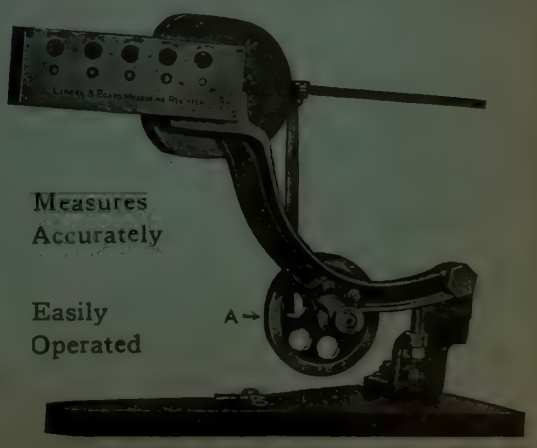
May be bolted to your planer, molder, etc., easily and quickly. It will automatically and continuously measure your stock, giving the results in lineal or board measure as desired.

Solidly constructed; no parts to get out of order; fully guaranteed to give accurate results if operated according to instructions.

A labor saver that saves you money. Write for explanatory booklet.

The James Morrison Brass Mfg. Co., Limited

93-97 Adelaide St. W., TORONTO



Measures Accurately

Easily Operated

Alphabetical Index of Advertisers, Page 58 Classified Directory to Advertisements, Page 60

"AMPHIBIA"

BELTING

For Difficult Runs

The supreme test—the acid test of belting is on heavy duty machines, over high-speed small pulleys. AMPHIBIA Belting on these runs, as shown above, makes you forget belting troubles, because no trouble develops. The wear is there under all conditions.

Prove it. Try a sample of AMPHIBIA Planer and see for yourself.

Sadler & Haworth

Tanners and Manufacturers *Established 1876*

FOR 40 YEARS TANNERS AND MANUFACTURERS OF THE BEST LEATHER BELTS

MONTREAL, 511 William Street

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WINNIPEG Galt Building
VANCOUVER 107-111 Water St.

"Leather like gold has no substitute."

Shell-Box Stock

WE are now running on SPRUCE and JACK PINE and are prepared to book orders for your requirements in 1 in., 5/4, and 4 x 5— Our Jack Pine is being used with good results by several of the largest shell-box manufacturers.

LET US SHIP YOU A SAMPLE CAR

Bartram Brothers

Limited

White Pine, Spruce, Norway and Jack Pine

Ottawa, Canada

QUALITY LUMBER

This Week's Special

Lot No. 1

2 cars 1⅜ x 32 M. R. Red Pine Lath
5 cars 1⅜ x 32 M. R. White Pine Lath

Lot No. 2

50,000 1 x 4 and up 6/16 W. P. No. 2 Cull

Lot No. 3

2 cars 1 x 4 8/16 No. 1 Hemlock

Lot No. 4

1915 Cut
50,000' 1 x 10 10/16' W. P. Small Log Mill Run
1916 Cut
30,000 1¼ x 4 and up W. P. Dressing and Better Shorts
50,000 1¼ x 7 and up 10/16' W.P. No. 1, 2 and 3 cuts
25,000 1½ x 4 and up W.P. Dressing and Better Shorts
40,000 1½ x 7 and up 10/16' W. P. No. 1, 2 and 3 cuts
50,000 2 x 7 and up 10/16' W. P. No. 1, 2 and 3 cuts

Full Stocks of Hemlock at Bala on C. P. R. and Bracebridge on G. T. R.

Have you tried a Car of "T & G" "Quality Brand" B.C. Red Cedar Shingles?

BRITISH COLUMBIA PRODUCTS

We solicit your inquiries of Douglas Fir Timber, Bill Stuff and Trim.

Branch Office
852 Cambie Street
Vancouver

Terry & Gordon

Wholesale Lumber Merchants

Head Office
704 Confederation Life Bldg.
Toronto

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

HEMLOCK

1915 CUT

300,000 ft. 2 x 4	No. 2	50,000 ft. 2 x 6	—14.
300,000 ft. 2 x 6 and up	No. 2	25,000 ft. 2 x 8	—14.
150,000 ft. 1 x 4 and up	No. 1 Sidings	2,000 ft. 2 x 10	— 10.
40,000 ft. 1 x 4	No. 1	30,000 ft. 2 x 10	— 12.
200,000 ft. 2 x 4	— 14 No. 1	100,000 ft. 2 x 10	— 14.
40,000 ft. 2 x 6	— 10 No. 1	90,000 ft. 2 x 10	— 16.
50,000 ft. 2 x 6	— 12 No. 1	1,000 ft. 2 x 10	— 20.

WE CAN SUPPLY THE SIZES WE ARE OUT OF IN 1916 CUT.

DRY SPRUCE

48,000 ft. 1 x 4 and 5 No. 1	25,000 ft. 2 x 4 No. 1.
2,000 ft. 1 x 7, 9 and 10 No. 1	1,500 ft. 2 x 10 No. 1.

The Long Lumber Company

HAMILTON, ONT.

The Vancouver Lumber Co., Limited

Have **3 PLANTS** Always at your Service

The "FIR" Plant

on

False Creek VANCOUVER, B.C.

Where we manufacture

Douglas Fir Timbers

Up to 94 ft. long.
Rough or Dressed.

Fir Flooring
Fir Ceiling
Fir Finish
Fir Mouldings, etc.

The "CEDAR" Plant

on

Burrard Inlet (Roche Point) B.C.

Where we manufacture the

World's Best Shingles

6/2 XXX (100% clear 100% edge grain)
5/2 XXXXX (100% clear 100% edge grain)
16" 6/2 "RITE-GRADE" Perfects

CEDAR BARN BOARDS

Sound Knots; any width; dressed as desired

CEDAR BEVEL SIDING, Etc.

"CHARLES" Plant

Our

Eastern Representative

To whom you should send all orders and enquiries at

701 Excelsior Life Bldg.
TORONTO,
ONT.

HIGH GRADE

BRITISH COLUMBIA WOOD PRODUCTS

SOFT MOUNTAIN PINE — FIR — CEDAR — LARCHWOOD—SPRUCE and CEDAR SHINGLES

We specialize in these lines and can give you prices that will interest. Try us for a sample car. Very prompt shipment on timbers, all sizes and lengths up to eighty feet, also on cedar poles and piles, cedar silo stock and barn boards and all grades of shingles, lath, etc.

WE HAVE A LARGE AND COMPLETE LIST OF HEMLOCK

SEND US YOUR ENQUIRIES

We also have a very complete list of SPRUCE, WHITE PINE and NORWAY PINE in all grades and sizes

We have an exceptionally nice stock of 1 x 8—10 and 12 in. mill cull stock boards and a large stock of mill run and No. 1 spruce lath.

WE ARE OFFERING SPECIAL

100 M. 1 x 12 smooth box and common 15 per cent. box, 85 per cent. common.
50 M. 1 x 7 in. and wider No. 1, 2 and 3 cuts, 15 per cent. No. 3 cut, 85 per cent. No. 1 and 2 cut.
100 M. 1 x 4 No. 3 Clear Fir Flooring.
200 M. 1 x 8 in. Western White Pine mill culls.
100 M. 1 in. mill cull spruce.
100 M. 1 in. x 4 in. and up mill run spruce.

LET US QUOTE YOU

Very Prompt Shipments on RED and WHITE CEDAR SHINGLES. Several cars in transit.

Western Office
[1007 Dominion Bldg.,
VANCOUVER, B.C.
GEO. R. POTTER,
Manager

MUIR, KIRKPATRICK & SHARPE

WHITE and NORWAY PINE, HEMLOCK, SPRUCE, JACK PINE

Eastern Office
1325-6-7-8 Traders Bank Building
TORONTO, CAN.

LUMBER

Murray & Gregory, Limited

Head Office: St. John, N. B. **Quebec Office: St. Camille, B. Co., Que.**

WE will now book orders for our new cut of SPRUCE and PINE from our Quebec mills. If you want some very nice stock for early fall delivery it will pay you to communicate with us promptly.

Our

Spruce and Pine Lumber, Laths and Pulpwood

cannot be beaten for Quality and Manufacture

Large Mills, Woodworking Factories and Glass Works at ST. JOHN, N. B.
Also Mills at St. Camille and Lac Frontier, Que.

Address all enquiries to our Head Office, ST. JOHN, N. B.

You are cordially invited to visit and inspect

The British Columbia Lumber Exhibit

in the

GOVERNMENT BUILDING

at the

CANADIAN NATIONAL EXHIBITION, TORONTO

August 26th to September 11th

This exhibit is very comprehensive and will fully repay a visit.

ANNOUNCEMENT

TO THE LUMBER RETAILERS AND WHOLESALERS OF EASTERN CANADA:

THE FOREST SERVICE OF THE PROVINCE OF BRITISH COLUMBIA is about to issue a DIRECTORY of LUMBER RETAILERS stocking BRITISH COLUMBIA WOODS and LUMBER WHOLESALERS handling BRITISH COLUMBIA WOODS throughout EASTERN CANADA. This Directory will be for general distribution.

An advance edition is now in the Press and a copy will be mailed to all retailers and wholesalers in Eastern Canada on or about September 5th. This is being done in order that the Directory will be correct in detail and omit no yard or wholesaler dealing in British Columbia woods.

If through an inaccuracy in our mailing list you do not receive the advance copy I shall be glad to forward you one on application.

L. B. BEALE,
B. C. Lumber Commissioner,
Excelsior Life Bldg., TORONTO

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

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2 x 4 —	10/16 feet	2 x 8 —	10/16 feet
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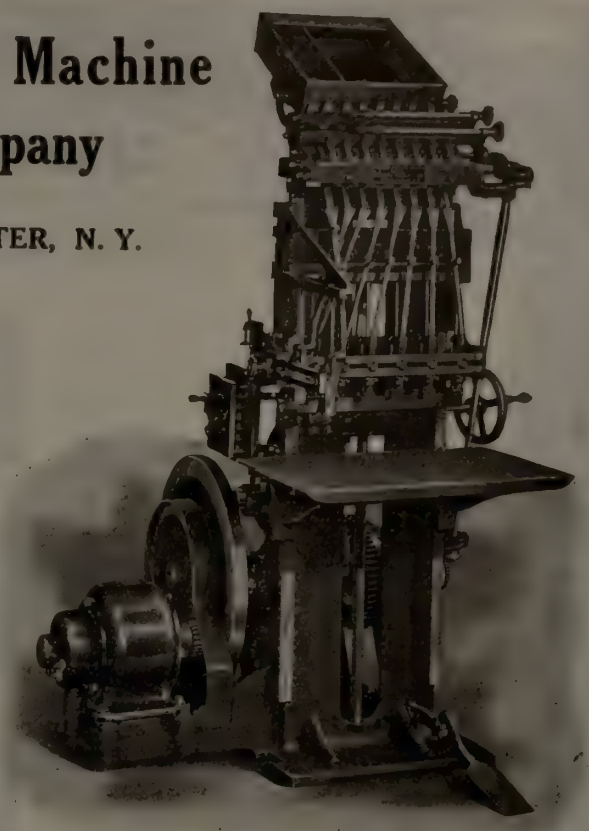

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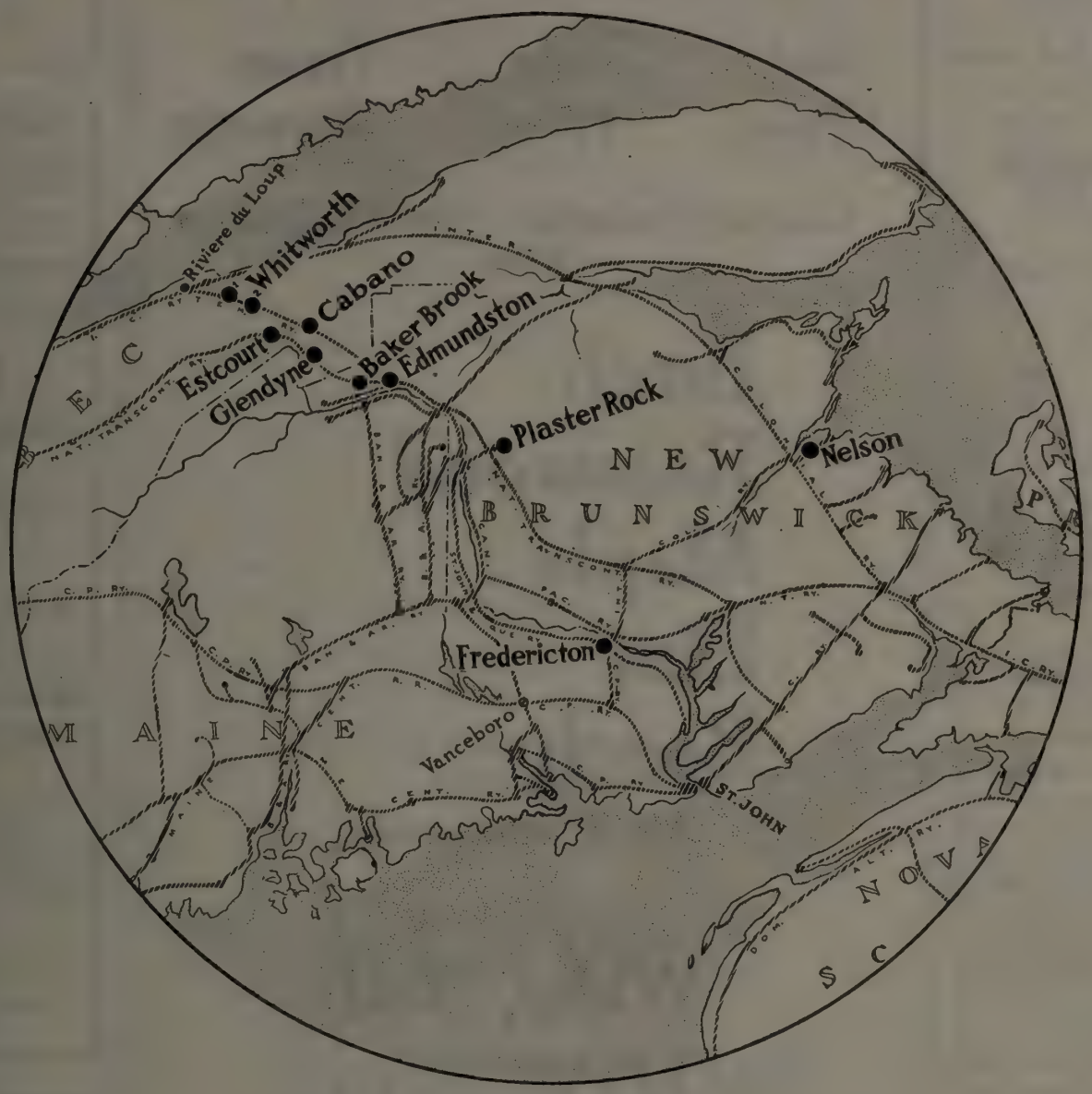

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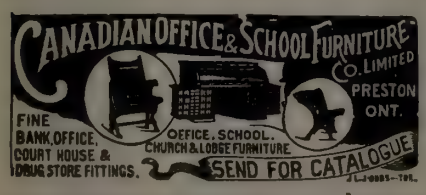
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Merchantable	100,000'	1" Spruce
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All sizes and lengths up to 20 feet

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LOUISIANA RED CYPRESS COMPANY

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Canada's Banner Province

Ontario's timber production last year valued at $26,774,937 or 40% of Canada's total output.

Pine production,	905,442,000 ft. B.M.
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—Specifications—

⅜ x 1½—4 ft.—50 pcs. per pack
No. 2 and No. 3 grades preferred.

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10	cars 4/4 Oak tie siding.	2	" 8/4 C. & B. Soft Elm.
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2	" 4/4 Com. Red Gum.	6	" 5/4 C. & B. White Ash.
5	" 4/4 C. & B. Sap Gum.	3	" 6/4 C. & B. White Ash.
2	" 8/4 C. & B. Beech.	2	" 8/4 C. & B. White Ash.
2	" 6/4 C. & B. Soft Maple.	7	" 10/4 C. & B. White Ash.
2	" 8/4 C. & B. Soft Maple.	7	" 3 in. C. & B. White Ash.
2	" 8/4 C. & B. Hard Maple.	5	" 4 in. C. & B. White Ash.
2	" 10/4 C. & B. Hard Maule.	4	" 4/4 Com. Qtd. White Oak.
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2	" 6/4 C. & B. Soft Elm.	20	" 2, 2½, 3 & 4 in. Plain Oak.

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in different sizes and capacities

In Three Sizes.
Length of Wood:—
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Oven Width	Depth	Height	Fire Box Wood	
24-in.	26-in.	16-in.	28-in.	Coal or Wood

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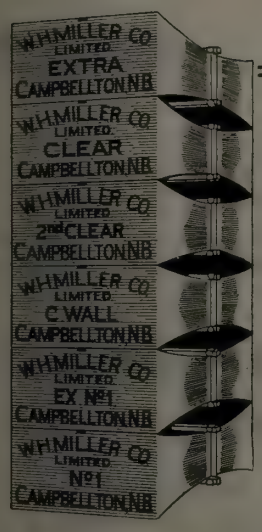
Let us quote you on your requirements for:

Spruce and Pine Lumber

We manufacture and export all kinds of it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have been made from steel made by us in our own plant since 1855. More than sixty years experience in the manufacture of saw-steel coupled with a study of operating requirements extending over three quarters of a century have resulted in saws of highest excellence.

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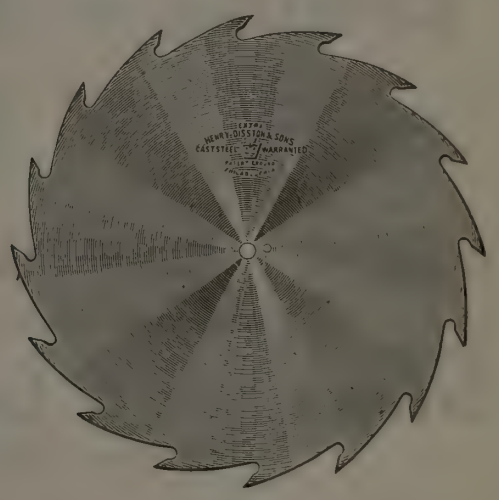

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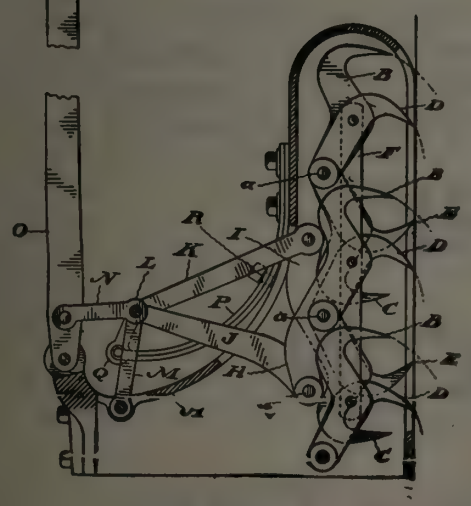

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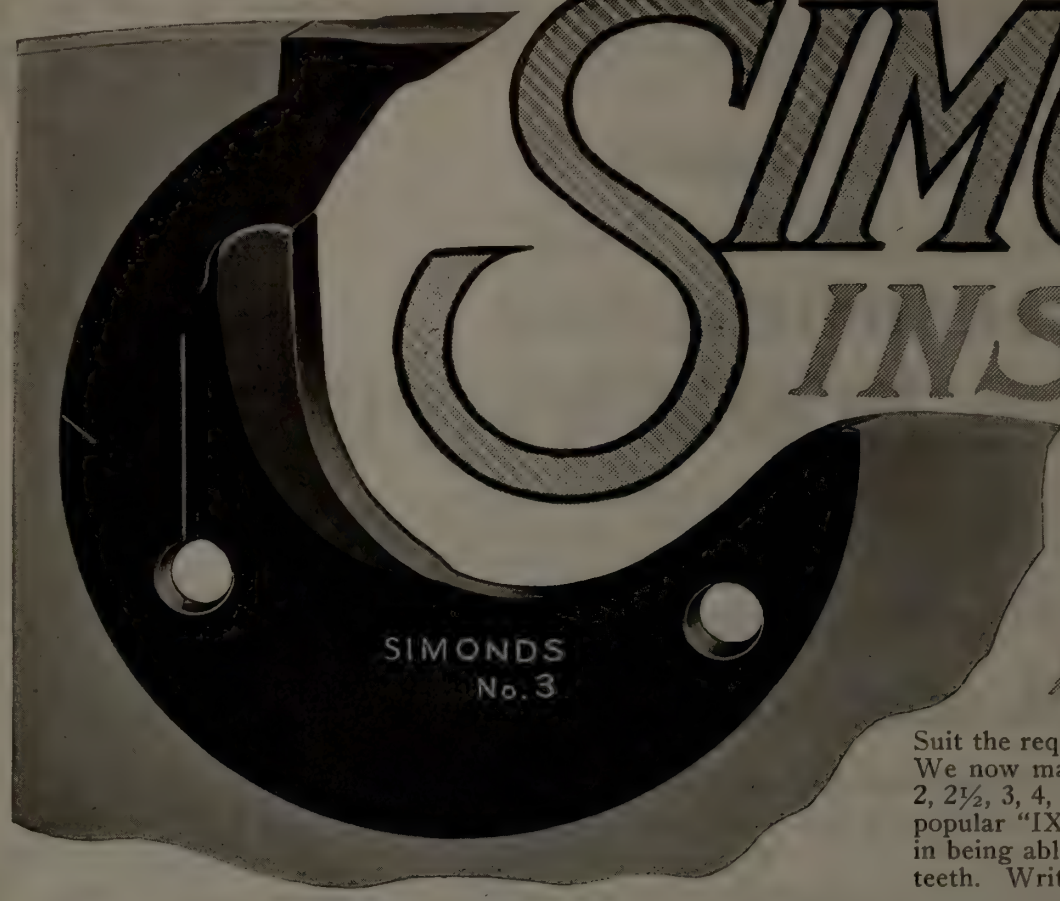

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Canada Lumberman & Wood Worker

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Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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Placing Responsibility for Ontario's Forest Fires

Every time that the Northland of Ontario is visited by a great forest fire, there follows in the daily press an outbreak of absurd references to the causes of these calamities, ascribing them, without consideration of the actual facts, to the carelessness and indifference of lumbermen in not disposing of their slash by modern methods. So long as the press of the country continue to display ignorance of the most elementary principles in connection with this situation, and to publish criticisms of this nature, at the same time failing to note the real neglect that is undoubtedly the greatest cause of forest fires, we may look forward to an almost annual fire loss of a more or less serious nature, and a periodical one which will involve millions in property loss and the destruction of many valuable lives, such as the fire which has occurred this year and that which occurred only a few years ago. The newspapers of the country, both Conservative and Liberal, are at fault in this matter. They are really failing in their plain duty by not facing the situation without considering their political affiliations. Politics, so far as we can gather, are directly responsible for the failure of the Ontario Government to face this problem, and for the inability of the daily press to see it in its real light.

This is a pretty strong statement to make, yet we are convinced of its truth. It is the verdict that we hear from lumbermen of both political stripes and from practically everyone else whom we meet, who comes out of the north country. Since the fire which recently took so great a toll of life and property, we have spoken to many men who are in close touch with northern conditions, and without exception they have all expressed the same views. They say, without the least hesitation, that the cause of the fires is the policy pursued by the Ontario Government in regard to the location of settlers. Men who settle in the north country, particularly in the clay belt, are located at long distances from one another. They are practically isolated, and they make their little clearings in the middle of a forest country. Each of them becomes a serious fire risk for the timber located round about him. A settler has in mind, above everything else, the necessity for getting his land cleared. He works at this, accumulates a large amount of slash and fallen timber which must be got rid of, and fire is the only practical way in which he can handle the problem. He waits until a dry spell has made the material easy to burn and then sets it on fire. He gets his clearing alright, but in many a case he does so at the expense of enormous quantities of timber, and often at a heavy cost in human lives. That is the situation in a nutshell; what is the remedy?

In the first place the desire of the Government to scatter settlement extensively throughout the vast northland, so as to make a good showing in regard to the extent of the country covered, is a mistake. The only way in which such a country can be settled successfully is by grouping the settlers; that is to say, setting aside a fair-sized area at a time and directing all settlement towards it until it is well occupied. This will give the settlers a community interest, such as they cannot obtain if they are scattered about at great distances from one another. The work of building roads will be greatly simplified by such a policy; the settlers will have one another's company, and will be able to co-operate during the season when co-operation is most important; and they will not be so disheartened as many of them must be under conditions which remove them from almost all human companionship. From a business point of view alone, settlement in fairly extensive groups is a better proposition than a scattered settlement. From a fire risk point of view there is no comparison. Scattered settlers are just so many fire risks, and the risk of each one extends over an enormous stretch of country. Grouped settlers clear away a considerable area of land and create, instead of a risk, an extensive cleared area which will act as a fire guard for much of the surrounding forest country.

The fire ranging question is the other important factor in this problem. We often hear it said that the ranging problem is too great to be solved; that it cannot be handled effectively. There is no truth in this statement. It is the excuse of incompetence or indifference. The problem has been solved by corporations and individuals who own extensive timber limits, and there is no reason why the Government should not do the same thing, especially as they have the experience of the timber owners to profit from. There is nothing insuperable about the problem whatever. It is simply a question of organization and the employment of experienced rangers. One large company, owning a vast quantity of standing timber in Northern Ontario, has created a complete fire ranging system within the space of a single year. It has built roads throughout its limits, has placed lookout stations on all the important high points of land and has made it possible to keep a watch upon every bit of standing timber within its limits. If a fire occurs anywhere on these limits, the company learns of it almost immediately and the roads and trails enable the rangers to reach the scene and put out the flames before they become too large to handle. This is practically the whole science of forest fire protection; to get to the fire before it is large enough to do any great damage. The Government can do the same thing if it makes a serious attempt. The universal verdict, however, of all who own standing timber in Northern Ontario is that the Government has not faced this problem and has failed to protect the timber.

We are not trying to make out a case in defence of the timber owner against the criticisms of the daily press. Only those who are not conversant with the situation can utter such criticism. We are trying to show the Government that they are neglecting their duty. Their settlement policy is all wrong. They employ rangers who have little or no experience of their work, according to the testimony of timber owners. The same testimony tells us that these rangers neglect their work, and in many a case are shirkers when the critical moment arrives. We are told that Government rangers are sent up and down the Trancontinental Railway on speeders, to put out fires that may develop from locomotive sparks, but that practically no Government rangers go deep into the bush and guard the Government timber as it should be guarded, nor is there any attempt

to regulate the setting out of fires by settlers in their clearing operations. Moreover, campers, prospectors, and others, who visit the forest areas annually are not followed by rangers to see that their fires are properly set and thoroughly extinguished before the party strikes camp and moves elsewhere.

In short, the timber owners of Northern Ontario find the Government unquestionably guilty of neglecting their duty, and alone responsible for the great losses that are so frequently sustained by the timber owners and settlers themselves. These timber owners have shown the Government how to handle the problem and they are naturally indignant at the feeble manner in which both the present and all former goverments of Ontario have dealt with the situation.

By way of corroborating the view we have expressed above, we draw attention to an article which we publish elsewhere in this issue. This article is contributed by the Canadian Forestry Association, representing a great number of timber owners and public spirited Canadians who are giving their time and thought to the important problem of preserving the timber resources of Canada from exhaustion. Their conclusions, item for item, are in accord with those that we have expressed. In view of all the first hand information that we have received, it seems to us that if there should be an inquest into the death of one of the fire victims, the Ontario Government would have to figure in the verdict as guilty of a neglect that was the direct and chief cause of death.

The Labor Shortage and the Market Situation

Nearly everything that we have heard in the way of discussion about trade conditions during the past month, when calling upon members of the lumber trade, has borne upon the situation arising out of the scarcity of labor. So far-reaching are the effects of this state of affairs that there is not a single corner of the whole Dominion of Canada, in which lumber is consumed, that is not more or less concerned. In northern Ontario the manufacturers are daily wondering how long they can continue operating under present conditions. In eastern Canada the same reports are heard. In British Columbia, conditions are even more serious, as that province today is receiving far more enquiry for the output of its mills than it is in a position to take care of, either in regard to production or shipment.

At the present time, the interest of this condition is confined mostly to its effect upon production and shipment and it is serious enough at that. Before long, the situation will be complicated by the commencement of logging operations in eastern Canada, and by the natural increase in the demand for lumber which is to be expected with the return of cooler weather. The inference is clear that from the present time onward, until some extensive relief is brought about by an increase in the quantity of labor available, there will not be any increase in available stocks of lumber, but rather a steadily decreasing supply, and one which will be taken out of the woods and manufactured at the mills at a much greater cost than has ever prevailed in Canada. The shortage of labor, moreover, is affecting the railway companies just as much as anyone else, and shipments will be much less satisfactory than they have been during the past year.

In view of these circumstances we believe that, without laying ourselves open to the least suspicion of trying to create a demand on the part of retailers and large consumers, we are fully justified in advising them to make a definite point of anticipating their wants to a much greater extent than is usual during normal times. Such a policy will not only ensure them far better service, but will assist the manufacturer.

In connection with the market in eastern Canada for British Columbia lumber, the necessity for anticipating requirements is exceptionally definite as will be realized after reading an interview which appears elsewhere in this issue regarding conditions in the west as reported by a Toronto wholesaler who recently returned from an extensive visit to British Columbia manufacturing points. He reports that the most important effect of the whole situation is the necessity for anticipating requirements on the part of eastern dealers, as they will not be able to get prompt shipments for some time to come. This he ascribes chiefly to the shortage of labor which is curtailing the output of the mills, also to the effect of the labor shortage upon the ability of the railway companies to handle transportation, and lastly the fact that many of the mills of British Columbia, both in the mountains and at the coast have been obliged to curtail their output during the whole of the present year, on account of adverse weather conditions. These weather difficulties commenced with the heavy snow fall upon the coast which stopped logging operations during the early weeks of the year and compelled the mills to shut down for an extensive period. In the mountain districts, very heavy floods which occurred during the spring caused widespread damage to mills, washing away yard equipment, rails, and even mills themselves to such an extent that some of them have not yet been able to complete the repairs. The railway companies in some cases have not even been able to deliver the rails required for renewing tracks that were washed away in mill yards.

While the advice to anticipate requirements seems to us to be unquestionably called for on account of all these conditions, the outlook for trade in Ontario and eastern Canada generally at present does not lead to any definite expectation of an extensive movement of stocks. It will be reasonably easy, therefore, for dealers who have ordered ahead, to handle their business satisfactorily. When we get into the prairie districts of Canada, however, the condition is quite different. Reports all agree that the demand from the prairies is good, and that it will increase. The farmers made good profits last year and now their credit is good enough to enable them to buy anything they want in the way of lumber. Their crop outlook for the present year is also encouraging and we may expect the prairie trade to be good during the balance of this year and during next year as well. The effect of this upon eastern trade will be beneficial in proportion as industry in general in the east is able to keep busy with the limited amount of labor that is available.

Is It Impossible to Improve Trade Ethics?

Why is it that, even in the face of organization among lumbermen, which has made fair progress during recent years, one still hears the same old line of complaint about trade ethics which has always prevailed, and why is it that the number of these complaints does not seem to grow any less? We do not propose to answer this question, because we do not know the answer, except that perhaps the blame may be laid at the door of the "struggle for existence," which is blamed for so many things that go wrong in the business world; or in other words, at the door of the futility of all efforts to raise the moral standard of trade, because of the fact that the individual members of the business community are always changing and permanent improvement through organization and education cannot be so brought about as to hold permanently. It all reminds us of those dreams we often have in which we are struggling vainly to restrain some force, or to do something, or go somewhere, and yet can make no progress whatever. These nightmares come to all of us fairly frequently. In our waking hours, the futility of our efforts to improve the trade situation sometimes seems to be just as great and our failures seem to be just about as complete.

However, having worked off this pessimistic analogy, let us have a look at things a little more closely and see if we cannot do something to help. Getting down to facts, take the case of the retailer in a large city and his relations with the wholesaler. In Toronto, for instance, where the retailers have lately gone quite a distance along the road towards co-operative effort in handling many of their ugliest problems, we would expect to find less complaint about the relations

between retailers and wholesalers than in other trade centres, but now and then we hear some wholesaler break loose with a line of abuse and indignation about retailers that opens our eyes in wonder. If we asked ourselves who was to blame we would find it difficult to reach an answer. A Toronto wholesaler, whose opinions we have always held in pretty high esteem, unburdened himself to this effect a few days ago, in our presence. The retailers in this city, he told us, are just as bad a lot as we know, when it comes to kicking without good ground for complaint. Is this really the case, or was this wholesaler experiencing a periodical fit of the blues? It would be hard to settle the matter, but we do know that at that particular time he was settling a difficulty about a car load of lumber which he had shipped to a Toronto retailer and which he claimed was fully equal to the requirements of the order. The trouble, according to the retailer, was that the percentage of a certain low end of the stock was too great. The wholesaler held that this was not so, and to justify himself to us he explained that the stock had been disposed of for the same purpose elsewhere in the city. Of course, he was at a loss, on account of the cost of shipping the car from one locality to another, and what he said about the retailer would not be fit to print.

We do not care to say that this retailer was not fair in his dealings with the wholesaler, nor vice versa. To get at the merits of the case it would be necessary to enquire into the details of the transaction more closely than we have time for, but we think that we do see where the start of the trouble arose. Assuming that both parties were anxious to do business fairly, which we believe to have been the case, there had been a misunderstanding about the details. To remedy this and to make such troubles impossible, we see no other means than to introduce a more definite and businesslike manner of giving and taking orders for lumber. Far too many orders are put through without the parties to the transaction understanding one another. There is too much dependence upon verbal descriptions and too little general agreement about definitions of grades. Being acquainted with many instances of disagreement of this nature we have tried to become to a certain extent acquainted with the grading of lumber in such markets as Toronto, but we must confess that, after hearing lumbermen dispute continually about the grades, sometimes for hours at a time, without coming to any practical agreement, we have concluded that either our own mind is incapable of appreciating the intricacies of the problem or that there is no possibility of agreement because the interests are fundamentally adverse.

These conclusions are both distasteful to us and we are invariably coming to the further conclusion that, in spite of much discouragement that we have received from some lumbermen, it is possible to draw up in black and white a set of trade ethics regulations and a set of grading rules in connection with the trade of the more important markets, which will eliminate a sufficient number of these difficulties to make the effort more than worth while. We still hope to see this done and to see a better day dawn for the trade, when there will be much less mutual recrimination than there has been in the past. The Toronto trade affords a good starting point for this work. Indeed, a start has already been made, although it has met with a certain amount of indifference. The importance of the matter, however, is sufficiently great to encourage those who are trying to improve the situation, to increase their efforts until they reach a practical conclusion.

After the War—An Immigration Suggestion

We wonder whether it has occurred to the Trade and Commerce Department, or to the Superintendent of Immigration at Ottawa that they have a great force of advertising solicitors now in England, France and Flanders whose services can be utilized to spread information about the attractions of Canada as a land of promise in which to settle after the war. So far as we can remember we have not seen this idea in print, or heard it discussed by anyone, yet when it was suggested to us in a letter from one of our readers, which is published elsewhere in this issue, it appealed to us as one of the most practical suggestions we have heard.

Today, during the war, we are feeling keenly the great shortage of labor of every description and we can appreciate the importance which will attach to the immigration problem after the war when the millions of men who have returned from the front are restlessly looking about for the best land in which to commence again the task of building up homes and providing for their families.

We in Canada think that there is not anywhere in the whole world such a land of promise as Canada, but though we know this and think that we should therefore receive our full share of the immigrants from the Old World, we only have to give the matter a little careful study in order to conclude that we will not even get a fair proportion of this immigration unless we do all that we can to spread among these peoples a knowledge of what Canada holds for them. We will want immigrants after the war as we never wanted them before. The nations of the Old World will probably do all they can to persuade their best young men to stay at home and help to build up their own countries. Everything possible will be done to prevent a stream of emigration from leaving the Old World, and everything possible will be done in other lands to attract the best elements of that stream, which surely will set forth, and to induce them to settle in other lands than Canada.

It is in this light that we view the suggestion set forth in the letter referred to above. It would not involve sufficient expense to be worth while considering, to put such a plan into operation. In fact, with our representatives already abroad, mixing intimately with the very class of men that we will desire to attract, and sharing with them in the struggle for national existence, we have a factor that will be of great assistance, and which, it seems to us, it would be sheer folly to ignore. One only has to give the matter a few moments' thought to realize how great the opportunity is. The intimacy created by meeting Englishmen, Frenchmen and Belgians upon the field of battle, working along side of them in the trenches, meeting them under a great variety of circumstances, all working heart and soul for the same purpose, convalescing with them in hospitals and chumming with them during periods of leave; this intimacy is something that brings them closer together than they will ever be brought by any other influence; and during these days our men are in a position to urge Canada's claim for immigration in a way that will lead in a great many cases to definite results when the war is over.

The reputation that Canadians are making as ultra-loyal subjects of Great Britain is stirring a chord in the breasts of Englishmen and of our Allies which will be quickly responsive to the suggestion of settling in Canada after the war. We recall, some months ago, reading of an Australian who happened to have enlisted, while in England, with an English regiment. He was in the neighborhood of one of the great engagements in which Canadians covered themselves with glory by their resourcefulness and their fearlessness. Their energy in repelling attack and in carrying forward an attack against seemingly impossible odds, so worked upon this Australian's imagination that he exclaimed, "Canada for me after the war is over; the country that can produce such men as these is the country for me." That is how the idea will work out in thousands of cases if we see to it that the Canadians now at the Front and in England are furnished with sufficient definite information about Canada to talk invitingly to those whom they meet.

One may think, at first, that it is not necessary to go to any expense to put information in the hands of our soldiers for such a purpose, as, being Canadians, and knowing Canada well, they will naturally know how to attract others toward Canada. But this is not so. Few of us, if put to the task, could deliver even a five minutes' talk about Canada's attractions for the intending immigrant. Yet if we were furnished with the small amount of information necessary regarding the really important points we could draw a picture that would appeal to anyone who had the future before him.

Therefore, we hope that this idea of sending to the Canadians abroad a reasonable amount of well prepared literature to fit them for this work, will appeal to those who have charge of immigration matters at Ottawa.

Can Northern Ontario Bush Fires Be Prevented ?

The frightful loss of life and property from forest fires in Northern Ontario need not be accepted by the people of the province as wholly due to unavoidable causes.

Evidence thus far received indicates that the huge conflagration had its beginning in "slash" fires started by settlers for the purpose of clearing their lands.

For many years the menace of settlers' fires during excessively hot spells has been increasing, largely for the reason that no machinery of any sort existed whereby a settler's so-called "liberty" of destroying lives and property could be curtailed. On the other hand, the damage by railways has been rapidly lessening, as patrol and equipment have been improved, so that in 1915 the Canadian Pacific, Grand Trunk, Canadian Northern, and Algoma Central were credited by the Ontario Government with 110 fires in the railway zone, causing a property damage of only $4,156. On the Transcontinental and T. and N. O. (Ontario Government 1915 report) 317 fires were reported in 1915, the amount of damage being unstated. Investigation shows that both in Ontario and Quebec the settler and not the railways primarily must shoulder a very large part of the responsibility for annual forest fires, with a considerable contribution also from campers, fishermen, prospectors, etc. How is the settler to be brought under reasonable restraint so that the "slash" fire shall be eliminated forever from the causes of these North Ontario catastrophes?

In Other Provinces.

The laws of Quebec, British Columbia, and Nova Scotia place heavy penalties of fine or imprisonment upon any settler who starts a fire during the season of danger—April to November 15—without a written permit from a qualified forest ranger. The object of these laws is to make sure that the settler does not select a windy or abnormally dry day on which to carry on his fire operations; also that he piles his brush in the centre of his clearing, where the risk of contact with neighboring timber is at a minimum. This places no unreasonable hardship on the settler and, on the other hand, is a necessary guarantee for the safety of lives and immensely valuable timber in his neighborhood. During periods of excessive and dangerous drought the British Columbia and Quebec forest authorities have power to place a strict prohibition upon the setting out of all fires in forest areas for whatever period of time may be considered necessary.

What is the situation in Ontario? There is neither law nor regulation to prevent a settler letting loose conflagrations in any way and at any time he may select. No ranger has authority to advise or interfere with a settler in the employment of fire.

Under a watchful and modern forest administration the whole period of abnormal drought would have found every settler under a prohibition to set out fires of any sort. There was no such prohibition. Settlers' fires were started at the height of the danger season. Hundreds of lives, entire towns, and incalculable amount of growing crops and timber growth have been swept away and the whole Claybelt seriously set back in its development.

The control of settlers' clearing operations is but one foundation stone in the modern forest protective service, but had that been inaugurated by the Ontario Department of Lands and Forests the damage of the recent bush fires would probably never have reached its appalling proportions.

Before Fires Start.

A forest protection service is not supposed to be able to fight and overcome forest conflagrations once they have started to swirl across townships with the speed of a tornado. **The real business of forest rangers, and the governments responsible for them, is to stop fires from starting. Ontario, particularly in the Northern claybelt section, now so severely devastated, has practically no real ranger patrol, carries on no preventive campaign, and offers no opposition to the wholesale use of fire by settlers for stripping their soil of tree growth.**

In the spring of this year the Canadian Forestry Association, through their secretary, met the Associated Boards of Trade of the Temiskaming District at a meeting in Haileybury and asked that joint action be taken to stop the extravagant and dangerous burning of the northern forest areas by settlers. Some of the members of the Associated Boards frankly opposed any interference, asserting that many of the settlers favored free-running fires, and would not support such a measure as was proposed. Other members of the board took a more favorable point of view, but no joint action was taken.

From February to June, 1916, through the representations of the Canadian Forestry Association, twenty-two of the leading Boards of Trade of Ontario asked the Ontario Government to bring in legislation to control settlers' fires and also to reorganize the entire forest protection service of the province. The reply of the Minister of Lands and Forests to these communications was to the effect that the matter would be considered.

The Ontario forest protection service stands urgently in need of three main reforms, which, year after year, have been urged upon the governments by the Canadian Forestry Association, the Commission of Conservation, and other bodies:

1. Remodelling of the ranger service so as to give real protection to the forest wealth of the province and supply a fair return in service rendered for the money spent thereon. **The Ontario system is recognized generally as out of date and inefficient.**

2. The employment of inspectors in the ratio of at least one inspector to ten rangers, so as to get the maximum degree of actual forest protection. Over an area of ten million acres of timber lands under license, Ontario has just eight supervisors, each being required to manage, on an average, 36 men, a task so impossible that often not more than one flitting visit to the ranger on duty can be paid in an entire season. An industrial workshop would show bankrupt results under such loose inspection of workmen, and the forest patrol suffers in no less degree.

3. Sufficient rangers must be provided to patrol the Claybelt region, most of which is now under tree growth, and these rangers must have authority to control the burning operations of settlers so that holocausts, such as that of recent date, shall have less opportunity to recur.—Canadian Forestry Association Bulletin.

A Great Future for the Lumber Trade

An outline of what the lumber industry may expect in the way of foreign trade when the European war ends is given by Ernest W. Tickle, of Liverpool, in a letter to his brothers in the United States lumber trade. Here is the way he expresses the conditions in the industry as they will be abroad: "There's a good—and overwhelmingly good—time coming for the lumbermen of your country and ours when once this cataclysm is behind us, perchance before the actual end of the bloodshed arrives; because if once the German army has to evacuate the present scene of warfare in Northern France and Belgium, then the first duties of the respective governments of these mangled territories will be to rehabilitate as quickly as possible the shattered industries which formerly headquartered there for, as you know, these were the heart-centres of the commerce and industries of our allies. Think of the hundreds of factories and workshops and the myriads of homes to be rebuilt, and then try and estimate the lumber bill that will be wanted for immediately deilvery when once the job is taken in hand!"

A notable business feature arising out of the war has been the revival of the hemlock bark industry in New Brunswick. The scarcity of tanning acids has led the leather tanners to return to the old bark tanning process, and, as a result, large shipments of the bark are being made from the province. Bark peelers get about $8 per cord for the product.

Immigration After the War—A Practical Suggestion

Editor Canada Lumberman: Meaford, Ont.

Would not the present be a most opportune time for our Government or any duly appointed organization, to make good use of every Canadian at present in the overseas service?

The fact that they are serving is good evidence that they have the welfare of their country at heart. If supplied with a little good literature—say, once a month—every Canadian soldier could be made a most effective advertising agent for Canada. Our Canadians in England and France are constantly mixing with hundreds of thousands of men who will be looking for opportunities for bettering their positions when the war is over.

They could not be burdened with a large amount of literature for distribution, but could be supplied, say, once a month, with just a little fresh data, which they could use, or perhaps distribute, and if a supply were to come on monthly, it would mean effectual advertising.

In thousands of cases a very warm friendship will develop between Canadians and their English and French allies, with whom they are constantly associating, and now is the time to have all eyes turned towards Canada. There is no country in the world furnishing better opportunities for returned soldiers than our Canadian West. It is already well supplied with railways, and thousands of miles of rural mail and rural telephone service are being installed every year.

Canada's three great transcontinental railways offer unlimited possibilities to the right type of men looking for opportunities to make good.

Is it not up to those who are remaining at home to be alive to the situation, and do all in their power to promote our country's welfare?

The Seaman, Kent Company, Ltd.,
F. Kent, President.

B.C. Production Much Handicapped

Labor and Car Shortage and Weather Conditions Reducing Output—E. P. Sharpe Returns from Coast

Mr. E. P. Sharpe, of Muir, Kirkpatrick & Sharpe, wholesale lumber dealers, Traders Bank Building, Toronto, recently returned from a month's business visit to the Pacific Coast. In conversation with the Canada Lumberman, Mr. Sharpe laid special emphasis upon the fact that it was becoming more and more important for the Ontario trade to anticipate, so far as possible, its requirements in British Columbia stock. Heretofore the Ontario trade has been receiving prompt shipments in British Columbia goods in many instances, but conditions have changed materially within the last two months. The reasons for the conditions existing to-day are as follows: The white labor has, in many cases, resigned and gone to the prairies to assist in the harvesting, and many have joined the army. Oriental labor has made large demands upon employers for increased wages, and at the present time employers are not able to secure sufficient help. Many mills desire to run 24 hours a day, but this cannot be done without a portion of a white crew, such as sawyers, etc. Therefore, shipments have been greatly delayed, as the production is not equal to the demand. The chief demand for British Columbia materials is coming from the Prairie Provinces and from the United States markets. In future, Mr. Sharpe believes, that the Ontario trade will be acting wisely if they order British Columbia materials considerably in advance.

British Columbia mills to-day have more business than they can comfortably handle. The mills that are producing British Columbia pine have been handicapped to such an extent by conditions such as above mentioned and by natural conditions, such as great spring floods, car shortage, scarcity of labor, etc., that they feel that it will be from four to five months before they will be in shape to make reasonable shipments. They have all been putting forth every endeavor to meet the increased demand for materials, and have fallen short in production. These conditions apparently exist throughout the whole province, and all the mill owners have been voicing their views along the same lines.

There is a shortage of shingles upon the Pacific Coast; also a shortage of fir uppers, such as ceiling, flooring, etc. The mills that had accumulated large stocks of these classes of material in the past two years have absolutely depleted their stocks, and it takes considerable time to produce this class of stock, as the mills do not endeavor to cut for 1 x 3" or 1 x 4" stocks, except in edge grain stock. All narrow angle green stock is derived from the edgings. There is no doubt that prices will hold firm in the lumber and shingle market and will hold firm for some time, Mr. Sharpe says.

The trade will no doubt be interested to learn that some of the mills in British Columbia are interested in shipbuilding propositions, and they figure that in the near future they will be able to operate some of these vessels for the purpose of transporting their stocks to the Eastern markets, so as to receive a better mill price than they have been getting in the past, as current prices do not give them the profit which they desire when they have to pay 67c a hundred pounds on stock to ship it by rail.

The prairie markets are paying a greater price for many items on the list than the Ontario trade will pay, and the demand is very brisk from all parts of the prairies for British Columbia materials. The prairie buyers are numerous in the interior of British Columbia and also at the coast, endeavoring to get enough stock to fill their orders with reasonable delivery.

Mr. Sharpe visited Victoria, Vancouver, and a number of points in Idaho and many of the important mountain mills in British Columbia. During his trip across the prairies he learned that the crop situation generally is considered satisfactory, even good. He heard occasional mention of black rust among some of the crops in Manitoba, but persons who are well posted on the crop situation advised him that there will be more than an average crop this year. He was informed that the majority of the wheat has now practically passed the danger period, and that no damage from weather conditions is anticipated.

The logging situation in British Columbia he reported to have eased off to a considerable extent. Plenty of logs are now available, but there is no over-production, and prices are holding firm.

Canadian Sawmills Interest Englishmen

It is expected that the two forestry battalions now being raised in Canada the 238th and 246th, will provide all the lumbermen that will be needed for the operations in the Old Country, in addition to the 1,550 men already there—members of the 224th Battalion. The three battalions will have a total strength of over 3,600 men.

The 238th Battalion, under Lieut.-Col. Smythe, is well over the 700 mark, while the 246th is just being organized. The commander of the 246th,Lieut.-Col. John B. White, is in Ottawa buying equipment for both forestry battalions. He has already been overseas looking over the timber ilmits, and knows the needs of the new units.

The 224th is doing most of its work in the North of Scotland, cutting Scotch pine. There is a company at work in the park at Windsor Castle, cutting trees there, and a third company at New Forest. There is also a party in a camp near Dover and some men are still at Bramshott.

The new battalions will probably be sent to France. Lieut.-Col. White was over the ground there and found a great deal of timber suitable for lumbering, so that it is likely, if not all, at least the majority, of the men now joining will soon be laying low the trees in France.

Eight sawmills have been sent from Canada to England, six for the 224th Forestry Battalion and two for the Forestry Committee in England, which has supervision over the lumbering operations there during the war. They are mills typical of the Casadian lumbering industry and are generally known in Canada as portable mills. although they cannot be transported with the facility of most mills which carry the name "portable." They are entirely new to the British Isles, and their wonderful efficiency is said to be causing much interest. They each have a capacity of from 15,000 to 20,000 feet a day, and include the edger, slash saw, saws for making railway ties, etc., in addition to their big 56-inch circular saw. They have 40 horsepower locomotive boilers.

Liens Were Nullified—An Important Judgment

The case of the Sterling Lumber Company v. Jones, in which a judgment was given some months ago by an official referee, Mr. R. S. Neville, K.C., was subsequently taken before the Appellate Division of the Supreme Court of Ontario and the the judgment of the official referee was affirmed. The case was an interesting one, involving the Mechanics" Lien Act. The Sterling Lumber Company and others had furnished material for a building under construction which was being put up by the defendant Jones. One James Oliver agreed to purchase the building from Jones as soon as it should be completed. This was done, the deed was registered, and the money was paid about two weeks before the plaintiff's and other liens were recorded in respect of work done for and materials furnished to the building owner. These liens were all filed within thirty days immediately following the last delivery of materials.

Oliver, before purchasing the house, engaged a solicitor to enquire into the condition of the deed. He found that there were no liens registered, and he endeavored to see that all claims were paid. He took a statutory declaration from Jones to the effect that all work and material were paid for, and that there were no liens and no one was entitled to file a lien. When the conveyance of the property to Oliver was registered the solicitor believed that all claims had been paid upon which liens might be founded.

The official referee had found that Oliver was an innocent purchaser for value, having no knowledge or notice of any liens then existing, and that he took his conveyance and registered it, through his solicitor, in the full belief that there were no such liens, and that he was therefore entitled to hold the property freed of all liens, and his executors, the defendants in the action, must succeed.

The plaintiffs based their appeal upon several points, the chief one being that they were entitled to a lien upon the lands in question, on which the house was built, having fulfilled all requirements of the statute to entitle them thereto, in respect of materials furnished, and that the lien could not be destroyed by a sale or conveyance of the land; and that Oliver could not relieve himself from liability by accepting a declaration as to the absence of liens made by the defendant Jones.

In the judgment of the Court of Appeal the views of the official referee were upheld throughout.

News Print Exports Greatly Increased

Canada's pulp and paper exports for the first quarter of the current fiscal year surpassed all previous records. Newsprint exports for the first three months of the new Government year, April, May and June, reached a total value of $4,624,632. This is almost one million dollars above the value of the exports for the same period a year ago and more than double the total of three years ago. These exports were greater than for the entire twelve months of the fiscal year 1911-12, and double the volume of export for the year 1909-10.

The growth of the trade is illustrated in the following figures of the export of newsprint:

First quarter 1913-14	$2,281,413
First quarter 1914-15	3,073,565
First quarter 1915-16	3,657,132
First quarter 1916-17	4,624,632

Muir, Kirkpatrick and Sharpe have moved into more extensive quarters in the Traders Bank Building, Toronto, a step rendered necessary by the growth of their business.

Output of Forest Products in B. C.

Quantity and Price Both Reduced in 1914, as Compared with 1913—Shingle Output Greater

A report upon the output of forest products in British Columbia during 1913 and 1914 has been isued in a market bulletin by the Forest Branch of the Department of Lands. The statistics for the 1914 lumber cut are based upon reports from 216 sawmills and 49 shingle mills. In 1913 more plants reported production of lumber, lath, and shingles—namely, 230 sawmills and 52 shingle mills.

The gross production in 1913 and 1914 follows:

	Cut.		Total value.		Value per M.	
Product.	1913.	1914.	1913.	1914.	1913.	1914.
Lumber	1,227,496M	883,473M	$19,172,354	$11,749,257	$15 68	$13 30
Shingles	867,422M	982,935M	1,655,548	1,773,570	1 91	1 80
Lath	85,858M	45,069M	165,738	84,158	1 93	1 85

This comparative table shows a reduction in lumber and lath production in 1914, as compared with 1913, of 38.3 per cent. in lumber and 90.5 per cent. in the case of lath. This is attributed to decline in building operations during the whole of 1914 and to the shock to commerce incident to the outbreak of the European war in August of that year. On the other hand, the production of shingles increased 12.1 per cent. in the same period.

The table also shows the variation in price of all these products. In every case the price given is net average at mill.

Output of Lumber.

The following tables show the amount of lumber cut during 1914 and 1913, classified according to species:

STATEMENT SHOWING AMOUNT OF LUMBER CUT IN 1914, CLASSIFIED ACCORDING TO SPECIES.

Species.	No. of Active Mills Reporting.	Total Quantity Lumber Cut.	Total Value.	Per Cent. each Species forms of Total Cut.	Average Value per M. Ft. B.M. at Mill.	Marketed in			
						British Columbia.	Remainder of Canada.	United States of America.	Other Countries.
Douglas fir	176	541,102,295	$ 7,056,732 78	61.2	$13 05	105,332,894	280,914,230	37,252,000	23,700,000
Red cedar	73	70,052,034	1,066,074 08	7.9	15 22	18,653,013	32,708,442	6,408,500	1,000,000
Yellow cedar	2	253,058	5,062 45	*	21 52	121,658	...	...	....
Engelmann spruce	30	59,603,923	848,325 78	6.7	16 00	21,397,983	31,470,989	315,000	....
Sitka spruce	26	33,414,493	419,521 31	3.8	12 56	30,421,493	2,911,000	150,000	....
Western soft pine	55	46,371,201	644,055 45	5.2	13 67	14,488,154	24,097,464	1,754,000	None
Western white pine	26	11,930,559	171,504 54	1.4	14 68	1,252,701	7,178,492	3,500,135	....
Jack-pine	12	4,713,094	63,256 38	0.5	13 41	1,507,594	3,200,000	....	....
White birch	1	13,402	536 08	*	40 00	13,402	....	....	....
Balsam fir	11	3,779,354	53,500 59	0.4	14 16	2,950,354	765,000	....	....
Western hemlock	40	43,367,015	575,661 71	5.4	11 90	31,773,815	12,593,000	1,310,000	1,000,000
Western larch	45	63,173,363	887,159 57	7.2	13 25	7,510,014	40,582,973	980,000	....
Alder	1	1,000	13 00	*	13 00	1,000	....	....	....
Maple	1	22,000	275 00	*	15 00	22,000	....	....	....
Cottonwood	4	535,536	6,387 80	*	13 14	444,057	82,901	....	....
Totals	...	883,436,647	$11,740,257 28	100.0	$13 30	325,975,532	446,409,631	50,864,635	30,700,000

STATEMENT SHOWING AMOUNT OF LUMBER CUT IN 1913, CLASSIFIED ACCORDING TO SPECIES.

Douglas fir	182	739,914,304	$11,066,230 37	60.3	$15 77	285,706,454	389,130,533	5,110,000	45,492,537
Red cedar	106	122,484,152	2,072,408 27	10.0	16 92	33,864,987	79,636,000	684,000	250,000
Yellow cedar	2	100,000	1,400 00	*	14 00	100,000	...	...	...
Hemlock	64	49,736,587	726,260 29	4.0	14 60	23,937,411	24,677,084	...	1,000,000
Sitka spruce	46	53,521,476	815,150 06	4.2	15 23	37,710,460	12,991,102	...	388,000
Engelmann spruce	28	57,373,546	953,128 30	4.7	16 61	7,940,668	42,970,729	150,000	...
Balsam fir	29	6,759,326	100,553 27	0.5	14 87	4,340,916	1,742,500	...	...
Western White pine	24	8,242,369	121,473 75	0.7	15 23	1,791,983	5,488,918	418,000	...
Western soft pine	75	89,341,845	1,861,715 90	7.3	15 24	11,933,492	62,483,037	750,011	...
Jack-pine	9	13,540,150	190,100 15	1.1	14 03	1,330,000	9,760,000	...	...
Tamarack	31	84,084,822	1,196,127 05	6.9	14 25	4,563,669	73,359,311	600,000	...
Cottonwood	5	2,372,382	32,249 35	0.2	13 77	2,161,560	151,900	...	...
Totals	...	1,227,496,806	$19,240,807 66	....	$15 68	514,565,730	702,580,125	7,442,301	47,080,537

* Less than 0.1 per cent.

The shingle output of British Columbia during 1914 and 1913 is shown in the following tables:

SHINGLE CUT OF BRITISH COLUMBIA, 1914.

District.	No. of Active Mills Reporting.	Total Quantity Shingles Cut.	Total Value.	Per Cent. of Distribution.	Average Value per M. at Mill.
Vancouver	34	876,102,000	$1,583,934 62	89.0	$1 81
Island	8	55,646,000	95,464 05	6.7	1 72
Prince Rupert	1	2,000,000	4,500 00	0.3	2 25
Nelson	6	50,187,250	89,671 67	5.1	1 79
Totals	49	982,935,250	$1,773,570 31	100.0	$1 80

SHINGLE CUT OF BRITISH COLUMBIA, 1913.

District.	No. of Active Mills Reporting.	Total Quantity Shingles Cut.	Total Value.	Per Cent. of Distribution.	Average Value per M. at Mill.
Vancouver	37	709,232,000	$1,347,540 10	81.6	$1 90
Island	7	74,190,250	134,580 00	6.5	1 81
Prince Rupert	1	150,000	450 00	*	3 00
Kamloops	1	7,147,500	16,081 88	0.8	2 25
Nelson	6	70,720,000	136,886 50	8.6	1 94
Totals	52	867,441,750	$1,655,548 50	99.9	$1 91

* Less than 0.1 per cent.

Wood-Using Statistics.

Statistics are also given of the wood-using industries of British Columbia, showing that the total consumption was 85,827,464 feet B.M., the average price being $10.37 per M feet and the total value $890,007.64. The greater proportion of the stock consumed in the wood-using industries of British Columbia came from British Columbia, the amount being 84,636,964 feet B.M. From the United States these industries secured 933,000 feet; from the remainder of Canada they purchased 74,000 feet; from other countries, 183,500 feet.

In 1913 the United States supplied these industries with $202,000 worth of wood, and of this total $126,000 was for Douglas fir.

The relative importance of the different wood-using industries is shown by the amounts they consumed, which during 1914 were as follows: Pulpwood, 50,997,000 feet B.M.; boxes and crates, 23,617,964 feet B.M.; sash, doors, and interior fixtures, 5,054,000 feet B.M.; tanks and silos, 1,677,000 feet B.M.; ship and boat building, 1,486,000 feet B.M.; cars, 1,259,000 feet B.M.; cooperage, 1,186,000 feet B.M.; machine construction, 224,000 B.M.; caskets, 85,000 feet B.M.; patterns and flasks, 84,000 feet B.M.; vehicles and vehicle parts, 76,500 feet B.M.; cigar boxes, 60,000 feet B.M.; elevators, 21,000 feet B.M.

During 1914 the production of mine-props amounted to 23,102 cords, the average price being $4.71 per cord and the total value $108,698.59. The greatest production was in Western larch—9,448 cords—which was followed by Douglas fir, 6,091 cords; spruce, 5,547 cords; jackpine, 1,657 cords; Western hemlock, 300 cords, and Western red cedar, 59 cords.

The production of piles during 1914 amounted to 9,722,171 lineal feet, the average value being 6.5c per foot.

The production of poles during 1914 amounted to 4,339,234 lineal feet, the average value being 5.68c. per foot.

H. R. MacMillan Back from World Tour

H. R. MacMillan, chief forester for B. C., returned recently from an eighteen-months' tour of England, France, Holland, South and East Africa, Burmah, Australia and New Zealand, as special trade commissioner of the Dominion Department of Trade and Commerce, to inquire into export possibilities for lumber products of the Dominion. Before he considers his study of the question complete he will visit China and Japan, for which places he anticipates leaving in a short time.

His tour has left Mr. MacMillan convinced of the necessity of co-operation of the lumbermen of Canada, a keener study of market conditions, and the securing of ample cargo space. Inter-imperial trade would only be successful by operation along the best business lines, and this means that exporters must offer competitive prices and fill orders to specification both as to quality and quantity. In connection with the difficulties of exporting lumber which have been so much felt since the war, Mr. MacMillan endorsed the building of ships locally. Cargoes of British Columbia lumber would never go begging.

Nevertheless, said Mr. MacMillan, it would be something of a surprise and disappointment to people of British Columbia to learn that few of the importers abroad knew other than that the lumber was grown in the United States. Practically all the British Columbia raw materials were shipped through United States firms, who billed it as American lumber. San Francisco and other American ports on the Pacific coast had studied the export situation, had organized, and now controlled the charters in such a way that it was practically by their consent that British Columbia got the export opportunities she had.

Mr. MacMillan stated that the trade prospects were good. In many countries, Australia for instance, forests were thinning down rapidly and there was an increased demand for foreign lumber. Canada would continue to have competitors in some lines of raw material. Russia was practically unknown as an exporter, but Norway and Sweden would continue to be keen competitors in some lines of the business. There was a very ready disposition throughout the British countries to buy lumber within the empire and keep the trade at home. But even so, good business terms were expected, and the exporter must look to this if he wished to make and hold the market against the strong competitors already established.

B. C.'s Forest Reserves Exhibit at the C. N. E.

The forest resources of British Columbia have been represented for two years past at the Canadian National Exhibition, held in Toronto, by a display of the forest products of that province. Much interest was stimulated by the exhibit of last year, which was in charge of one of the Forest Branch officers, and which was awarded a gold medal. In view of the growing hold of British Columbia woods on the important market afforded by Eastern Canada, the exhibit to be placed on view this year will be on a more ambitious scale. Space has been secured in the Government Building, and in front of this space will be erected a handsome facade composed of pillars of Douglas fir in the rough, behind which the smaller exhibits will be arranged. The walls will bear panels of the different commercial woods of British Columbia, together with photographic enlargements showing forest stands, operations of the logging and sawmill industries, etc. The walls will be divided into six sections by means of pilasters of various woods, and to each of these will be attached, in such a manner that they can be readily swung, doors in various styles and finishes. Exhibits of articles made from Douglas fir, Western soft pine, Western hemlock, Western larch, Western red cedar, Western white pine, and Western spruce will be shown, with samples of flooring, veneer work, wood stave pipes, creosoted wood paving, railroad ties, piling, and bridge and trestle timber. Interior trimmings in the form of specimens of mouldings, casing, bases, etc., will be included, and, among other features, silo stock, oars and paddles, a fully equipped boat, boxes and fruit packages, and samples of spruce showing the qualities of that wood for aeroplane construction. The whole will be in charge of the British Columbia Lumber Commissioner in Eastern Canada whose headquarters are at the Excelsior Life Building, Toronto.

Shell Box Prices Allow No Profit

In Fact, They Involve Loss in Numerous Cases—Wholesaler Confirms Canada Lumberman Criticism

Montreal, Aug. 4; (Special to the Canada Lumberman):—"The article on "Shell Box Prices—Are They Adequate?" in the Aug. 1 issue of the Canada Lumberman, is on the right lines, and confirms our experience," was the comment of a Montreal lumberman with a considerable business in shell box lumber. "The low price at which contracts have been let throw a great burden on the wholesaler who is anxious to do business, but who is apprehensive that if he sells to box-making firms he will have difficulty in obtaining his money. This, of course, does not apply to all firms, but to many who have gone into the box-making game. After our recent experience we have decided to sell only to the large companies and to let the unimportant people alone.

"The method of giving out orders is, in our opinion, on a wrong basis, and we believe that the course of events has proved this to be so. Under the old shell committee an inspector visited the factory before giving out a contract, in order to note the manufacturing facilities. This practice has now been abandoned, with the result that contracts have been let to many firms with inadequate equipment and at prices which could not possibly pay. In fact, we are certain that some contracts have been let at below cost. Dozens of firms have tendered without careful figuring of the expenditure. That is the only conclusion that can be come to when one knows the cost of the lumber, hardware, etc. The outcome is disastrous for nearly all concerned. Contractors of this class have fallen down on their deliveries, and the Imperial Munitions Board have had to cancel the contracts and to place them elsewhere, at higher prices. This involves delay and other difficulties. The wholesale lumberman who had taken a chance finds that he has been left, and is, of course, a wiser but poorer man.

"Competition by tender is, generally speaking, a business-like way of purchasing boxes, but the Imperial Munitions Board, in giving out contracts to the lowest bidders have apparently lost sight of the fact that there are other considerations besides price to be taken into account. They should have investigated not only the facilities of the contracting firms, but also their financial stability. Instead, apparently, price was the main factor, contracts being offered on the basis of the lowest tender to many box-makers who had tendered at what seemed to be reasonable prices, but whose tenders were probably figured on inadequate data as to cost. Men who had little or no acquaintance with the woodworking industry jumped into the business, and the quotations at which they accepted the work were laid down as a basis for work offered to competitors.

"We contend that this was the wrong method. Every manufacturer is entitled to a living profit, and, as the prices varied so much, the Imperial Munitions Board should have, for a given box, taken the average quotation of, say, a dozen substantial makers and offered contracts on this footing. This, we think, would have proved economical in the end.

"The failure of the Munitions Board to place large orders at certain prices with box-makers who have finished previous orders, and who are anxious for further work, should be sufficient evidence to the board that they are not offering sufficient money. The manufacturers who declined these orders did so because there was no profit in them. The delays occurring through giving contracts to men at unremunerative prices should also be a warning as to the danger of trying to obtain something for nothing. Get good value by all means, but beware of trying to secure the uttermost cent from the firms tendering.

"Some manufacturers who put in low tenders quickly found out that they stood to make losses. With a view to getting out of the difficulty, efforts were made to substitute inferior stock, but this proved to be of little avail, as the specifications are very rigid and the inspection very keen in most instances. If the board attempts to beat down the makers to a level which is below cost, it is not surprising that men will try to get round the strict interpretation of the contracts."

United States Lumber Cut of 1915—By Principal Kinds

Washington, July 28.—The lumber cut of the United States during 1915 by principal kinds has just been compiled by the United States Forest Service. Southern yellow pine, with a total cut of 14,700,000,000 board feet, forms 30 per cent. of the total, and was more than three times the cut of Douglas fir, the second on the list. Oak, white pine, and hemlock are the only other kinds with a showing of over 2,000,000,000 feet.

The figures include both the actual reported cut from the mills making returns and the estimated probable actual cut. The total cut of all species is shown as 37,013,294,000 feet, as has been previously announced by the Forest Service. It is believed that, at the outside, the grand total 1915 lumber cut did not exceed 38,000,000,000 feet.

The actual reported cut of lath in 1915 was 2,745,134,000, and the estimated total cut 3,250,000,000. For shingles the reported cut was 8,459,378,000 and the estimated total cut 9,500,000,000.

1915 Lumber Cut By Species.

Kind of wood.	Probable total M feet	Reported M feet.	Av. values per M feet.
Yellow pine	14,700,000	12,177,335	$12 50
Douglas fir	4,431,249	4,121,897	10 50
Oak	2,970,000	2,070,444	19 00
White pine	2,700,000	2,291,480	18 00
Hemlock	2,275,000	2,026,460	13 00
Spruce	1,400,000	1.193,985	16 50
Western yellow pine	1,293,985	1,252,244	14 50
Cypress	1,100,000	926,758	20 00
Maple	900,000	771,223	15 00
Red gum	655,000	478,099	12 50
Chestnut	490,000	399,473	16 00
Yellow poplar	464,000	377,386	22 50
Redwood	420,294	418,824	13 50
Cedar	420.000	352,482	15 50
Birch	415,000	355,328	16 50
Larch	375,000	348,428	11 00
Beech	360,000	303,835	14 00
Basswood	260,000	207,607	19 00
Elm	210,000	177,748	17 00
Ash	190,000	159,910	22 50
Cottonwood	180,000	138,282	17 50
Tupelo	170,000	153,001	12 00
White fir	125,048	121,653	11 00
Sugar pine	117,701	115,109	.....
Balsam fir	100,000	71,358	14 00
Hickory	100,000	86,015	23 50
Walnut	90,000	65,144	.....
Lodgepole pine	26,486	22,672	13 00
Sycamore	25,000	19,729	14 00
All other kinds	49,531	37,826	.....
Total	37,013,294	31,241,734	

From the Canada Lumberman of Thirty-five Years Ago

The Nipissing District

Some time since, we referred to the development of the Nipissing district by the building of a propeller by A. P. Cockburn, Esq., M.P., to run on Lake Nipissing next season. The proposed steamer, the "Inter-Ocean," is expected to be ready to make a trial trip by the end of June next. The workmen to be engaged in constructing the steamer left Muskoka, by way of Rosseau, about the middle of last December. A correspondent, recently writing, says:—"Owing to the difficulties of communication all the settlers in the Nipissing district so far have settled on the south side of the lake; and there is actually only one man, with his wife and child, living in all the vast expanse of territory north of its waters. The establishment of short colonization roads running north and south from the lake; the navigation of the Sturgeon river and other tributaries of the Nipissing by the 'Inter-Ocean'; the daily arrival of trains at Callander, and the construction of the Sault Branch Railroad, will give a wonderful impetus to the settlement of the country. As demonstrating that the winters in the Nipissing District are not of necessity more severe than those in Muskoka, the fact is communicated that although last week there were about two feet of snow at Bracebridge there were only three inches at Lake Nipissing. The most recent surveys confirm every statement as to the fertility and suitableness of a large proportion of that country for settlement by agriculturists. A map carefully corrected by field notes, and issued within the past few weeks by the Crown Lands Department at Toronto, shows that in the townships south of the lake and French River 95 per cent. of the land is arable, and well wooded with birch, white oak, hemlock and balsam. It may be mentioned that the want of a steamer has been much felt by lumbermen in this district during the past year. It is not expected that the enterprise will be immediately successful from a pecuniary point of view, but there is such confidence in the future of that District that a Lake Nipissing Navigation Company will before long be formed."

Thomas Marcy, of Bigelow, Minn, is the new manager of the North Canada Lumber Company, Prince Albert, Sask.

German submarines during the last week of July sank four Norwegian vessels laden with lumber in the North Sea.

Keeping Track of Retail Transactions

A Systematic Arrangement Which Enables One Firm to Trace and Record All Kinds of Sales with the Least Possible Effort.

Some of the problems in connection with the routine work of a retail lumber office, that have to be handled frequently every day, lend themselves so definitely to systematic treatment that in many cases their solution has become almost standardized in all up-to-date offices. Once in a while one comes across a unique method of handling some of these problems by means of which the work is simplified and the results are improved. One or two seemingly small matters are dealt with in this article, but they are matters which, unless handled in some thoroughly systematic manner will cause a lot of difficulty. A short time ago the editor of the Canada Lumberman was fortunate enough to make the acquaintance of Mr. C. F. Middlebrook, formerly of C. D. Middlebrook & Son, Binghamton, N. Y., to whom he is indebted for the material upon which this article is based.

In the first place this company have adopted the use of an order blank which appeals to us as extremely simple and effective. It happens, in connection with all retail lumber yards, that a good many orders are received over the telephone. Before these order blanks were used telephone orders were jotted down upon such plain bits of white paper or scrap paper as happened to be handy. This led to confusion and uncertainty on account of the impossibility of filing

Order No.....

C. D. Middlebrook & Son Binghamton, N. Y.....191.....

Name.....P. O.....

Send to.....

.....

Wanted.....Promised.....Order Phoned by.....

Pieces	Size	Length	Feet	Description	Price	Amount	Filled	Slip No.
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Order No..... C. D. MIDDLEBROOK & SON

..... Per.....

Telephone Order Blank Used for All Orders Received.

such orders systematically. A telephone order blank was worked out in the first place, and, after a few changes, it was found to be so satisfactory that it was adopted in connection with all orders received at the office.

An All-Purpose Order Form.

These order blanks are 7¼ inches wide by 6¾ inches high. They are padded on the right, in blocks of white and yellow sheets alternately. The white original sheets are perforated at the top with three holes, the outer ones being spaced for an arch file. The yellow duplicate sheet is pierced with only one hole in the centre at the top. Several of these pads are distributed around the office—at the telephones, shipper's desk, etc. When an order is taken the original is placed on an arch file at the shipper's desk, where the order number is put on it. The yellow sheet is hung on a hook, and is merely a loader's memorandum for use outside, no effort being made to preserve it. The use of this duplicate removes the necessity for consulting the original of the order, both in the office and outside, where the loaders are at work.

When an order has been filled the foreman makes out a dray ticket for it. He puts the date of filling only, on the order sheet, which remains on the file until the close of the day. In invoicing, the checker puts the number of the dray ticket on the order blank. After the checking has been done the order forms are filed alphabetically in a vertical file, and they are transferred to a permanent file about once in two years.

When the order forms are in the arch file the lower edge is free, and when they are in a vertical file the upper edge is free. For this reason it will be noticed from the illustration that the firm name and the order number are repeated at the bottom of the form. The order form also contains a two-line blank for address, blanks for the time wanted and time promised, and numbered description lines for the details of the order. All of these have been found of practical use.

Dray Tickets in Triplicate.

The dray tickets, which are made out by the foreman when an order has been filled, are 6½ inches wide by 8½ inches high, and come in rolls of 500 each, consecutively numbered at the factory. These are used in a machine which makes three copies at once, numbered 1, 2, and 3 in heavy black type. Our illustration shows No. 1. The others are largely similar, with a few differences, which will be explained. When an order is filled, the foreman makes out a dray ticket for each delivery, showing date, customer's name, place of delivery, when and by whom ordered, the lumber firm's order number, the teamster's name and time out, description of merchandise and loader's name. These items, of course, are identical on all three dray tickets. Ticket No. 1 bears at the foot a printed notice as follows: "Received in good order by ————. Customer please sign and return by teamster." Ticket No. 2 is the office record, for use in case No. 1 is lost or

C. D. MIDDLEBROOK & SON

LUMBER DEALERS

Cor. STATE & LEWIS STS.

Binghamton, N. Y., ———— *191*—

Sold to ———— *P. O.* ————

Delivered to ————

Ordered by ———— *Order No.* ————

Delivered by ———— *Out* ———— *In* ————

PCS.	SIZE	LENGTH	FEET	DESCRIPTION	PRICE	AMOUNT
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

ANY CLAIM FOR SHORTAGE ON THIS BILL MUST BE MADE ON RECEIPT OF GOODS

12514 DRIVER LOADED BY

Received in good order by

CUSTOMER PLEASE SIGN AND RETURN BY DRIVER

Dray Ticket used in Triplicate for Receipt from Customer, Invoice Check for Customer, and Office Record.

destroyed. Ticket No. 3 bears a printed notice at the foot as follows: "Customer please keep to check invoice."

Teamsters and foremen have strict orders that no delivery must be made without a dray ticket. They learn very soon that it pays to follow this practice. On return to the office the teamster signs ticket No. 1 and enters upon it the time of his return. If he has been unable to find anyone to receipt for the load he writes upon the ticket "No one on job" and his initials.

Invoices for all orders are made out daily. The billing clerk first sees that all of the dray tickets for the day are together. Then he compares these with the orders and puts corresponding dray ticket numbers upon the orders. Prices and extensions are then written on the dray tickets and the invoices are made out from them. It will be seen that this system, simple though it is, involving only two sets of printed forms, is very complete, and easily handled.

We also show an illustration of a sales analysis sheet used by this firm. This sheet is 24 inches wide by 12 inches deep, with columns for the chief lines handled in the yard, such as hemlock, white pine, N. C. pine, yellow pine, spruce, fir, siding, shingles, etc.; 18 classifications in all, and an additional column for goods not otherwise specified (N. O. S.). All columns on this sheet show dollars and cents, and the principal items show quantities (feet or pieces). In distributing the day's work upon this analysis sheet the dray tickets are used. First of all, the charge sales are attended to, each item being entered in its proper column. For instance, the sale of 380 feet of hemlock at $11.40 would be entered under hemlock, with 380 under the column headed "feet" and 11.40 under the column headed "dollars." An order for 4,000 shingles worth $16 would similarly be entered under "shingles" by writing 4 in the column headed "M"" and 16.00 in the column headed "dollars." The columns are then footed and the totals are footed. This grand total must agree with the day's charge sales as shown in the sales journal. The cash sales are then treated in the same way, and the combined totals must agree with the day's charge and cash sales. After comparison with the journal record, the totals of each kind of merchandise are entered in a record book, with charge sales in black ink and cash sales in red ink. The pages of this record book are as illustrated in the sales sheet. The record book is large enough to hold a month's work to the double page, and at the close of the month, when all the footings are made, the record shows a set of totals, giving the sales in dollars and cents in each division, with quantities in the main items, charge and cash sales being shown separately by the different colored ink. There is one more division that it is interesting to note. Sales in connection with which deliveries are made direct from the car are indicated by drawing a red circle around the item and keeping it separate until the footing is made. The total of all car sales for the month is also shown in the sub-footing for the month, and a glance at the column footings show the items.

The monthly footings show how the sales are made up and enable the manager to look sharply after any line of stock that is moving more slowly than it should. They also form one side of a perpetual inventory, and are an aid to intelligent distribution of overhead, as the sales going through the yard are separated from the car deliveries.

The greatest practical value found in connection with this system is the fact that the firm knows the sum of its sales, as shown on the journal and the ledger to be the sum of all the items shown on the dray tickets. In making out a long invoice the billing clerk will sometimes strike an item that would require reference to a previous sale, estimate, or something of that kind, perhaps for several items. It is easier to write out the item, leaving price and extension to be put in later. Once in a while the bill may be footed without these entries, and the omission may not always be caught in checking. The sales analysis always catches these omissions. Once it caught the error of a misplaced decimal point, which is a very easy matter to overlook. "40M extra clear red cedar shingles at $5.50 per M, $22," got through, but in the analysis it was caught at once. This system paid for itself in a few months. In a business doing, say, $200 per day the daily work of analysis and entry in this manner and the monthly footings take up less than an hour a day of one person's time.

The Value of Cost Finding*

It is necessary to-day for a manufacturer's success that he knows on what articles he is making a profit and on what he is incurring a loss. A prominent vehicle manufacturer recently made the statement that he was forced, for his own protection, to install an efficient cost system. This showed, he said, that he had been in the past laboring under a wrong impression. He was surprised to find that where he thought he was making money he was not making it, and that certain lines he was not pushing were affording a far greater percentage of profit than lines he was actively pushing.

Unfortunately, the value and importance of proper cost accounts are often underestimated. So long as the details of a business can be carried in mind cost records are not so essential, but when this cannot be done it becomes absolutely necessary for the safe conduct of business that costs be kept. They serve three broad purposes—first, they show the cost of each product second, they permit the elimination of unprofitable business; and, third, they establish a correct basis upon which to make future prices.

Arbitrarily making a price may result not only in a direct loss, but an indirect loss by reason of the demoralizing influence in establishing a false price for future business. A manufacturer owes it to his stockholders, his employes, his customers, and his competitors to accurately determine his cost of production. To sell blindly a product of which the complete cost is not known almost invariably produces bad results, not only to the company but to the industry as a whole. Your most dangerous competitor is the man who does not know what his goods cost him.

Index to Efficiency.

Another marked advantage of properly kept costs is their value as an index of operating efficiency. With properly prepared cost figures the relative efficiency of the various departments of plants may be watched and compared. The current results obtained in each department may be checked against those obtained in the past, thereby showing increases in efficiency, or the reverse, and the results of improvements in practice. The judicious use of accurately prepared costs will help to bring to light poor and inefficient management, and will enable standards to be set for the less efficient departments, based on what actually has been done in departments that are being properly and efficiently administered.

It is a fact too little realized that scientific cost keeping is fundamentally related to manufacturing efficiency. A cost system in the hands of an executive who thoroughly appreciates its possibilities is a most effective instrument of control. A majority of our business failures can be attributed to poor accounting and inadequate business information. Bad office methods, inadequate and unreliable costs of production and distribution cause a great deal of unfair competition and a heavy business death rate.

I know I am safe in saying that with better accounting many of our bad business practices would be brought to light and promptly

*From an address by R. E. Belt, before the National Veneer and Panel Manufacturers' Association.

SIDING
A — Fir
B — Cull W. P.
C — No. 1 R. C.
D — No. 2 R. C.
E — .....
F — .....

-Charge Sales in Black
Cash Sales in Red
Carloads in Circle

SALES SHEET

C. D. Middlebrook & Son, Binghamton, N. Y.

Month Day 19

Date	Hemlock		W. Pine		N. C. Pine		Y. Pine		Spruce		Fir		Beveled Siding		Shingles		Lath		Building Paper		Roofing		Wall Board		Molding		Porch and Stair Work		Glass		Doors		Windows		Blinds		N.O.S.		Totals		Grand Totals	
	Ft.	$	Ft.	$	Ft.	$	Ft.	$	Ft.	$	Ft.	$	Ft.	$	M	$	Pcs.	$	Rolls	$	Sq.	$	Ft.	$	$		$		No.	$	No.	$	Pr.	$	$		$		$	

Sales Analysis Sheet on which Seperate Totals and Grand Totals are easily kept.

curbed. When accurate results are known to proprietors and to creditors, conditions never become so bad and losses never so great, as good accounting gives reliable information and timely warning.

There is no net profit until everything in the way of expense and service is taken care of, including depreciation, taxes, insurance in all its forms, losses from bad debts, price discounts, expense in collecting outstanding receivables, etc. The omission of such items as these is the reason that the final profit and loss account at the end of the year is so often disappointing, and so difficult to reconcile with the profit percentage that was added to the supposed cost of the goods.

The Attitude of Banks.

There is another phase of this subject which manufacturers should not lose sight of, and that is the attitude of banks in the matter of getting credit. Banks are paying more and more attention to the accounting methods used by the manufacturer to whom they extend credit. They are willing to give larger loans and very often more liberal terms to the business man who keeps his books in a way that enables him to show the bank at any time the true condition of his business. A business man who can give a bank this information will receive more consideration with the same amount of assets than the one who cannot.

If merchants and manufacturers would agree on some standard practical system of accounting it would go a long way towards eliminating the unintelligent and destructive competition that is so manifest in many of our industries of to-day.

It is of great importance to the manufacturers of an industry that they agree on the elements or fundamentals of a cost practice, especially to make sure that all of the elements of cost are included in their calculations. This is of vital importance. Make sure that you have included in your cost an adequate provision for depreciation and every expense of every description incurred during the year. The test of the accuracy of a cost system is that it dovetails in and co-ordinates with the financial books of account. The costs then, in the aggregate at least, must be correct.

Betterment of Trade Conditions.

Production costs, determined by a uniform practice, have been demonstrated to improve trade conditions to a remarkable degree. Excellent results are being attained by trade associations appointing a man to devote his entire time to visiting the concerns that are engaged in their industry, getting acquainted, preaching the gospel of good accounting practice, reconciling differences, and in standardizing methods. When the person engaged for this work has the subject at heart, is congenial and persuasive and well grounded in the principles of cost accounting, the results in improving the general welfare of the industry are surprising. There should be no selfish motives back of such service. There should be the same willingness and free spirit to help and to aid and bring in line the non-member of an organization as there is manifested in the member. The non-member is usually the trouble-maker. In the interest of the industry he should be guided by the experience of others. The fallacies and disastrous results of bad business practice should be pointed out to him.

Business men are looking upon activities for the general welfare of their industry in a new light. They are being governed by the single purpose to promote the best interests of the community and of the industry in which they are engaged. They are putting aside sectional differences, and there is the broadest and most generous co-operation for the general good.

The lack of a correct knowledge of one's business carries with it various undesirable results. In the first place, the manufacturer is unable to conduct his business upon sound business principles. The result is reprehensible practices as disastrous at times as intentional unfair methods of competition. In the second place, he severely handicaps himself, in that he is unable, when seeking credit, to produce a correct statement of his financial condition which would enable a banker to extend to him the full credit to which he is entitled. He thereby hampers and limits the possible expansion of his business.

Nearly every business man is perfectly willing to include in his costs all items for which he pays out actual money, but he is inclined to overlook those which do not require a visible outlay, and depreciation is one of these. A number of manufacturers do not charge any depreciation, and give as a reason that they keep their plant in first-class condition and it does not depreciate. This is one of the most fallacious ideas in business to-day. Every machine, building, and apparatus, like every man, has a certain period of life, and no matter how much care you take of the machine or how much medicine you give the man, death is bound to come.

Many manufacturers hesitate to charge off depreciation because of the mistaken idea that by so doing they are really spending money. Nothing could be farther from the truth. You have not lost one penny by making an adequate charge for depreciation; on the contrary, you have strengthened your business and you are playing fair with yourself and with your competitors.

A Solution of the Waste Problem

By James E. Dewey*

The problem of waste, without doubt, is the most vital question that confronts every manufacturing institution in existence to-day, not only in the consumption of lumber alone, but it applies to any raw material that enters into the process of manufacturing your products. When you consider that statistics show all of the principal materials have increased in value from 25 to 150 per cent., which, I presume, is a conservative maximum, then you appreciate, to some extent at least, the great necessity for conserving the waste in these materials. Modern machinery and improved methods absorb a reasonable percentage of this increase in cost of materials by reducing the handling and manufacturing costs and otherwise creating a saving in production. We must then give our attention to other means of waste reduction, and I now refer particularly to your lumber requirements.

A great deal of abuse and criticism has ben heaped upon the heads of the lumber industry over the question of establishing a set of inspection rules which will conform more closely to the requirements of lumber consumers. While it is probable that the present rules can be improved upon in this respect, until this past year no united effort has been made by the consumers to encourage an interchange of ideas on the subject.

The elimination of waste is a factor which appeals to me more each day as I study manufacturing problems, and it offers unlimited possibilities toward the solution of our difficulties. This, again, suggests the importance of closer co-operation between the consumers and manufacturers of lumber. Those among you who are not familiar with the operation of a sawmill cannot appreciate the remarkable improvement in manufacturing methods of an up-to-date plant. To some extent this has been due to a natural evolution and the necessity of reducing costs, but the idea of conservation has been paramount in the development of these methods. Why, then, should not the consumer derive a benefit from these developments through a closer communication with the manufacturer? It is a surprising fact that a large number of lumber consuming industries of the present day make no attempt to compute their waste or estimate their cost of production. The important feature with them is the total production of their finished product within a specified time. Quantities of stock are burned which could be utilized in the production of useful articles at a profit. I consider this actually a crime, and some means of punishment should be meted out by our Government for such gross and needless waste of this country's resources.

We have come in contact with one case through our service department which will serve to illustrate this condition. This company uses a large amount of lumber each year, and one of our salesmen who calls on them regularly explained the idea of our service plan. The buyer was mildly interested, and agreed to consult our special representative, so that an interview was arranged. Our representative has now held three meetings with that buyer, but so far has been unable to interest him. On the first visit the buyer resented his suggestions, and seemed to consider them a reflection on his ability. The succeeding visits were a little more productive, but so far the privilege of investigating their manufacturing operations has been refused. We know positively that we can offer suggestions which will save money, not only in the purchase of material, but also the waste in their production. This instance is only one of many, and emphasizes my former remarks regarding the closer co-operation between the purchasing and operating departments.

The principal factor in the waste elimination is in the selection of your raw material, and this again reverts to the purchase of your requirements. In this connection we must first consider the kind of material best adapted. It is necessary to know what physical properties in the wood are most essential for the use intended. This is in regard to strength, texture, grain, weight, etc. Next, the choice of grade or grades which will produce the maximum of product with the minimum of waste at the least cost, and then the selection of widths, lengths, and thickness most economical for the sizes of your cuttings. In this connection, where narrow widths or short lengths are desirable, it immediately reduces the initial cost of your material.

Now we come to the products of timber waste which may be utilized to advantage. This at once offers opportunities for conservation that are unlimited. Cossidering these facts, who is better qualified to offer constructive ideas and furnish specific information in the proper understanding of these factors than the lumber manufacturer whose knowledge from years of study and experience enables him to proffer most valuable knowledge? It is a deplorable fact that we have never been given the proper consideration in this respect, while in practically every other line of materials you immediately call in the producer to confer on your problems.

Our mutual interests have millions of dollars invested that are dependent on the great timber resources of this country, so I implore your earnest co-operation and assistance to curtail this wholesale slaughter of nature's bounty for the sake of our own existence and the benefit of posterity.

* Abstracted from an address delivered before the Manufacturers' Cost Association, by James E. Dewey, of the Stearns Salt and Lumber Company.

Stock List Evils—Real Salesmanship

Advice from a Yellow Pine Salesman That White Pine Men May Absorb to Advantage—Practical Selling Suggestions.

By Robert H. Brooks*

SIX years ago, and for some years preceding that time, it was my lot to be a part of a retail lumber concern located in one of the larger Middle West cities. This town was, and still is, the home of several large manufacturing companies, and consequently our yard was on the calling list of a number of home office representatives. Being a market in which large quantities of pine were absorbed, it may be presumed that these salesmen were among the best on the payrolls of their various companies. These men were all amiable and courteous fellows, with whom we became well acquainted and whom we grew to like. Liking them and being human, we gave them our patronage, placing orders for various items with such mills as we knew from experience were most likely to ship what we wanted. I may say, however, that, with the exception of our transactions with the representative of one concern from which we secured the greater part of our requirements, almost every carload shipped into our yard was bought by us and not sold by the representative.

A former sales manager of the National Cash Register Company once said that cash registers were not bought, but sold. Unfortunately, the reverse mainly applies to lumber, for it is not sold, but bought. We have called lumber salesmen order-takers until that term has lost its force, but its meaning still applies to a vast number of these men. It appears, however, that one of the prominent factors which is contributing to this state of affairs is that famous adjunct to every lumber salesman's equipment—the stock list. Instead of using it merely as a memorandum to govern his orders in proportion to his stock, the average man employs it somewhat as a bill-poster, which, to all intents and purposes, might better be gotten up in big red and blue lithographed dodgers and read about like this:

> "750,000 feet No. 2 Common Strips — 750,000 feet — Count them! What will you give us per thousand? We are asking $14.75—but what will you give?"

What better inducement to offer $1.50 less could the buyer ask? Even asssuming that the salesman had instructions to disregard the market by so presenting it, he invites a Dutch auction and nothing else.

Not Enough Inspiration.

I think a great many of the shortcomings of lumber salesmen as a whole lie in a too long fafmiliarity with what they regard as a prosaic and bulky article which they no longer appreciate if they ever appreciated it at all. To sell an automobile involves the actual seeing of and close contact with the car itself. It is handled, ridden in, and admired by the buyer and salesman during the time of the transaction. The lumber buyer, on the other hand, sees nothing in a material way except the salesman. The commodity may be a thousand miles away, down at the mill. Consequently, the ordinary lumber sale merely involves a discussion of the grade, the price—usually as compared to a lower one said to have been offered—and the time of shipment, but some of you are saying the average dealer, contractor, or railroad buyer doesn't care a rap about anything except the price, and the price gets the order or loses it. One answer to that statement is that it takes a tree about 150 years to grow and mature. You cannot, therefore, adequately describe its various uses and worth with the mere words "$23.75 per M delivered."

It makes little difference whether the sale includes mill timbers for factory construction, car material, or interior trim. The salesman should be able to tell his man every possible detail about the physical make-up, proper handling, exact quality, and anticipated service involved in his product.

How the Real Estate Agent Works.

Consider for a moment the optimistic real estate agent. His lots are always well located, his houses modern, his decorations artistic, his new allotment in the best part of the city, and as to the cost—why, merely so many dollars. You can't afford to miss it. There is a good deal of "bunc" in real estate selling, true, but there is a lesson in it in creating desire. If the agent hung his argument on "50 x 125 feet at $900.00," he would soon starve to death.

Every paper written on salesmanship emphasizes creating the necessary desire for an article before the sale is possible. Granting the buyer must have lumber, we have a mere disinterested desire to begin with, and it will therefore take more than a stock list and prices to develop a genuine desire for your stuff above that of the other concerns.

Probably some of you are saying that this may be all right in theory, but not in practice. If so, what have you ever done to prove it? How, for example, would you approach an engineer or architect on a factory bill? Many salesmen have a reputation of going in backwards, with words about like this: "No. 1 long leaf yellow pine, 8 x 8", 10', 20" x 20"—40', at so much per M for the various sizes, shipment as per contract." That part off it, however, should be made incidental to the fact that geological conditions in the region in which your mill and timber are located are highly favorable to a dense growth, insuring a heavy percentage of summer wood and consequent great tensile strength, that timbers of this character are well within the new density rule on which contract specifications are based; that your stock will fully meet their requirements; and, in addition, that your concern brands its name on each stick, not only as an identification against substitution on the job or at the city yard, but as a trade mark as well, which is symbolic of reliable merchandise, behind which your firm stands with its reputation of twenty years. Drive these points into your prospect's mind and you will find him more interested in these physical qualities which he desires and which are essential to the successful carrying out of this contract than in the fact that to get your stock he must pay a little more money than for unidentifiefid stuff sold on a mere quotation.

An Example of Good Work.

One day a man dropped into a hardwood mill and asked the manager if he had any inch culls which he would like to dispose of. Almost anything would do, as it was for very ordinary use. This manager hadn't any on hand just then, but thought that a neighboring mill across the railroad track had a pile which was probably about what the buyer was looking for. "If you like," said the manager, "I will go over with you and see them." So the two men walked over and entered the yard at the lower end near the pile in question. "There is the stuff," said the manager, "and while you are looking it over I will walk up to the office and see what they will take for it." So the prospect looked the pile over and the manager walked along to the sales office. Entering, he said: "You have a pile of culls down there at the southwest corner of the yard. How much are you carrying it for on your books? Perhaps I can sell it for you." He was told, after reference to the books, that the stuff was listed at $250.00 on the records, and that he might have what he could get above that figure. The manager returned to the pile and found his man just finishing a rough tally.

Said he: "Well, can you use it "

"Yes, it is just about what I need."

"All right; make an offer."

"Well," said the buyer, "there will be a good deal of waste, but there is also a considerable amount of it, and I will give $1,000.00 for the pile as it is."

"Well, now, you will find that stuff runs pretty good," said the manager, "and we could not let it go at that figure, but will take $1,500.00."

The sale was made at $1,250.00, the buyer was satisfied, the company got its book value, plus $1,000.00, or 400 per cent., as the manager would not accept any division for himself. That is a true story, as well as a demonstration of what actually was done with an item which could scarcely be qualified even as a bargain. Of course, the buyer wanted the stock, but that manager made him desire it $250.00 worth more than he offered and 400 per cent. more than the owners expected to get out of it.

Now, take Southern pine stock. Five hundred mills, say, make the same kind of lumber, sell in the same territory, on the same grading rules. It is probably the idea with many salesmen in view of this situation—which is, indeed, a mistake—that with so much stock of identical character being offered on stock lists low prices are the only leverage available. However that may appear, it is more than apparent that such arguments—or shall we say impediments?—assuredly give no individual advantage over the other fellow. So, then, what will?

As an example, take finish. First of all, be sure that you sell the wood which actually is specifically adapted to use as finish, because some woods are not, and this fact will have to be recognized just as must the contrary one, that a wood adapted to finish is not usually a proper one for timbers. Assuming, then that your product is one suited to the use to which the buyer will put it, know and tell him, for instance, that your pine is from a district in which the species attains a state of perfection in timber growth—a fact recognized by forest service reports and other authoritative sources. If it is so, emphasize the fact that your wood contains a very low percentage of resin, combined with a lustrous texture and fine grain, which supplies the necessary absorbing qualities upon which a successfully finished interior trim depends. Also know and point out that your wood has certain individual advantages under various color treatments. In short, post

* Address delivered at Detroit World's Salesmanship Congress.

yourself on everything to be known about the use of your wood and you will find the buyer so interested in what the wood will do that cost will be secondary.

Possibly some of you are thinking that the average dealer knows the difference between long and short leaf yellow pine or white pine and hemlock, but beyond that you cannot teach an old dog new tricks. The answer is, "Try it." During a recent tour of inspection by some fifty Northern retailers through the mills of the South those men saw and learned new things about wood which they have been selling for the past twenty-fiears years, and which they never dreamed existed. Now, about one dealer in every 2500 ever sees a mill stock, so why not take the mill stock to the dealer in the form of a complete line of honestly-selected representative samples? If necessary, carry a trunk to hold them. Show everything, from a strip of waney edging from which lath are made up to a piece of 8309, with a mahogany and white enamel combination finish on it. The inspection of such samples themselves would get your customer's mind off that 50c per M less, which is worrying you so much, and will give you an excellent opportunity to pump him full of information about your plant, your timber, your dependable shipping department, and all the rest of it.

The preparation of such a salesman's equipment would develop new ideas for presenting the stock as the plan was carried on, until the salesmen themselves can, on their own initiative and creative ability pull themselves out of the stock list—low price—rut and on to the higher plane of real salesmanship. Did you ever watch a $10,000.00 a year shoe salesman in action? If not, make a point of doing so at the first opportunity. True, he has to show a range of styles, but to compare with that you have everything from "A" edge grain flooring to Byrkit lath. That salesman will take a $10.00 shoe and have it cut into two cross sections, to show the stuff inside and the make-up. He knows every step in the process of that shoe's manufacture and all about the physical qualities of every piece of material in it. Then, too, there are the cheap shoes for the cheap trade, just as there are cheap grades of lumber for the yards that cater to cheap contractors. He makes an analysis of the goods, which is the successful salesman's greatest lever. It is what the shoe, clothing, automobile or lumber will do, how it will serve, first, then come the terms of price, but not until the prospect's mind has been made to grasp the full worth of the article, and right there you have it, Mr. Lumber Salesman. In other words, sell yourself on your own product, after which it will be far more simple to talk convincingly to your customer.

Selling Methods Always Changing.

Lumber-selling methods are changing from year to year just as are other methods changing from year to year. They have, alas! been the last to show improvement, because stock list order-takers have been among the common garden variety of sales representatives for twenty years, and they are still with us in vast numbers, for the disease is almost hereditary. Happily, however, there are a few notable exceptions rising above the rank and file.

As to price-cutting, I recall in those retail yard days previously referred to a feeling of respect for the fellow who quoted his price on pine and stuck to it, on the basis of intrinsic value consistent with the current market price, and he was the one mentioned from whom we bought the bulk of our stock from common to finish. To be a confirmed skeptic is to keep yourself down to the ordinary level.

We realize that customs and habits of long standing are deep rooted and hard to change. Nor can a revolution in the old order be accomplished over night, but at least an attempt must and will be made. We all know it is the fellow with the ideas and the nerve to try them out who leads the procession. No one is satisfied with the stock list order taking method. Yet the majority of stock is sold on that basis to-day. Hence why cointinue it? The lumber selling field to-day offers magnificent opportunities for original thinking, new ideas, and distinguished accomplishment in salesmanship.

In conclusion, I would again emphasize that you talk uses and not prices, and, above all things, remember that it takes 150 years for a tree to grow and mature to the lumber-cutting stage, and that it therefore is utterly impossible to present adequately the worth and uses of that tree's product in the mere words "$23.75 per M delivered."

Attractive Yards Draw the Best Trade

Well Kept Stocks, Tidy Driveways, and Neat Fences Transform An Ugly Yard into One That Pulls the Customer Inside.

By An Alberta Yard Manager

"Orders be Orders," remarked Gordon Snow, the tall, slender local manager, to his yardman, who stood by anxiously watching the reading of a reply to a request for a new large up-to-date shed, which is so much the desire of all managers and their assistants.

It was plainly evident that the answer had been that times and general conditions did not warrant any expenditure for new or expensive plants and with the least expense possible the old one must be made serviceable, and there was no good reason why it could not be made so, and, furthermore, be the neatest and most attractive yard in its district.

Most men want large and expensive sheds, and then never have their lumber well or handily piled in them, having the short lengths, or unsaleable items, piled away in the highest part of the gable or attic or in some other inaccessible, out-of-the-way place so it is never easily got at, to be put on an outgoing load. It is, therefore, left there and never disturbed, and although occasionally spoken of, is always forgotten when loading up a customer. The wide, dry driveways always make a convenient and tempting place to dump loads instead of immediately piling the material in its proper place.

The instructions were so definite that all immediately set about putting the old yard in shape. Arrangements were made with the drayman and all steam plants for their cinders to be hauled into the driveway of the yard and the assistant would level them, crown the roads and make drainways for the water to run off. The dinky little hood was torn off the one-deck shed and doors made so as to keep the rain and sun from beating in, as the shed faced the south. This kept the finishing lumber and mouldings free from dust, stain, rain or sun, and as bright and clean as the day they arrived, and consequently were equal or even superior to any kept in a large enclosed shed.

The old fence was pulled into place and straightened up and given a coat of whitewash, it having been found that at a small expense, a fence could be whitewashed twice a year, so as to look always well.

The bearings in the yard were straightened up, and if they did not give enough slant or pitch, so as to run all the water off the piles, then an occasional inch piece, instead of a lath, was used in front of the pile only, as a cross piece. A few of these pieces soon raised the front of the pile so as to give the proper slant to run off the rain.

As to the office and sash shed, they were straightened up, all windows and doors properly marked and put into their places. The office was cleaned up, floors, desks and cupboards and all old calendars and other papers removed from the walls, and there were left thereon only those articles pertaining directly to the business.

To beautify the outside, vines, hops, Virginia creepers, scarlet

Climbing Foliage Gives an Inviting Aprearance to a Retail Yard.

Cleanliness and Neatness are Strong Factors in Attracting Trade.

runners, all of which grow well in this country, were planted, and soon the building was attractively covered with green leaves and pretty flowers, adding comfort and charm on warm days.

The accompanying illustrations show the result of the effort, and really, don't you think it was worth it? Does not the yard in general give to a customer an assurance of "Quality" and "Service" and that he will be satisfied, if he deals here?

What was done in Northern Alberta with so little outlay can be done at every retail lumber yard in the prairie provinces and all can have a yard as satisfactory and attractive if they will only put forth the effort.

A lumber yard like this bespeaks courtesy, and hospitality; it advertises itself and its being up-to-date. IT RESTS WITH YOU, Mr. Retail Lumberman as to the conditions of your Yard.

Evolution of White Spruce from Forest

Description of Processes of Manufacture of White Spruce as Found in Western Canada—Some of the Difficulties Encountered

By John P. Jacobson

The man who contemplates building a home for himself, whether on the prairie or in the city, gives but little thought of the operation involved which enables him to go to the nearest lumber yard and pick out just what material he requires for his building purposes. He buys his white spruce drop siding, flooring, ceiling, dimension and boards, and notices the smooth finish of the lumber, but he seldom stops to think of the hard work and the many difficulties that must be overcome before this spruce can be converted into what is displayed for sale at the lumber yard.

Vast stretches of land in Northern Manitoba and Saskatchewan are covered with as fine specimens of white spruce as anyone could wish to see. Last winter I had the opportunity of observing the logging operations of one of the largest mills in the Middle West, namely, the Finger Lumber Company,, Limited, the Pas, Man.

I shall endeavor to give you a brief description of their logging as I saw it.

The Finger Lumber Company's timber limits are located along the Carrot and Saskatchewan Rivers and at present the company is operating on the Carrot River and on the Sipanock Channel which connects the Carrot and Saskatchewan. The logging operations are planned a year ahead. The first man sent out is the cruiser and camp locator. This man locates the places most suitable for building the camps so that they will be within easy reach of as large a growth of timber as possible, as the aim is to have one camp last several years. The cruiser also locates the main log roads and the branch roads leading into the timber.

As early as July the company commences to ship supplies up the river, such as oats, provisions of all descriptions, and also a quantity of iron. In fact everything necessary for the operation of a modern logging camp is hauled up. The items required are numerous and it takes a man with a clear head to figure out the right quantities. These supplies are shipped by water in large barges towed by steamers and are unloaded at a central warehouse from which they are delivered to the camps as needed during the winter.

The first men are sent into the woods during August and September, and their task is building the camp. The camp is sometimes built of logs and sometimes of lumber from the mill. The camp consists of several buildings: the sleeping camp, the kitchen, the barns, blacksmith shop, warehouses, filing shack, office, etc., but the men are experienced and work with a will and the invigorating air gives them zeal and energy so that it takes but a short time to finish the construction of the camp. The next step is a very important one, namely, that of making the roads. As has already been stated, the roads were located by the company cruiser and the main logging road leads from a convenient place within the limit to be operated to the bank of the river. From this main road the branch roads lead conveniently to the timber and serve as feeders to the main road. A modern logger takes great care in making roads, especially the main roads. They must be graded and levelled and are provided with a rut wide enough for the sleigh runners. When the ground freezes, the road is iced, that is, a big water tank drawn by four to six horses and provided with sprinklers is continually hauled over the road; the water quickly freezes and a glaring ice road is the result. On this ice road it is an easy matter for two horses to draw loads containing from 12,000 to 15,000 feet and weighing something like fifty tons. During the winter the roads are kept constantly repaired by sprinkling water over them and this is done mostly during the night to avoid interfering with hauling the logs.

As soon as the roads are made the cutting of the timber commences. First comes the undercutter who marks with his axe the trees to be felled. The sawyers with six-foot cross-cut saws follow him and saw the trees down. The branches are cut off and the tree sawed into lengths of twelve feet and longer. The skidders follow the sawyers. The skidders' work consists of dragging the logs to the skidways along the branch roads. Horses are used for this work. As soon as the logs have been placed on the skidway they are loaded upon the logging sleighs and this loading is done with what is called a log jammer, a tripod-shaped structure with block and line. The logs are piled on the sleigh seven or eight tiers high, each tier being securely fastened with chain. As soon as the sleigh is loaded it starts

A typical load of white spruce loaded at the logging camp of the Finger Lumber Company on the Carrot River, Man.

Illustration No. 1.—Logging operations on the Carrot River. Logs released prior to being rolled on to the River.

Illustration No. 2.—Logging on the Carrot River. Logs on the frozen river waiting for the Spring floods to drive them to the mill.

for the landing where the logs are released and placed on roll ways which stretch across the river. This operation is seen in illustration No. 1. The logs which have been rolled on to the river may be seen in the second illustration.

In a brief way, this is what I observed on the trip to Finger Lumber Company's camps, but no description in this journal can convey to the reader the difficulties connected with the work. One must remember these camps are located as much as a hundred miles from a railroad station and it is, therefore, necessary during the logging season to maintain a line of communication with teams in such a way that the camps are at least within tri-weekly communication with the outside world.

It was a pleasure to note the fine camp buildings provided for the men. Each camp has about 125 men and with such a large number it is not easy to keep a good sanitary condition, but the daily visits of the camp doctor were sufficient stimulus to the men in charge of the camp to keep everything in the most perfect sanitary condition. It was interesting to watch the men come into camp at night. They had the elastic, springing walk of the experienced woodsman. They were a hearty looking lot of men and they certainly enjoyed the appetizing victuals provided by the chef of the camp and I assure your readers that the most exacting epicure would have relished the food with which the tables were loaded. There was vegetable soup, roast beef, potatoes, turnips, pies and cakes of every description, most delightful bread, and coffee and tea. After the meal the men spent their time in reading, smoking, mending their clothes, or telling yarns around the camp fire.

I have endeavored to give your readers some little idea of how White Saskatchewan Spruce is logged, but the logging is only one stage of the operations necessary to provide the farmer on the prairie with building material. When the logging operations are finished, the driving commences. Driving in the Carrot River is comparatively easy, as the banks are high and there are no lakes to cross. The logs float down with the spring flood and are placed in booms at the mouth of the Carrot River and thus ends the woods operations.

Next comes the towing of the logs to the mill and converting them into lumber.

Cost of Machinery

In connection with factory costs, there is a difficult problem for every manufacturer to work out, and that is the cost of machinery. What is meant by this is not the original cost of any given machine, but the proportional cost of the item of machinery for doing any given work. This must, necessarily, include the cost of machinery as compared to the work it does, the life of a machine or the amount of depreciation in value each year, and the chance, meantiime, of some other more up-to-date machine being invented, necessitating the replacing of the machine before it has really served its time.

It is considered that machinery depreciates about ten per cent. each year. This is, in substance, that the life of a machine should be reckoned at about ten years. This may be a fair average, but it is not conclusive. There are machines in use today that are seventy-five years old. Other machines are sometimes ruined through accident or something of the kind inside of five years. Some machines wear out very rapidly. Others last as long as a man. Estimates are complicated by the claims made for some new machinery that it will pay for itself in a very limited time.

The matter of machinery paying for itself raises a complicated question. It goes without saying that every machine must pay for itself in a certain length of time. Otherwise, it is a loss. But to make it pay for itself, a certain amount each year must be allowed to the machine for its share of the work, just as so much is allowed for the machinist. This is one way of looking at it. There is another way. There are those who say that improved machinery will do more work than others previously in use at the same labor cost. This is frequently true, but it, like lots of other truisms, depends to a certain extent, on other things.

In the first place, if it effects a saving over the old machine, you will have an advantage in first cost until your competitor puts in the new machine also. Then the situation changes. You haven't any more advantage over the other man in the business than you formerly had, and the benefits that accrue from the saving go to the world in general by cheapening the articles produced. This is one of the inevitable results of competition, and is a point which must be considered in deciding whether or not a machine will pay for itself on the basis of its work compared to the work of the older machines.

Another factor is the possibility of some other machine being invented soon after this new one is installed. This other machine may offer such advantages over the new one that it will become necessary to make a change before the machine has had time to pay for itself. In this case, if you don't buy the new machine, you are left behind by your competitor, who will get it and then have the advantage over you. It is easy to see, therefore, that this matter of the cost of machinery, and of machines paying for themselves, is a subject in which one may get tangled.—Hardwood Record.

Use of Lumber in Coal Mining

The consumption of wood in connection with coal mining operations is greater than many people realize. This is shown in an interesting manner in a letter published by the National Lumber Manufacturers' Association, from the editor of Coal Age. The letter says in part:—

"Every ton of coal mined in the United States requiries the expenditure of about 7 cents for pit lumber. Taking the coal production of the country at roughly 580 million tons, this means an annual expenditure for pit lumber of over $40,500,000. This includes what is ordinarily known as pit props, timber sets, brattices, overcasts, etc., or the lumber, mostly rough, which is used underground alone.

"Above ground neither I nor any other man knows or can estimate accurately how much is spent each year for building material in the shape of lumber. However, lumber enters into the construction either in whole or in part of practically all mine buildings such as tipples, breakers, hoist houses, sub-stations, offices, stores, magazines, fan houses, shops, warehouses, oil houses, power plants, boiler plants, pump houses, stables, etc.

"Furthermore, with approximately 750,000 men directly engaged in the coal industry, nine-tenths of whom live in company houses, the coal operators of the land must provide housing conditions for say 3,000,000 people. The majority of the houses are of frame construction although brick, hollow tile, and concrete and stucco, are being employed to a limited extent.

"You question whether the use of timber is on the increase or decrease in and about the mine. In answer I would say that as years go on, and the difficulties of mining due to greater depth increase, a greater amount of timber must be used. Not only this, but the price of this timber is constantly increasing, so that the amount spent for pit lumber from year to year increases more rapidly than does the output.

"As to the use of steel. This is being employed more and more for permanent timbering along gangways and headings. It is not, however, to the best of my knowledge and belief used to any extent in room timbering, and although the sale of steel mine timber is constantly increasing it is doubtful if at the present time more than one-half to one per cent. of the props used in mining are of steel."

Miscellaneous Items of Interest to Lumbermen

Canada's exports of forest products for twelve months ending June were valued as follows:—1916, $53,259,354; 1915, $43,228,935; 1914, $43,241,666.

The Department of Lands and Mines, Fredericton, N.B., reported under recent date that there were then no forest fires on Crown lands in New Brunswick.

New Zealand's imports of hewn and sawn timber during the first quarter of 1916 were valued at £47,328. During the corresponding quarter of 1915 the value of these imports was £97,879.

The Bell Telephone Company of Canada report that they have specified British Columbia fir for interior trim and finish in the buildings which they propose to erect this year in Barrie, Galt, Oshawa, and possibly in a proposed building for Levis, Que., with the idea of perhaps standardizing it for this class of work in place of quartered white oak, as they desire, if possible, to use domestic materials throughout their buildings.

The timber returns for June, issued by the Department of Lands of British Columbia show that the total scale of sawlogs for the province amounted to 120,023,869 feet board measure, in addition to 375,905 lineal feet of poles and piles, and 28,840 cords of ties, shingles, bolts, etc. Timber sales recorded during June cover an estimated total of 6,195,500 feet of sawlogs, 19,800 lineal feet of poles and piles, and 300 cords of bolts, etc., to produce an estimated revenue of $10,206.

The head of one of the largest lumber manufacturing firms in British Columbia reports that their volume of business during the first five months of this year was 300 per cent. greater than during the first five months of 1915. "Conditions are good, and from all signs they will continue to be so for some time. Most of the millmen I know," he continued, "have told me within the last day or two that they are stacked up with orders which will keep them busy for six months at least."

Editor Canada Lumberman:—

The article which you Published in the Canada Lumberman of August 1st about shell box contracts seems to us to have been written by a man who knows what he is talking about. We have not experienced any trouble in collecting our accounts from any of our shell box customers, but in our opinion there can be no doubt that some of the box makers are taking grave risks of loss in accepting contracts for shell boxes at the prices paid on recent orders.—Eastern Wholesaler.

New Horizontal Resaw With Interior Return Rolls

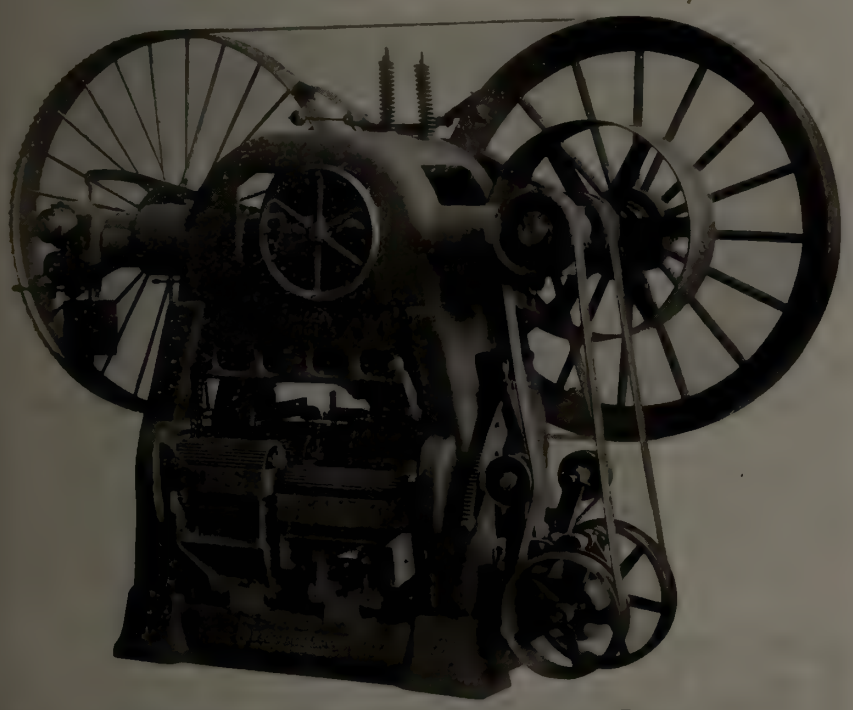
If one were to pay a visit to all the sawmills of over 50,000 feet daily capacity that have been erected during the past five years he could not fail to notice the prominent place given the sawmill resaw on the mill floor, or the important part it plays in the mill's operations.

The day is fast passing in mills of any size wherein the log is cut to the last board on the head rig, for mill men have been quick to realize the value of the heavy duty resaw as a manufacturer of lumber and have incorporated it in their operations.

The sawmill resaw, whether vertical or horizontal, has easily proven its worth as a lumber producer, and as such is running neck and neck with the head rig for the position of first importance in the mill. Of course, the head rig has the advantage of being the one indispensable machine in any mill, a position from which it will probably never be driven, but as the real lumber producer it is fast being distanced by the heavy duty resaw.

As is well known, sawmill resaws are divided into two well-defined classes, viz.: vertical and horizontal, the usefulness of each being dependent upon the log conditions. Thus, generally speaking, the vertical machine works out to the best advantage where the logs are of the best grade and where it is desirable to saw as much to grade as possible. In such operations the log will usually be cut to the best grades on the head rig, and the material in the form of deals of double thickness will be sent to the vertical resaw for centre sawing. This method relieves the head rig of one-half the cutting lines and, generally speaking, doubles the possible output of the mill.

Where the logs are small or of inferior quality the usual practice is to install a horizontal resaw, to which may be fed all material that may be dropped from the head rig—the only requirement of such material being one sawed surface. Thus a log of small diameter might be cut through its centre and the two halves passed to the horizontal resaw for completion; or, in case of a larger log, it could be heavy slabbed and the slabs cut into boards on the resaw, while the balance of the log could be cut to grade on the head rig and the deals sent to the horizontal machine for resawing.



Infeed End of Yates Type H 61 Horizontal Resaw.

Horizontal resaws operating on slabs and half logs require some provision for returning the uncut portion of the slab to the infeed end after each successive board is taken off.

In mills where sufficient floor space is available the uncut material is returned on a line of live rolls and transfer chains placed alongside the resaw. An installation of this kind encounters no serious obstacle in the mill wherein the resaw has received consideration in the mill plans, but the limited floor space of many existing mills offers no opportunity for returning stock in this manner. Many mill men who have recognized the advantages of the horizontal resaw have been deprived of its use owing to this lack of sufficient floor space.

The accompanying engravings illustrates a new addition to the Yates type H6 series of horizontal resaws, which has been introduced to facilitate the return of uncut material to the infeed operator by passing it back directly through the machine instead of returning it by the customary circuitous route around the mill on a long line of live rolls.

To accomplish this the machine which has been named the Type H61 is built with two sets of rolls, revolving in opposite directions. One set, the feeding rolls, is mounted in the standard Type H6 manner below the saw line in an adjustable frame that may be raised and lowered to secure the desired thickness of lumber. The other set—the returning rolls—is mounted above the saw line in a similar but stationary frame and driven at a slightly faster rate than the feeding rolls.

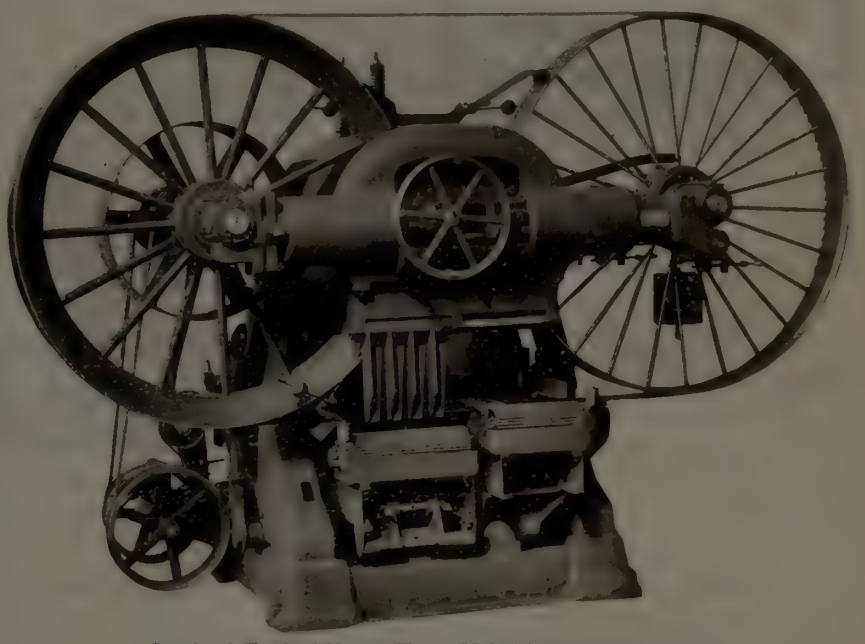
The advantage of a horizontal band resaw, as before mentioned, lies in its ability to manufacture material of the lower grades, i.e., small diameter logs and slabs, into lumber at a lower cost than it can be produced on the head rig.

The capaciy of such a machine is governed by the ability of the men and equipment to properly take care of the stock leaving it. In all ordinary operations such material is delivered to three outlets, viz.: the cut board is sent to the gang edger, the slab to the refuse slasher, and the remaining uncut portion is returned to the infeed operator to be passed through the machine for a second or third time.

In actual operation it has been very closely determined that a horizontal resaw carrying 6-foot wheels and a 10-inch blade is capable of receiving the average mill run stock at a rate of 250 feet per minute. This speed will permit handling only one piece at a time, but if the saw is kept continually in the cut a great capacity is obtained. To illustrate: If an uninterrupted average cut of 12-inch material is made, a well-built machine of this type will produce 15,000 feet of lumber per hour.

To assist materially the off-bearers this latest machine of the Type H6 Series is designed to return the uncut material in as convenient and direct a manner as possible. The uncut section is rolled from the top of the cut section on to the returning roll, where it is immediately returned to the operator's position at a slightly faster rate of travel than the feed.

In completing this arrangement the wheel centres of the original Type H6 machine have not been changed. These were positioned to receive the shortest saw practical, and when in their normal position the wheel rims are but two feet apart. With this close spacing it is possible to feed a maximum width of 24 inches and at the same time return a maximum width of 20 inches, or vice versa, as the stock may overlap without interference. Slabs wider than this will not ordinarily leave the head rig, as it is usually considered poor practice to slab so thickly that a slab of over 24-inch width will be produced from any log.



Outfeed End of Yates Type H61 Horizontal Resaw.

The advantages of a machine of this particular kind will be instantly realized by practical mill men. It materially simplifies the conveyor and transfer system of the mill and reduces to a minimum the floor space required.—Yates Quality.

Australia's Imports of Timber

Australia's imports of timber from Canada during 1912, 1913, and 1914-15 were valued as follows: 1912, £70,922; 1913, £67,982; 1914-15, £17,653. Imports of wood manufactures from Canada during the same years were valued as follows: 1912, £2,850; 1913, £4,077; 1914-15, £3,909. Imports of printing paper from Canada were valued as follows: 1912, £179,173; 1913, £149,050; 1914-15, £122,688.

The imports of timber from the United States during these years were valued as follows: 1912, £1,314,314; 1913, £1,511,665; 1914-15, £1,021,175.

Through the incidence of the war and abnormal marine freight rates the total imports of timber (lumber) into Australia declined from £2,922,578 in 1913 to £2,153,469 in 1914-15, the contraction in values being no less than £769,109. Imports from Canada declined by £50,328, from the United States by £490,490, from Sweden by £115,759, from Norway by £61,958, from Russia (Siberia) by £58,683, and from Japan by £11,123.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch. each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Wanted—Quotations on 1¼ in. and 1½ in. Hard Maple lumber. J. H. Connor & Son, Limited, Ottawa, Ont. 15-16-17-18

BASSWOOD AND PINE WANTED.—No. 2 Common and Mill Cull Basswood, 1 in. cull pine, Winter cut preferred. Apply M. Brennen & Sons, Hamilton, Ont. 16-21

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Birch Wanted

WANTED—10 Cars 2½ in. No. 1 Common and Better Birch for Fall delivery. Buffalo Hardwood Lumber Company, Buffalo, N.Y. 14-17

Lumber Wanted

Lumber wanted for various shell boxes—Spruce or other soft woods, all grades ⅝ in. to 4 in. Hardwood 2 in.—all grades. Must be absolutely dry stock. Give width and full particulars. Prices F. O. B. Montreal. Terms cash 30 drys. Address Castle & Son, 200-202 Papineau Avenue, Montreal, P. Q. 16-16

Wanted—Lumber

10,000 ft. Good Hard Maple, free from hearts, first and seconds, 5 in. x 6 in.
5,000 ft. 1 in. Rock Elm, first and seconds.
3,000 ft. 2 in. Rock Elm, first and seconds.
2,000 ft. 3 in. Rock Elm, first and seconds.
Quote price and delivery.

Ottawa Car Manufacturing Company, Ltd.,
16-16 Ottawa, Ont., Can.

For Sale-Lumber

For Sale

We have in Toronto for quick shipment the following among other items:—
75,000 feet 4/4 1st and 2nds quartered white oak.
50,000 feet 4/4 1st and 2nds plain red oak.
100,000 feet 1 in. No. 2 C & B basswood.
50,000 feet 4, 6 and 8 quarter 1st and 2nds chestnut.
We also carry poplar, gum wood, ash, mahogany, cypress and other hardwoods. Write or wire your enquiries, our expense.

Wilson Lumber Company,
16-16 1 Spadina Ave., Toronto.

For Sale

One car 3-in. Practically Clear White Oak, all 12 ft.

Two cars 1½, 2, 2½, and 3 in. No. 1 Common and Better Dry Red and White Oak, all Ohio stock.

The Probst Lumber Company,
15-18 Cincinnati, Ohio.

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal. Que.

Doors For Sale

About eight hundred fir doors, also stock of fir and pine finish. All high class; will sell cheap. Box 436, Canada Lumberman, Toronto, Ont. 16-17

For Sale

25,000 ft. Yellow Birch, 2½ in. No. 2 Common and Better.
115,000 ft. Yellow Birch, 2 in. No. 2 Common and Better.
25,000 ft. Yellow Birch, 1½ in. No. 2 Common and Better.
70,000 ft. Hard Maple, 2 in. No. 2 Common and Better.
20,000 ft. Hard Maple, 1½ in. No. 2 Common and Better.
Well seasoned and in good shipping condition. For Sale by:

JOHN S. EAGLES & CO.,
16 16 St. John, N.B.

For Sale-Machinery

Saw Mill Machinery

Complete equipment for 40,000 capacity mill, including belts, conveyors, etc., with or without boilers and engines. For sale cheap to quick buyer.

St. Maurice Lumber Company,
15-18 Gaspe Harbor, P.Q.

FOR SALE

1—Wicks Gang.
1—Ideal Engine, 13 in. x 12 in.
1—Plain Engine, 16 in. x 24 in.
1—Plain Engine, 5 in. x 7 in.
1—Boiler, 72 in. x 16 in.
1—Boiler, 54 in. x 12 in.
2—Upright boilers.
1—Cookston water heater.
Several steam pumps.

CHAS. PEDWELL,
16-t.f. McVicar, Ont.

Saw Mill Machinery For Sale

Two (2) New Waterous Band Mills.
Two (2) 2½ A. Log Carriages.
Two (2) Gun Shot Steam Feeds.
One (1) Dittbener Band Re-saw.
One (1) New Champion Edger No. 405.
One (1) Standard Two-saw Trimmer.
One (1) Overhead Slat Slasher.
Lath Mill Machinery.
Rolls and Drives.
Transfers.
One Refuse Hog.
Sorting Table.
Filing Room Machinery.
Live Rolls, Boxes, Shafting and Driving Chain.

All of the above is new and was never used

For particulars write to Bayl ss Pulp & Paper Company, Binghampton, N. Y., U.S.A.

Machinery can be seen at any time at Beaupre, P. Q. 14-15-16-17

FOR SALE

Woodworking Machinery

1 Jackson-Cochrane 54-in. Resaw; 1 Cowan 42-in. Sander; 1 Jackson-Cochrane 36-in. Sander; 1 Egan 36-in. single Surfacer; 1 McGregor-Gourlay 2 drum 30- in. Boss Sander; 1 Egan 30-in. 2 drum sander; 1 C.M.C. 8-in. 4 side sticker; 1 McGregor No. 212, 30-in. double surfacer; 1 No. 180 Berlin 30-in. double surfacer; 1 Ballantyne 12-in. sticker.

P. B. YATES MACHINE CO., LTD.,
16-19 Hamilton, Ontario.

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

Young man, four years experience in sawmill office as stenographer and bookkeeper, desires change. Good references. Box 424, Canada Lumberman, Toronto, Ont. 14-16

CIRCULAR SAW FILER wants position in band saw mill, under a first class Band Saw Filer, to learn the filing. Box 431, Canada Lumberman, Toronto, Ont. 16-21

EXPERIENCED LUMBER WOODS CLERK wishes to make a change. With same company several years. Good references. Box 434, Canada Lumberman, Toronto, Ont. 16-18

MARRIED MAN, THIRTY YEARS OLD, ten years' experience in office work as Accountant, speaking both languages, desires to change, best of references. For particulars write to P. O. Box No. 69, Three Rivers, Que. 16-24

POSITION WANTED : — BY EXPERIENCED OFFICE CLERK:—Timekeeping, Pay Rolls, Shipping Bills, Cashier, Bookkeeping, Typewriting; or general assistant to Manager. Lumbering and Milling plant, Quebec or Northern New Brunswick. "Business," Box 435, Canada Lumberman, Toronto, Ont. 16-16

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

Millwright Wanted

to take charge of a circular saw mill for balance of season and then complete building and installing of machinery in another mill. Yearly job for right party. French and English speaking. The Turner Lumber & Pulpwood Company, Lake Edward, Que. 16-16

Business Chances

For Sale

Saw Mill, 2½ miles. Limits, Houses, Barns, Store, Farm, Railway Siding in yard. Box 432, Canada Lumberman, Toronto, Ont. 16-16.

Timber Tract and Mill

Valuable Timber Tract, British Columbia; nearly 10,900 acres; 60,000,000 feet of timber; on railroad. Local market for mine props. First class mill, 30,000 feet daily capacity. Very attractive proposition. George W. Grant, P. O. 1676, Calgary, Alta. 13-16

For sale or to rent—The long-established business of The Amherstburg Planing Mills & Lumber Yards. Buildings are fully equipped and contain 15,000 feet of floor space and dry kiln. Splendid prospects. Apply to

The J. R. Park Estate,
15-16 Amherstburg, Ont.

VALUABLE HARDWOOD FACTORY AND PLANT FOR SALE

Situated in the centre of the best hardwood district within 115 miles from Toronto. Fully equipped with modern machinery. Hydro Electric system, good railway facilities, can be purchased now at about one-third face value, favorable terms arranged. Local orders, also skilled and other labor available. Could commence operating in a short time. A rare opportunity. Full particulars Box 118, Gravenhurst, Ont. 16-16

Business Opportunity

Wanted immediately a high-grade, experienced man to take charge of all or part of a pine logging and manufacturing operation of good size in Ontario. A fine place for the right man. State full particulars needed for arriving at judgment in first letter. Please do not apply unless you can make good. Box 426, Canada Lumberman, Toronto, Ont. 15-16

Timber Limit For Sale

Thirty-six square mile limit, North Shore, License allows cutting all kinds of timber. Contains Hemlock, Birch, Spruce, Pine, Cedar Ties and Poles, Pulpwood and Hardwood. Railroad runs through part of berth. Cheap operation. Splendid opportunity for small mill. Apply Box 423, Canada Lumberman, Toronto, Ont. 13-t.f.

For Sale—Modern Saw Mill

and 300 Million feet of standing timber in British Columbia, most advantageously located on beautiful lake and main line of Transcontinental Railroad having advantage of $3 per thousand feet in freight rates to best markets on the Continent. Logging and manufacturing conditions ideal and very economical. A fortune for the right parties. Will sell on easy terms and may accept other desirable property in part payment. Principals only.

A. C. FROST COMPANY,
Corn Exchange Building,
14-17 Chicago, Illinois.

Miscellaneous

For Sale—Well equipped small seagoing tug, name "Shirley." Marine boiler, condenser, steam anchor winch, etc., 55 ft. x 15 ft. beam. Draft 7 ft. Can be seen at Quebec, care of J. L. Lachance Limited. 15-16

Canadian Portable Houses in France

A despatch recently received from Paris, France, states that the samples of portable houses manufactured in Canada which were recently sent to that country are now on exhibit at the Tuilleries, and are attracting much favorable comment. A Paris Association has furnished these seven houses, and around them are displayed a number of farming implements furnished by the automobile club of France.

LEFAIVRE & GAGNON

Accountants & Liquidators
147 Mountain Hill
(Bosse Building)
QUEBEC

AUCTION SALE

In the matter of

"The St. Simeon Lumber Company, Limited"

Of St. Simeon, Que. Co. Charlevoix
In Liquidation

Notice is hereby given that on

Wednesday, August 30th, 1916

At 10 o'clock A.M.

will be sold by public auction at the office of the undersigned, 147 Mountain Hill, Quebec, the following assets of the said Company in Liquidation:—

(a) 10. A property situated in the parish of St. Simeon, County of Charlevoix, known and designated as Nos. twenty-two (22), twenty-two A (22A), twenty-three (23), twenty-three A. (23A), twenty-four (24), twenty-four A. (24A), twenty-four B. (24B), twenty-four C. (24C), twenty-four D. (24D), twenty-four E. (24E), twenty-four F. (24F), twenty-four G. (24G), twenty-four I. (24I), twenty-four J. (24J), twenty-four K. (24K), of the official cadastre of the parish of St. Simeon, first range of the township of Callieres, including wharves, dams, booms, mills, outhouses, machinery, belting and tools, engines and boilers in use of same, and all the other buildings erected on the said lots.
The lot number twenty-four (24) being subject for some part of it to an emphyteutic lease consented by Mauril Tremblay, to Alfred Couturier, Eugene LeBlond, Francois Lavoie, Ludger Bergeron, Chs. Simard before Boulaine, N. P., on the 5th December, 1904, and by Andrew and D. C. Thompson to Victor Imbault before Kane, N. P., on the 8th April, 1897, to Elzear Chamberland and Frs. Hervey on the 13th October, 1896, to Pierre Tremblay on the same day before Kane, N. P., and the lot No. twenty-four K, (24K), being subject for an EMPLACEMENT detached of said lot to an emphyteutic lease consented by Mauril Tremblay to Geo. Gagne before Boulaine, N. P., on the 5th December, 1904:

20. The rights of the Company on the limits actually under license from the Crown by the Minister of Lands of the Province de Quebec, and known under the following names:—
10. "River Malbaie limits No. 2" comprising 27 square miles;
20. "Black River limits No. 1 West," comprising 20 square miles.
30. "Black River limits No. 1 East," comprising 15 square miles;
The licences of the limits bear the numbers 166, 167 and 168 of the year 1906-7, and as the said properties are described in a certain deed of sale by Ovide Brouillard to the St. Simeon Lumber Co. passed before St. Germain, N. P., on the 11th May, 1907;

30. The rights acquired by the said company on:—
(a) A strip of land situated in St. Simeon, forming part of the lot No. fourteen (14) of the 3rd range South-West, township of Callieres, and which is described in a deed of sale by Jos. Tremblay to the St. Simeon Lumber Co. passed before Boulaine, N. P., November 12th, 1911;
(b) The rights to occupy and inundate in perpetuity a strip of land situated in St. Simeon, forming part of lot No. fifteen (15) of the 3rd range South-West township of Callieres, and more fully described in a deed consented by Meride Lavoie to the St. Simeon Lumber Co. passed before Boulaine, N. P., Nov. 12th, 1911;
(c) A strip of land situated in St. Simeon forming part of lot number thirteen (13) of the 3rd range South-West of the township of Callieres, which is described in a deed of sale by Jules Marier to the St. Simeon Lumber Co. passed before Boulaine, N. P., 12th November, 1911;

40. The rights of the said company in liquidation on a part of lot No. 157 of the cadastre of the parish of St. Simeon, and to her consented by Wilbrod Asselin by deed passed before Boulaine, N. P., November 12th, 1911;

50. The rights of the said company in liquidation on an EMPLACEMENT situated in the parish of St. Simeon, being part of the properties known and described under the numbers twenty-one (21), twenty-two (22), twenty-three (23), and twenty-four (24), of the first range South-West township of Callieres, which are described in a deed of sale by Xavier Tremblay to the St. Simeon Lumber Co. passed before Boulaine, N. P., August 24th, 1907;

60. The rights of the company on part of lot No. twenty-four (24) of the first range South-West, township Callieres, as described in a deed of sale by Flavien Tremblay to the said company passed before Boulaine, N. P., February 5th, 1909;

70. The rights and privileges of the said company in liquidation on the lot No. 69 of the official cadastre of the parish of St. Simeon South-West side of the river, consented by and described in a deed of arrangement between D. McLaren and the St. Simeon Lumber Co., passed before Boulaine, N. P., August 24th, 1907;

80. All that tract of land known and designated as the "Location Forestiers ARRIERE CALLIERES" in the county of Charlevoix, containing about 14,150 acres, which is described in a deed of sale by Ovide Brouillard to the St. Simeon Lumber Co., passed before Morin, N. P., February 12th, 1915;

90. 10. All that tract of land situated in the township of Sagard in the county of Saguenay, containing about 7,170 acres, known under the name of BLOC "A" SAGARD, which is described in a deed of sale by Ovide Brouillard to the St. Simeon Lumber Co., passed before Morin, N. P., February 12th, 1915; 20. The rights of the company on the limits under license of the Crown by the Minister of Lands of the Province of Quebec, and bounded as follows: Towards the North-East by part of the township of Dumas, towards the South-East by the limit No. 2 West of Saguenay and Charlevoix, towards the South-West by the division line of Charlevoix and Saguenay, and towards the North-West by the division line of the counties of Saguenay and Chicoutimi, less the part covered by subsidy now belonging to the company known as BLOC "A" SAGARD, leaving an area of 25 square miles more or less, the license covering the said limits dated 1st May, 1915, and bearing No. 244 of the year 1914-1915.

100. The rights of the company in liquidation on a certain property situated in the township of Dumas, in the county of Chicoutimi, forming part of lot No. (14) of the North range of the said township, containing about 21, 6-10 acres, including wharves dams, booms, outhouses and mills, machinery, belting and tools, engines and boilers in use therewith which are described in a deed of sale by Ovide Brouillard to the St. Simeon Lumber Co., passed before Gohier, N. P., Nov. 20th, 1915;

110. The rolling stock in use with the above limits;
The properties above mentioned and the rolling stock will be sold en bloc and as one sole item;
The goods and moveables in the above matter will be sold separately and each item as follows:

(b) The stock-in-trade as found in the stores of the company, as per inventory, $14,000.00.

(c) The book debts and credits as per list, $19,872.70.

(d) The refuse lumber and culls about 408½ cords.

(e) The wood on the banks of the rivers, lakes and streams, also in the water in the condition it is at time of the sale unless it has reached its destination before or it is being driven or on way of drive.

The sale will be made separately for items A, D & E, and awarded to the highest bidder, and items B and C will be sold at so much in the dollar.
The sale of the item A will be made at an upset price of $125,000.00.
The buyer of item A to deposit in the hands of the liquidators an accepted cheque for $25,000.00, and which will be forfeited in the event of his failing to pay the balance of the amount of the purchase price which becomes due and payable on the production of the title deeds.

TERMS: "CASH"

The limits can be examined at any time and the store will be opened for the stock inspection on AUGUST 26th, 28th, and 29th, 1916.
The inventory, the list of book debts, and the title and certificates regarding the properties can be examined at our office.
The above limits comprise about 33 miles of Freehold property and about 55 miles under license of the government.

LEFAIVRE & GAGNON,
Joint Liquidators.

Office: 147 Mountain Hill,
Block Bosse, Quebec, Que.

184 5 5am

Union Lumber Co.

Limited

1915 CUT—MILNET (Sellwood Jct.)

40,000 feet 2 x 10—10/16 Norway.
500,000 feet 1 x 4 and up 6/16 No. 1 Mill Cull.
1 Car ⅜ x 1½—4 ft.—No. 2 Red Pine Lath.
1 Car ⅜ x 1½—4 ft. —No. 3 Red Pine Lath.
5 Cars ⅜ x 1½—32 in. Mill Run White Pine Lath.
5 Cars ⅜ x 1½—32 in. Mill Run Red Pine Lath.

Red and White Pine Timbers

12 x 12—5/20 - 5/22 - 5/24 - 13/26 - 1/28 - 1/30 - 3/16.
10 x 12—10/26 - 6/24 - 5/28 - 3/20 - 3/16.
10 x 10—2/26.
8 x 10—1/24 - 2/22 - 5/26.

Write, wire or phone for prices.

Union Lumber Co., Limited

701 Dominion Bank Building
TORONTO, CANADA

Use Horse Sense

Keep a good supply of Douglas Egyptian Liniment always on hand for the horses. A quick application may save you a valuable horse and much expense in an emergency. The only liniment made that

Stops Bleeding Immediately

Also for thrush, cuts, callouses, spavin, etc., it will be found invaluable.

FREE TRIAL

We will send you a sample absolutely free by filling in the attached coupon. This trial will prove the wonderful beneficient qualities of Douglas Egyptian Liniment.

Sample Coupon

Douglas & Co.,
Napanee, Ont.

Please send me sample of Douglas Egyptian Liniment as advertised.

Name _____

Address _____

Review of Current Trade Conditions

Ontario

The lumber trade in Ontario continues in the peculiar state which has characterized it for some weeks past. The demand cannot be said to be good. It is best described as patchy. The supply of lumber, however, is short, on account of the scarcity of labor at the mills. Stocks are a great deal shorter than is usual at this time of year. The result is that wholesalers are finding it increasingly difficult to obtain such stocks as the limited amount of trade requires. The prospects of the mills in northern Ontario securing a sufficient supply of bushmen for next winter's operations are very slim. Some of them have appealed to the Government for assistance, but, so far as we can learn, the Government claim to be unable to give any help. We do not believe that relief can be expected from that quarter. The prospects for next year's cut are therefore anything but good. The market generally is strong, with an average fair demand.

White pine stocks have been much reduced of late in quite a number of lines, chiefly in dry stock, and they are likely to be reduced even more. Most of the mills are having great trouble in continuing operations. Many of them report that they do not know at night time each day whether they will be able to run the mill during the following day. Scarcely any of them can give prompt shipment. At most of the mills the men are doing double duty whenever possible, the crews working both upon running the mill during the day and loading the cars at night.

There is no feature worthy of note in regard to the demand. As usual at this time of year it is quiet. Wholesalers and retailers, however, are expecting that some improvement will develop before long. There is no expectation of a big trade during the fall, but the prospects are for a fair demand which will show some increase over present conditions. Wholesalers and retailers will find that they must be patient with the manufacturers and the railroads for some time to come. The railway companies are also up against the labor situation and on account of the exceptional congestion of traffic at Allandale, deliveries from northern Ontario points are greatly delayed.

The hardwood trade, like that in soft woods is very spotty, but this is always to be expected during July and August. There is no surplus of stock, and prices are about as stiff as they have been. Moreover, the prospect is that they will advance. The threatening strike of railroad employees in the United States is a factor that should be watched carefully. The effect, if a strike is brought about, would be to advance prices greatly, on account of the stoppage of deliveries. Flood conditions in the south have retarded cutting operations to some extent, making a shortage of logs, which is an added factor in the firmness of the market, in the face of a quiet demand.

Eastern Canada

There is no change to report in trade conditions at Montreal. The volume of trade is only moderate, most of it being for shell box business. Wholesalers are expecting advanced prices on account of the increased cost of labor and camp supplies. The export trade to the United States shows a little improvement. Trade with the United Kingdom has fallen off to some extent, largely on account of the uncertainty in the freight situation.

The demand for shingles at Boston is fair, but there is not much in the way of business in large lots. Most of the current transactions are for white cedars, the best of which are bringing about $3.50. Red cedar shingles are selling at about 40 or 45 cents above the prices for white cedars. Lath are firm, quite a number of enquiries having come from large yards. Offerings are not so large as a short time ago. There is a good demand for spruce lath which is bringing about $4 for the best grades.

The deal market at St. John, N. B., shows no more activity than it did a fortnight ago. No shipments are being made, buyers preferring to pile such stock as they have purchased, and to wait until they can get prices that will give them a profit. At present prices they would not be able to get their money back. The American market has gone very flat and two of the largest mills at St. John which were sawing for this market, have been closed down since the first of August. Freight rates for transatlantic and coastwise shipments continue high and accommodation is scarce. Local trade at St. John is very quiet. Low grade stocks are easier in price. The only line of business that seems to have any real life in it is the box industry.

United States

Probably the most important feature in connection with the lumber trade situation in the United States is the great reduction that has been brought about in the output of the yellow pine mills, together with reports from many parts of the country to the effect that the demand for this class of stock is increasing. It is believed that stocks of lumber in buyers' hands are depleted in the great majority of cases and that the recent improvement in the demand is an indication of a fairly general and well sustained buying movement. Those who hold this opinion believe that the lumber market has done as much easing off as can be expected, and that those who were holding back until the bottom was reached are now laying in supplies. The latest Southern Pine Association trade barometer shows that orders during the week exceeded normal production by 42.32 per cent. Compared with the preceding week the orders showed an increase of 12.18 per cent. The actual production for the week was 17.59 per cent. below normal and shipments were 1.68 per cent. below normal. All of these conditions are healthy from a market point of view. There is still an active enquiry for yellow pine car material and the increasing use of mill construction buildings is widening the market in a very satisfactory manner. Eastern retail yards are still buying carefully, but line yards in the middle west are commencing to stock up while prices are low.

The northern pine trade has been feeling the natural effects of mid-summer weather. Reports from Minneapolis state that country yards are counting upon a good trade a little later on, but are not yet laying in stocks to any extent. Low grade stock is moving well. Prices are steady and the outlook is for continued strong prices during the remainder of the season. Trade conditions in the lumber business are closely associated with crop conditions and as the outlook in the latter regard is excellent there is good cause for encouragement regarding the lumber trade. The demand for northern pine at Chicago is steady and prices are unchanged. An increased demand is expected in the very near future. Low grade stocks are moving well and pattern lumber is also in fair demand.

Hardwoods show no important changes during the past fortnight. Furniture factories are renewing their purchases to a small extent and there is some trade in other lines which gives a fairly active appearance to the whole market. Manufacturing plants in all parts of the country are busy, most of them producing to their capacity, so that the demand for hardwoods is likely to continue. Stocks throughout producing territories are not heavy. Many producers have had difficulty in securing sufficient labor and some have been obliged to shut down. It is even expected that the labor situation may produce an upward price tendency. Birch and maple are in good demand and prices are strong. There is also a little revival in the demand for oak.

Great Britain

Much uncertainty prevails in connection with the lumber trade at London, a result chiefly of the unsettled condition of the freight market. Very little is being done in the way of speculating in future stocks, most merchants being quite content to delay until the position has been cleared up to some extent. Official requirements, however, are still consuming large quantities. The continually increasing population of prisoners in England is again resulting in a demand for huts, which will require a fair amount of material for their construction. Arrivals of stocks are extensive and values continue high, comparatively speaking, although there has ben an extensive drop of late. There is, however, a tendency towards lower prices, especially for lower grades and the smaller sizes. Deliveries at London docks for the week ending July 15 amounted to 6,105 standards, as compared with 7,423 standards during the corresponding week of last year. At Foy, Morgan & Co.'s recent auction sale a lot of first, second, and third St. John spruce, 2 x 4/6 inch, 15/17 feet, was sold at £22 5s. St. John pine, 3 x 7 inch, 6/18 feet, first, second, and third, red, brought £23. Quebec spruce, 3 x 5/6 inch, 9/16 feet, firsts, sold at £23 5s per standard.

At Liverpool trade has been rather quiet, and prices for the cargoes that have arrived have varied considerably. Shippers are showing a tendency to wait, expecting higher prices, which it is generally thought are inevitable. Freights have again advanced, especially for September loading, 350s having been refused. At Manchester there is a moderate volume of trade in progress, but it is greatly hampered by delays at the docks. Prices, though somewhat lower,

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

have not shown any slump. The better class of spruce deals from Campbellton, N.B., Quebec, etc., are firm at the latest prices, which vary from £27 for the narrowest scantlings to £32 10s ex quay.

There has not been much business at Glasgow during the past fortnight. Several arrivals of spruce and yellow pine deals have been recorded, including two or three full cargoes, the latter mostly on contract. Transactions from the ships' side have been rather slow, and most of the consigned stock is being stored on importers' or shippers' account. Buyers are still nervous about the freight situation, and are only dealing on a strictly hand-to-mouth basis. Stocks have accumulated to some extent, but prices are not noticeably weaker. Stocks in second hands are exceptionally light, and any demands which arise will have to be filled almost entirely from importers' stocks in public yards.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Trade—Everybody Marking Time

St. John, N. B., August 7th; (Special to the Canada Lumberman): There has been positively no change in the deal market at St. John during the past fortnight, everything in the way of shipments is at a standstill, and, so far as can be told, shows no signs of changing. The buyers refuse to purchase and are shipping no deals; preferring to pile off cars into yards, there to be held until they can sell at a price which will give them a reasonable profit. They cannot sell today at a price which would give them their money back. Stocks at Liverpool and Manchester remain about the same as last year, but conditions for using stocks in England are not nearly so favorable as a year ago. Labor is at a premium and many wood users are out of business, and will be until the end of the war.

Two of the largest mills at St. John, Messrs. Stetson, Cutler and Company's are idle, having closed down on the 1st of August, and, although well supplied with logs, they do not know when they will again begin sawing. These mills were sawing largely stock for the American market, for which, at the present time there is very little demand.

Another great trouble is the high priced and scarce freight accommodation. The market in New York will not stand a high freight rate today, and vessels refuse to take less than $6 per thousand, which is about twice the usual rate.

The building trades at St. John are also stagnant, but not to the same extent as the shippers. Very few contractors are busy, and those who are, have only small works, and repairs from place to place. Prices for low grade stocks are easier, the mills being overstocked with refuse, which is selling from the country mills at about $9 free from cars. Usually we begin to feel a better tone after this month, and it is to be hoped that this year will be no exception.

Laths and shingles are in the same condition as the rest of the market.

The box trades are the only ones who are busy in the lumber trade, and they surely deserve it, as they have had a good number of years of small profits and bad conditions.

Montreal Trade on a Quiet Basis

Montreal, August 8.—(Special to the Canada Lumberman.)—Practically no change in market conditions has taken place since the last report. A moderate trade is being transacted, with a few orders on shell box account. Wholesalers emphasize the probability of a rise in values, the cost of labor and camp supplies being serious factors in this situation. Collections in Montreal are reported to be poor, but in the province they are fairly satisfactory.

There is complaint of a shortage of cars, especially on the Intercolonial.

Business with the United States has picked up slightly. The break in the Lachine Canal disorganized water shipments for a time, but the condition is now practically normal, the break having been temporarily repaired.

There is no alteration in the pulp and paper markets. Sulphite is still in good demand, with the supply on the short side. A considerable amount is still being sent to Great Britain. The ground wood market is also strong. Newsprint is firm, and is likely to continue so for some time. The decision of the New York papers to cut down the size of their Sunday editions is evidence of the increasing difficulty of obtaining supplies and of the substantial increase in prices.

Lumber exports to the United Kingdom have decreased. The state of the British market just now is not encouraging, buyers being influenced by the uncertainty of the freight situation. The prohibition of building operations in the United Kingdom except under Government license is also calculated to affect Canadian shipments adversely. The Government takes the view that only absolutely necessary buildings, including dock and similar work, can be allowed. Rates show little fluctuation, but there is no telling when they will rise or fall. Space is by no means plentiful for lumber, other commodities with a preference going forward in large quantities. Several lake vessels of the Canada Steamship Lines have this season been engaged in shipping lumber from Montreal, Three Rivers, Quebec, and Rimouski to United Kingdom ports. The cargoes ranged from 530 standards to 872 standards of deals. Dock labor is scarce.

Mr. George Kersley, who does a large business in veneers, reports that the piano and furniture industries in Ontario and Quebec are in a satisfactory condition. He has just returned from a visit to the chief woodworking points in Ontario, where he found the factories well supplied with orders.

United Kingdom Imports for Six Months

Imports into the United Kingdom during the six months ending June 30, 1916 and 1915 included the following.

	1916		1915	
	Quantity	Value	Quantity	Value
Wood and Timber (hewn)—	Loads	£	Loads	£
Russia	11,747	49,706	1,485	4,203
Sweden	6,094	32,377	3,456	11,537
Norway	3,688	20,889	15,513	51,581
United States	63,949	621,891	71,496	423,868
British East Indies	10,262	207,490	17,588	340,508
Canada	1,594	17,578	5,241	28,231
Other countries	9,624	125,026	5,054	68,724
Total	106,958	1,101,957	119,833	928,652
Wood and Timber (sawn or split) Fir—				
Russia	69,726	434,972	65,105	267,215
Sweden	523,099	3,732,296	450,287	1,943,538
Norway	184,199	1,348,457	203,801	889,742
United States	101,424	926,090	104,262	502,146
Canada	171,798	1,248,558	237,385	1,016,340
Other countries	1,494	10,585	3,736	27,677
Total	1,051,740	7,700,960	1,064,576	4,646,658
Wood and Timber (sawn or split, planed or dressed) Unenumerated—				
United States	5,110	52,948	7,899	65,472
Canada	5,627	40,611	7,993	36,691
Other countries	9,281	47,856	6,767	32,649
Total	20,018	141,415	22,659	134,812

Quebec Cullers' Report

The following comparative statement of timber, measured and culled to date, is furnished by the Supervisor of Cullers' office, Quebec, P. Q., under date of August 4th:

	1914.	1915.	1916
	Cubic Feet	Cubic Feet	Cubic Feet
Waney White Pine	481,560	341,680	118,960
Red Pine	1,040	.....	.....
Oak	290,280	90,880	221,400
Elm	299,280	46,840	69,440
Ash	680	840	1,680
Birch and Maple	50,800	48,880	46,880

A severe electrical storm and cloudburst, which recently occurred in New Brunswick, resulted in a sudden rise in the St. John River. The river came up about 12 feet at some points. A result of this is that some of the small drives on the Tobique and elsewhere that were making slow progress came out rapidly and were driven to the booms at Douglas.

An extensive exhibit of timber products from British Columbia, which will be installed permenently at McGill University, has been almost completed, under the supervision of Mr. D. Roy Cameron, district inspector of forests, Kamloops, B.C., and Mr. Nelems. of the Forest Branch.

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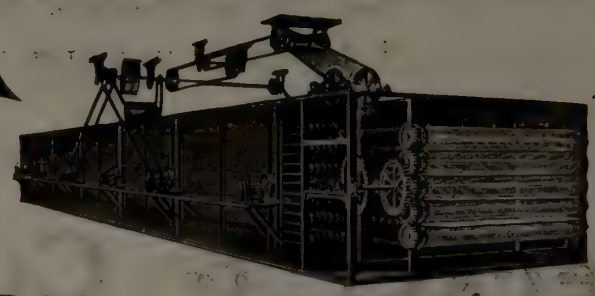

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Cost Accounting in the Factory

By J. D. Clark

The operator of a planing mill, dimension mill, or other woodworking plant where "jobs" rather than regular work are handled, naturally finds the cost-keeping problem more difficult than is confronted in the furniture factory which is turning out the same goods right along. Of course, the problems of the furniture man are not simple, because the number of items produced is great enough to suggest the necessity of discriminating in figuring costs, and it is needful to know just how much expense is attached to the production of each item.

On the other hand, the planing mill which gets work by bidding on it in competition with others must find out to the last cent how much the production of the job involves, for the reason that it is only logical to learn the results of each operation, if for no other reason than to determine whether the original estimate was correct, and as a guide against possible repetition of errors. So also with the dimension factory which is cutting lumber to size for use in some other woodworking plant. If it has a large cutting order there is a good chance of overlooking certain items and of assuming that a price which is really insufficient to pay all the charges will cover the requirements.

The dimension proposition is newer than the planing mill, and, in view of the rapid growth of this kind of business it may be of interest to other woodworkers to explain how a model system of this kind is operated. The plan is not put forward as ideal, but is certainly a big improvement over the rough-and-tumble, hit-or-miss methods which often prevail, especially when the dimension business is operated in connection with a sawmill, as is usually the case.

In the first place, the correct basis of the proposition is obtained by figuring the cost of the lumber at the price which would be paid if the manufacturer went into the market for it. In a lot of cases where low-grade lumber (which is not easily sold) is used in dimension manufacturing, the tendency is to disregard the value of the material. Obviously this is not a correct method of procedure, since the object should be to sell the product at a profit, and a price which does not take account of the original intrinsic value of the raw material is not properly ascertained.

If the material is kiln-dried, as is usually the case when dimension stock is manufactured to order, the cost of drying is included, this averaging about $3 per 1,000 feet. That is the usual custom charge, and while an individual manufacturer operating his own kilns should be able to do the work for somethisg less, it will not miss this figure much by the time the cost of handling, which is a big item in kiln-drying operations, is taken into account.

The system referred to is handled by means of a loose-leaf ledger, each job being figured on its own page. The idea is to enable the manufacturer to go over the whole proposition and see just how much he has made or lost on each job. This is a big advantage, compared with the ordinary system of grouping expenses without reference to their application to various jobs.

The first item on the page is rough lumber. The date and quantity of each kind and grade of lumber delivered for dimension manufacing are shown, together with prices, enabling the value of the material to be calculated accurately. As suggested, the cost of kiln-drying is included, this being added to the market price of the stock, without the K. D. feature being taken into account.

The labor costs involved in the work are then figured in detail, columns being provided for "Cross-cutting labor," "Ripping labor," "Resaw labor," "Inspecting labor," and "Bundling labor." This, it should be noted, applies to labor expense only, a separate calculation being made to cover machine expense. The labor costs are determined by the use of time-cards for each employe, whose records show just how much time was put in on each job, and therefore what proportion of his wages is chargeable to that job. The jobs, it should be added, are handled in the dimension plant by number only, so that none of the hands is advised regarding the destination of the material.

The labor expense is handled more easily in this particular plant by reason of the fact that the machine hands and inspectors are paid by the piece, so there is no difficulty about figuring the actual cost which is to be included on each job. The inspection feature is, of course, important in this kind of work, as one of the troubles which many plants have in making good with customers is due to the fact that a lot of material is shipped which is not up to specifications. This means that in order to get results the inspection work must be properly taken care of. Inspection in this case does not mean technical inspection for the purpose of determining grade, but is used to learn whether the material is clear and whether the general character and appearance of the stock is up to the specifications. The plan of paying so much per thousand pieces for inspection suggests a possible tendency to speed at the expense of care; but of course any complaints regarding the stock are immediately put up to the inspector, who for this reason is bound to be careful in going through the stock before it is bundled and shipped.

Possibly the most interesting feature of this cost sheet is the figuring of machinery expense. In many plants no attempt is made

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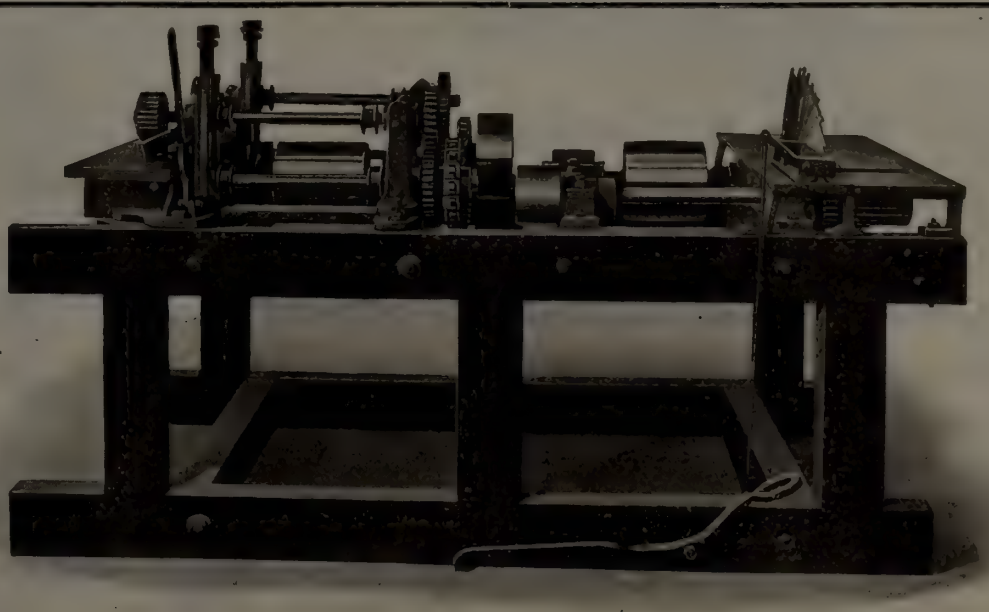
We make gang edgers, shingle machines, sleeper machines and barkers, etc.



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to analyze this, power and machinery expense being grouped and applied against all of the work done by means of some general or overhead charge. But there is as much individuality in machines as there is in men, and the plan used in the plant now under consideration, whereby the cost of operating each machine for each job is carefully calculated, seems to be by far the better system.

In the first place, the rate is determined by figuring the total capacity of the machine per year—that is, the normal number of hours it may be expected to operate. This is based on actual tests, and takes into account loss of time for repairs, adjustments, etc. Then the value of the machine is considered, and the expense represented by interest, depreciation, and other charges is figured. Tests are also made to determine the power consumption, and if electric motors are used the current consumed can be actually measured and a definite figure secured for this. If steam power is used, the power being transmitted from the engine by mechanical means, the distribution of the expense would, of course, be harder to figure, and might have to be applied on a pro rata basis.

The point to be kept in mind, however, is that the object of cost accounting should be to get away from the use of general charges as much as possible, and to substitute individual items, because it is in the calculation of those general figures that errors are introduced, due to the actual variations in the capacity, efficiency, etc., of various machines. Putting each machine, each man, and each job on a basis determined by the facts in each case is the only logical plan.

In the plant referred to the rate per hour for each machine is calculated on the basis suggested, so that by having a record of the number of hours each machine works on each job the cost of the machine time applicable to it may be entered with the assurance that it will be very close to the correct data.

As pointed out above, the rate for machine time is based on the assumption that the time used will be normal. If the plant happens to run overtime, this, of course, reduces the cost to the manufacturer, but the normal rate is used, as it would be unfair to allow a customer whose work was done at night a lower rate than that applied to the manufacture of goods in regular hours. Such an unearned increment as this, it is also worth noting, might serve to offset unexpected losses of time due to breakdowns of more than the usual importance.

The record for the finished stock is analyzed with reference to the number of pieces produced, the amount of lumber used, the waste, and hence the net results in thousands of feet. The sales price is indicated on this calculation, with the sales value in terms of feet.

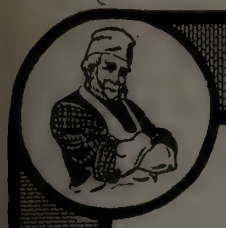
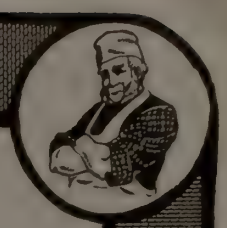
In this particular mill an effort is made to dispose of the waste and offal of the plant, and a careful record is also kept in this respect. It shows the character and quantity of all the material, with the inventory value, this being credited to the job against which it is figured. These figures are unusually valuable, because they serve not only as an inventory of the waste (which otherwise would be hard to secure), but also provide a basis for determining the average waste to be allowed for in the manufacture of the finished product.

The whole job is recapitulated on the same sheet. The gross sales value of the finished stock is shown, together with the allowances made for freight and other items. Space is provided to enable the freight to be figured, as many of the sales made by this concern are on a basis of delivered prices, and it is necessary that the transportation cost be shown here in order to enable the net results of the job to be determined. The net sales value, after making the deductions indicated, is then entered.

The next item, determined from the figures already entered on the sheet, is cost. This includes lumber, which is analyzed as follows: Total cost of lumber sent to sawyers, less rough lumber laid out or left over; gross lumber actually used, less shorts and reusable offal produced. The result of this calculation is the net cost of the lumber. The manufacturing expense is then figured, the items here being as follows: Cross-cutting labor, cross-cutting machine cost and burden; ripping labor, ripping machine cost and burden; resawing labor, resawing machine cost and burden; inspecting labor; bundling labor; miscellaneous labor; loading labor; hauling labor and expense. The total thus secured gives the total manufacturing and shipping cost, including the cost of the lumber shown above.

The total cost of the product shipped, which means with the freight allowance included, is then secured by adding the lumber and manufacturing cost, and the result is compared with the net sales value realized (already calculated) to determine the gross profit or loss on the order. This is gross for the reason that the general selling expenses, which are figured in percentage on the total sales, must be deducted. After this is figured the result is the net profit or loss on the job.

One other calculation which is made—and one that would be interesting if available to every woodworker—is to show the correct price based on these cost figures. The total cost shipped is entered, plus selling expense, plus cash discounts, plus freight allowance, the result being the correct delivered price. That enables the sheet to be referred to from time to time when repeat orders are secured, to insure the right quotations being made on the job.—The Woodworker, Indianapolis.

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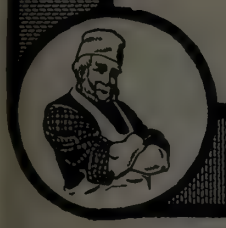

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Stationary Engineers' Supplies on Exhibit

An attractive exhibition was held in Montreal recently in connection with the annual convention of the Canadian Association of Stationary Engineers. Belting, packings, and fire hose of all kinds formed the main proportion of the exhibits.

Sadler and Haworth, of Montreal, had a decidedly novel method of demonstrating the quality of their "Amphibia" waterproof belting. A belt was fitted to a shafting and run continuously through a tank of water, so that visitors could judge of the validity of the claims made. A tanned skin showing the part of the leather used in making a belt was shown, together with various lines of belting and many samples of mill supplies, such as dressings, fasteners, and lace leathers.

Darling Brothers, Ltd., Montreal, showed several appliances, including centrifugal and rotary pumps and Webster heating system.

The Dunlop Tire and Rubber Goods Company, Ltd., Toronto, made a feature of their Gibraltar red special belting, and also had on view several lines of packings and fire hose.

The Garlock Packing Company, Hamilton, exhibited many varieties of steam, hydrant, and other packings. The company are exclusive packing manufacturers, and report a large increase in business.

The booth of the Gutta Percha and Rubber Company, Ltd., Toronto, showed many of the company's well-known brands. Belting, packing, fire hose, rubber tiles, and sheet packing were well displayed.

The James Morrison Brass Manufacturing Company, Ltd., Toronto, had a well-arranged exhibit, containing valves, locomotive injectors, steam regulating and safety valves, etc.

Why Lumber Dealers Should Know How to Read Blue Prints

I will tell what I think of a dealer being able to read blue prints or having someone in his yard who can do it. One day a woman came to my office with a set of blue prints for a house she wanted to build. She asked me if I could make up the bill of material from the plans, and said she had called at both other yards in the town to have this done and was told at both places that she would have to get a carpenter to do it. I told her I had a man who could take off the bill. I called in the young man, set him to work, and in a couple of hours he had the bill all ready with the prices. She asked me if she could have it. I asked whether she thought it would be fair after we had spent a couple of hours on it, to let her take it to our competitors for them to figure against me, when they had been unable to make up the bill. She agreed that it wouldn't be. I offered to sell her the lumber, let her then take the bill to whoever she might want to, get estimates, and if any prices were out of line I would adjust the matter to her satisfaction. She said, "Well, I guess your prices are all right; just take the order."

That set of plans had been sent to the woman by a ready-cut house concern, or a mail order house. They made her a price on the material bill, but did not, of course, send her the itemized bill—that isn't their way of doing things. Two of the lumber dealers in her town couldn't make up the bill of material. They had no chance to get the business. The other dealer, the live wire, could make up the material bill and he got the order.

And listen—his price to the customer, at his regular retail prices, were lower than the ready-cut house people had quoted her.

This proves that it is easy for the local dealer to get the business if he knows how to figure. The mail order houses and the ready-cut house concerns send out plans. They send them out broadcast. They quote a lump sum price for the materials. They know if the local dealers have a chance at the itemized bill the lumber will be bought at home.

Every lumber dealer should learn to read blue prints.—The Retail Lumberman.

Decreased Trade in Lumber

The lumber trade in France during 1915 was affected unfavorably by the war conditions. While the consumption of wood for the construction of buildings was comparatively small, owing to the crisis in the building trade, there were large orders placed by the military authorities and by contractors engaged in work for the Government. On account of the abnormal oversea freight situation the congestion of the home ports, the extraordinary rise in freight rates, and the high rate of exchange, the foreign trade, both as to imports and exports, fell off as compared with the previous year, and the prices were considerably increased. The imports of wood for construction purposes in 1915 were 380,805 metric tons, against 821,920 tons in 1914; for cabinetmaking, 14,209 tons, against 63,208 tons; and staves, 26,076 tons, against 55,755 tons. The exports during the same periods were: Building wood, 50,003 tons, as compared with 221,508 tons, and all other varieties, 658,724 tons, against 873,455 tons.—United States Commerce Report.

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That every one we turn out is **absolutely** guaranteed?

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We are the original and the only makers of "Dunbar" Shingle Machines, Lath Machines, Clapboard Machines, Steam and Gasoline Logging Engines. Each is the best for its particular work. Are you using the best?

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Conditions in Canada necessitate an engine that will stand any amount of strain and hard work in the lumber industry. With this idea in mind we have brought out the "Dunbar" engines perhaps a little stronger than is really needed. They do their work easily and willingly, and stand a great amount of hard usage. Built entirely in Canada for the Canadian lumber trade.

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You will need no excuse for the quality of your product if you use the original "Dunbar" Clapboard Machine. Expert in every detail. This machine will give you the very best service under most trying conditions. It will turn out work without delays. It will need practically no repairs and will increase your output. We cannot recommend it too highly because it is giving this very service to lumbermen in all parts of this country.

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EDGINGS

Ontario

The planing mill belonging to Ewing & Murphy, Limited, 20 Cameron Street, Toronto, Ont., was recently destroyed by fire. The loss, including the machinery, amounted to $12,000.

Kutschke & Son, Limited, have been incorporated with head office at Pembroke, Ont., and capital stock of $40,000, to carry on business as lumbermen and dealers in lumber and wood products.

The Pine Lake Lumber Company, Limited, has been incorporated with head office at Pickerel Landing, Ont., and capital stock of $60,000, to carry on business as lumbermen, timbermen, manufacturers of timber, logs, wood, etc. The provisional directors are F. H. Hammond, and H. B. Palen.

The Abitibi Pulp & Paper Company, Limited, report that their loss in the Northern Ontario bush fires was fully covered by insurance, and operations were only interrupted for a comparatively short time. The company lost about 20 houses at Iroquois Falls, together with 20,000 cords of pulpwood. Their limits suffered only slightly and the interruption in the operation of their plant was caused by the destruction of their stock of pulpwood ready for the mill.

The sawmill, stave mill, heading mill, hoop mill, planing mill, machine shop, dry kilns and other buildings comprising the plant of the Fesserton Timber Company, at Fesserton, Ont., were completely destroyed by fire at about midnight on August 5th. The loss included four cars of lumber which had been dressed in transit, two cars of timber, two cars of 1½ inch hoop plank, one car of heading, one car of staves and a quantity of other material, all of which had been accumulated on account of the great scarcity of labor. If the company had had a sufficient staff of employees they would not have accumulated so much material in the neighborhood of the mill. In their dry kilns they also had a large quantity of staves and heading which were undergoing treatment. A number of wagons and other equipment were also destroyed. The fire was confined to the boundaries of the fire limits around the plant, none of the stock piled in the yard having been destroyed. In the yard the company have some 3,000,000 feet of lumber, 2,000,000 staves and other manufactured stock. The loss by fire amounts to about $80,000, which was partly insured. Mr. W. W. Carter, president of the company, has not definitely made up his mind regarding rebuilding, but it is expected that a new plant will be built during the coming winter.

Eastern Canada

D. Cyr & Frere, Ste. Rose, P. Q., have been registered to carry on business as sash and door manufacturers. Those interested are J. M. Damien Cyr and Horace Cyr.

The woodworking plant belonging to Wallace & Robinson, Lake Street, Waterloo, P. Q., was recently destroyed by fire. The damage was partially covered by insurance.

J. F. Gerrity, Bangor, Me., and Frank Newton, Boston, Mass., have purchased 3,500 acres of spruce and fir stumpage on Campobello Island, N. B. They have not yet announced any plans for developing the property.

Plans are under consideration for doubling the capacity of the ground wood mill of the Ouiatchouan Falls Paper Company, Ouiatchouan, P. Q., of which Mr. J. E. A. Dubuc is manager. This will give the plant a capacity of one hundred tons per day.

P. T. Dodge, of the International Paper Company, during an enquiry by the Government at Washington, D. C., recently stated that new paper miills which his company intends to build will be located in Canada, as a result of the present tariff situation.

The Provincial Lumber Company, Limited, has been incorporated with head office at Montreal, P. Q., and capital stock of $20,000, to carry on the business of lumbering and the lumber trade in all its branches, also manufacturers and dealers in logs, pulpwood, etc. Those interested are C. J. E. Charbonneau, B. Melancon, G. N. Clermont, I. J. Labrosse and A. Turgeon, all of Montreal.

A report from St. John, N. B., states that the Partington Pulp & Paper Company completed its rafting operations at the mouth of the Naskwaak River, for the season of 1916, on August 4th, 16,500,000 feet having been rafted, which will be sent to St. John to be manufactured into pulp at the Partington mill. Driving conditions on the Nashwaak have been good and very few pieces have been left in the river.

Western Canada

The Valley Lumber Company, Limited, Winnipeg, Man., has been incorporated.

The lumber yard of the Revelstoke Lumber Company at Swift Current, Sask., was recently destroyed by fire.

Negotiations are under way for the sale of the properties of the Swan-

son Bay Forests, Wood Pulp and Lumber Mills, Limited, to a company to be known as the Empire Pulp & Paper Mills, Limited.

A four-saw shingle mill is to be opened about the middle of August at Avola, B. C., by Mr. Tait, of New Westminster.

Work is about to start on the erection of a lumber mill to cost $100,000 for the Alberta Lumber Company, Vancouver, B. C.

The Johnstone Straits Timber and Trading Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $500,000, to carry on business as timber merchants, sawmill proprietors, and as dealers in timber and wood of all kinds.

The Marsh-Hutton-Powers Company, New Westminster, B. C., have applied for a lease of city water front near Lulu Island Bridge, in order to erect a shingle mill. If the lease is granted they state that they will immediately commence the erection of the mill.

Cook's mill at Dennison, B. C., which has been closed down for many months, has resumed operations, with a capacity of about 30,000 feet per day. The plant is being operated by the Britiish American Lumber Company of Vancouver, on timber obtained near Gifford, B. C.

The Canadian Exporting Lumber Company, Liimited, have been incorporated with head office at Victoria, B. C., to carry on business as timber merchants, sawmill, shingle mill and pulp mill owners, loggers, lumbermen and lumber merchants in all or any of their branches.

Sealed tenders are being received by the Minister of Lands for B. C., until the 23rd day of August, 1916, for the purchase of License X683, to cut 1,511,000 feet of Douglas fir, cedar and hemlock on two areas adjoining Lots 501 and 513, Maurelle Island, Sayward District. One year will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for B. C. until the 23rd day of August, 1916, for the purchase of License X690, to cut 1,000,000 feet of cottonwood, and 5,000 cords of posts, on an area adjoining Lot 491, Goat River, Kootenay District. One year will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for B. C., until the 23rd day of August, 1916, for the purchase of License X663, to cut 1,200,000 feet of spruce, balsam, birch, poplar, cottonwood, cedar and jack-pine, on an area adjoining, S. T. L. 10037P, situated two miles northwest of Eddy, Cariboo District. One year will be allowed for the removal of the timber.

The Retail Lumbermen's Purchasing Agency, Limited, have secured an extra-provincial license with head office at 704 McIntyre Block, Winnipeg, Man., and provincial office at the Credit Foncier Building, Vancouver, B. C. The capital stock of the company is $50,000, and H. K. Agnew, Vancouver, B. C., is attorney. The objects of the company are to carry on the business of lumbering in all its branches and as manufacturers and dealers in logs, timber, lumber, wood, poles, ties, pulp, etc.

The East Kootenay Lumber Company, Limited, Jaffray, B. C., report that the recent loss of their sawmill by fire was not so serious a matter to them from a business point of view, as the daily press led one to believe. Instead of a total loss of their plant at Jaffray, they lost their sawmill only, which had a capacity of 80,000 feet per day. They saved their planing mill and lumber yards. The loss on the plant was covered by insurance and the company have two other mills operating at Ryan and Cranbrook. As it would be impossible to complete a new plant in time to be of any use this season, they will not build immediately, but will probably install a couple of portable mills to saw out the logs they have on hand at Jaffray. Later on, they hope to erect an up-to-date plant, capable of cutting at least 100,000 feet per day of ten hours and equipped to run night and day. This plant will be equipped with band saws and resaws.

A report from Washington, D.C., states that the Interstate Commerce Commission has suspended from August 1 to November 29 the freight rate advances proposed by the Maine Central and other railroads on lumber and other forest products in carloads from points in Maine and Eastern Canada to various destinations in New England and Eastern New York. The present rate from Vanburen, Fort Kent, and other points of origin in Maine, taking the same rates to Harlem River, New York, is 18 cents per 100 pounds. The proposed rate is 21½ cents. Rates to other destinations would likewise have been increased ½ to 3½ cents per 100 pounds. The commision will conduct an investigation into the reasonableness of the proposed increases.

The auction sale of no-mark and mixed logs rafted by the St. John Log Driving Company took place recently at St. John, N.B., the sales being as follows: Usher Miller, spruce deals, $15; spruce battens, $10; pine, $8.50, gross scale; Murray & Gregory, cedars, $9.25; York and Sunbury Milling Company, hemlock, $8.25.

J. H. Turnbull, representing the Alberta Farmers' Co-operative Elevator Company, recently visited Vancouver in order to enquire into the possibility of establishing a direct trade between lumber manufacturers in British Columbia and Prairie Province consumers.

We handle

Everything in Lumber

We can offer at very attractive prices, if interested, the following:

50 M 1" No. 1 Common & Better Birch
140 " 1" Good Pine Sidings
50 " 1½" No. 3 Barn & Better Strips
80 " 3"x11" Red Pine
42 " 1" A. Sidings
90 " 1½" S.C. Sidings
98 " 1¼" " "

Have also considerable dry stock for shell box making in 1" x 9" and 10" Pine and Spruce.

Write or wire for prices and stock lists.

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Dominion Express Bldg., 145 St. James St., Montreal
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SHELL BOX STOCK
White and Red Pine, Spruce
Hemlock, Birch, Maple
Railway Ties, Fence Posts, Etc.
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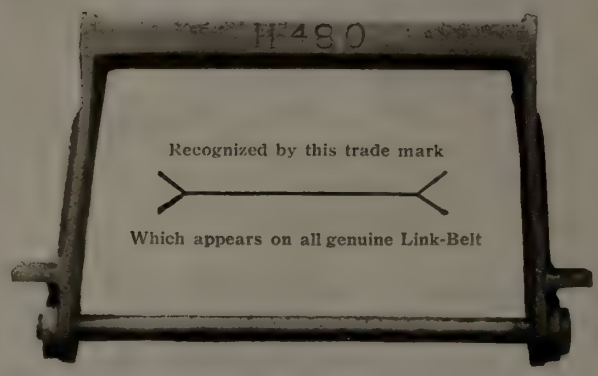

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Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa, Deputy Minister.
December 20th, 1912.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1¼ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	31 00	32 00
1 x 12 common and dressing	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft.		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft.		16 00
2 x 4 to 12, 10 and 16 ft.		20 00
2 x 4 to 12-in., 12 and 14 ft.		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain		31 50
Fir flooring, 1 x 4, edge grain		35 00
Fir flooring, 1 x 4, flat grain		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1¼-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 25
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1¼ and 2-in.	60 00	
Ash, white, No. 1 common	45 00	
Ash, brown, 1sts and 2nds, 4/4	50 00	
Ash, brown, common and better	40 00	
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00	
Birch, 1st and 2nds, 4/4	44 00	
Birch, No. 1 com. and bet., 4/4	35 00	
Birch, 1st and 2nds, 6/4 and 8/4	46 00	
Birch, 1st and 2nds, 10/4 and 12/4	60 00	
Birch, 1st and 2nds, 16/4	62 00	
Basswood, 1sts and 2nds, 4/4	40 00	
Basswood, No. 1 com. and bet., 4/4	35 00	
Basswood, No. 2 and 3, common	18 50	
Basswood, 6/4 and 8/4, 1sts and 2nds.	44 00	
Basswood, 6/4 and 8/4, com. and bet.	38 00	
Basswood, 4/4, No. 2 com. and bet.	30 00	
Soft elm, 1sts and 2nds, 4/4	40 00	
Soft elm, No. 1 com. and bet., 4/4	32 00	
Soft elm, No. 2 and 3 common	17 50	
Soft elm, 6/4 and 8/4, 1 and 2	42 00	
Rock elm, 1sts and 2nds, 6/4 x 8/4.	55 00	
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00	
Soft maple, 1sts and 2nds, 4/4	33 00	
Soft maple, com. and bet., 4/4	25 00	
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00	
Hard maple, 1st and 2nds, 4/4	40 00	
Hard Maple, common and better, 4/4	33 00	
Hard maple, 12/4 & 16/4, 1sts and 2nds	50 00	
Red oak, plain 1st and 2nds, 4/4	66 00	
Red oak, plain, No. 1 com., 4/4	42 00	
Red oak, plain No. 2 com. 4/4	32 00	
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00	
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00	
White oak, plain 1sts and 2nds. 4/4.	66 00	
White oak, plain, No. 1 com., 4/4	42 00	
White oak, plain, No. 2 com., 4/4	32 00	
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	66 00	
Red and White oak, plain, No. 1 com. 5/4 and 6/4	45 00	
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00	
Red and White oak, plain, 1sts and 2nds, 8/4	72 00	
Red and White oak, plain, No. 1 com. 8/4	50 00	
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00	
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00	
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00	
White oak, ¼ cut No. 1 common	57 00	
Hickory, 1sts and 2nds, 4/4	70 00	
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00	

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$52 00	54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips	23 00	24 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	24 00	25 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00	27 00
Pine, 1-in. x 10-in. M.R.	28 00	29 00
Pine, s.c. sidings, 1¼ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x 10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	17 50	18 00
1"x 3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16'	25 00	27 00
1¼" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles:		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Quebec Spruce Deals		
12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.		$54 00
1 in., 8 in. and up wide		62 00
1¼ and 1½ in. and up wide		65 00
2 in. and up wide		70 00
Cuts and Better		
4/4 x 8 and up No. 1 and better		50 00
6/4 x 8 and up No. 1 and better		60 00
8/4 x 8 and up No. 1 and better		62 00
6/4 x 6 and up No. 2 and better		52 00
8/4 x 6 and up No. 2 and better		54 00
6/4 x 6 and up No. 3 and better		46 00
8/4 x 6 and up No. 3 and better		50 00
No. 1 Cuts		
1 in., 8 in. and up wide		40 00
1¼ in., 8 in. and up wide		55 00
1½ in., 8 in. and up wide		57 00
2 in., 8 in. and up wide		60 00
2½ and 3, 8 in. and up wide		75 00
4 in., 8 in. and up wide		85 00
No. 2 Cuts		
1 in., 6-in. and up wide		31 00
1¼ in., 6-in. and up wide		42 00
1½ in., 6-in. and up wide		44 00
2-in., 6-in. and up wide		44 00
2½, 3 and 4 in., 6-in. and up wide	62 00	65 00
No. 3 Cuts		
1 in., 6-in. and up wide		24 00
1¼ and 1½ in., 6-in. and up wide		33 00
2-in., 6-in. and up wide		33 00
2½, 3 and 4-in., 6-in. and up wide	43 00	48 00
Common and Dressing Mill Run		
1-in. x 4-in.		25 00
1-in. x 5-in.		25 00
1-in. x 6-in.		26 00
1-in. x 8-in.		27 00
1-in. x 10-in.		29 00
1-in. x 12-in.		34 00
1 in. x 13 in. and up		34 00
1¼, 1½ and 2-in.		30 00
No. 1 Barn		
1 inch	31 00	45 00
1¼, 1½ and 2-in.	36 00	45 00
2½ and 3-in.		45 00
4 inch		50 00
No. 2 Barn		
1 inch	28 00	36 00
1¼, 1½ and 2-in.	30 00	36 00
2½ and 3-in.		38 00
No. 3 Barn		
1 inch	21 00	28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00	25 00
Box		
No. 1, 1, 1¼, 1½, 2-in.	22 00	25 00
No. 2, 1¼, 1½, 2-in.	19 00	23 00
Mill Culls		
Mill run culls, 1-in.		19 00
1, 1¼, 1½ and 2-in.		20 00
No. 2	17 00	18 00
Lath		
No. 1, 32-in. pine		1 80
No. 2, 48-in. pine		4 35
No. 1, 48-in. pine		4 85
No. 3, 48-in. pine		3 85
Hemlock Lath 48 in.		3 80

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1. E.			
	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8..	14 00	17 00	20 50	21 50
2 x 10	18 00	18 50	21 50	22 50
2 x 12	18 00	19 00	23 50	23 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	21 50
2 x 4, 10, 18, 20	23 50
2 x 6, 8 to 16	21 50
2 x 8, 8 to 16	21 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	29 50
2 x 10 and 2 x 12; 8-16 ft.	26 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	28 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	30 50
No. 1 Common Boards	
4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50
Flooring	
4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00
Shiplap—Finished	
6 inch	22 50
8, 10 and 12 inch	23 50
Siding	
6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00
Lath	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed)	4 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	27 10
3 x 8 in.; 8 to 16 ft.	24 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	27 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	29 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	20 50
2 x 4 in.; 12 and 14 ft.	21 50
2 x 4 in.; 10 and 16 ft.	22 50
2 x 4 in.; 18 and 24 ft.	23 50
2 x 4 in.; 22 and 24 ft.	24 50
2 x 4 in.; 26 to 32 ft.	26 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	23 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	25 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	26 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	28 00
2 x 14 in.; 10 to 16 ft.	28 00
2 x 14 in.; 18 and 20 ft.	30 00
2 x 14 in.; 22 and 24 ft.	31 00
2 x 14 in.; 26 to 32 ft.	33 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	24 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	25 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	26 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	27 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	27 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	27 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	28 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	28 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft.	23 00
No. 2 Shiplap, 6 in.	22 00
No. 2 Shiplap, 8, 10 and 12 in.	23 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 85

LATH

Fir lath, ⅜ x 1½ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ⅜ x 1½ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00

(Continued on page 56)

NATIONAL

LOGGING CARS

NATIONAL Steel Logging Cars give exceptional service under all conditions found in the Lumber Industry. We have analysed every known condition of logging and have produced a line of cars that not only give every satisfaction but eliminate every trouble encountered in the safe and economical handling of logs.

The Logging Car Dept. is in a position to give good service on cars of all capacities.

Full particulars supplied upon request.

National Steel Car Co., Limited

Montreal Office:
SHAUGHNESSY BLDG.

Works and Operating Offices:
HAMILTON, CANADA

CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	62 00
No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	37 - 39	24 - 26	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in...		98 00
Selects, 1 to 2 in.		88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	72 00	74 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	38 00	40 00
No. 2, 1 x 10		35 00
No. 2, 1 x 8		34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 50	30 00
No. 3, 1 x 8		29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		25 00
Spruce 8 in. and under dimen.		27 00
10 and 12 in. random lengths, 10 ft. and up	26 00	27 50
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	22 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	22 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50	23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled		22 00
1⅝ in. spruce laths	4 10	4 15
1½ in. spruce laths		3 75

New Brunswick Cedar Shingles

Extras	3 50	3 60
Clears	3 10	3 15
Second clears	2 30	2 40
Clear whites	2 10	2 20
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.		3 75
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear		3 65

A Successful Dry Kiln

Here's what a manufacturer of pianos and organs says of a

Sturtevant Kiln:

Trade Mark

"We have two dry-kilns which are operated in this manner, one along side of the other; one in which we place the green lumber that is shipped us, what is usually called shipping dry. This stock is all steamed before the suction fan is placed on it. The other kiln we use for lumber that has been on stick on our yard for from one to two years, and on this we do not apply any steam, simply running it through in about ten days for immediate use. The green lumber, however, in the other kiln is steamed several days and is put through drying apparatus for about three weeks before it is taken out. We have never had any case hardening using this method, neither have we had any warping, in fact, we are perfectly satisfied with the results."

We can quote you dozens of cases where our Kilns are giving excellent service.

Talk it over with one of our drying engineers or get catalog 220-C.

B. F. Sturtevant Co. of Canada, Limited

Montreal Toronto GALT, ONT. Winnipeg Vancouver

CROWN BRAND CORN SYRUP

Cheaper and Better than Molasses

Barrels, about 700 lbs.	Pound .4
Half Barrels, about 350 lbs.	Pound .4¼
Quarter Barrels, about 175 lbs.	Pound .4½
2 Gallon Wooden Pails, 25 lbs. each,	Per Pail $1.50
3 Gallon Wooden Pails, 38½ lbs. ea.,	Per Pail 2.10
5 Gallon Wooden Pails, 65 lbs. each,	Per Pail 3.35

Prices subject to change without notice.

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200 Rooms, Private Bath, $1.50 Single, $2.50 Up Double.
200 Rooms, Private Bath, $2.00 Single, $3.00 Up Double.
100 Rooms, Private Bath, $2.50 Single, $4.00 Up Double.
100 Rooms, Private Bath, $3.00 to $5.00 Single, $4.50 Up Double.

TOTAL, 600 OUTSIDE ROOMS
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Black Japan Finish. 1½ inch angle-iron frame supported by strong steel braces. "Alaska" patent twisted link fabric attached to frame by oil-tempered helicals at each end, making very strong, resilient and comfortable bed. Height of ends, 60 inches; height of lower spring, 13 inches; height of upper spring, 52 inches; length, 76 inches. Sizes: 4-6, 4-0, 3-6, 3-0, 2-6. Shipping weight, 145 pounds.

Good sound sleep for your men will repay you many times over in increased vigor and work.

No chance for vermin in these steel frames. Can be erected or taken down in a few minutes. Packed flat for shipping. ***Last a lifetime.*** We guarantee every bed for 20 years. They are strong and much more comfortable than wooden bunks.

Mattress is strong, durable, light—filled with clean, curled wood fibre.

Special prices for lumbermen. Write us for further information.

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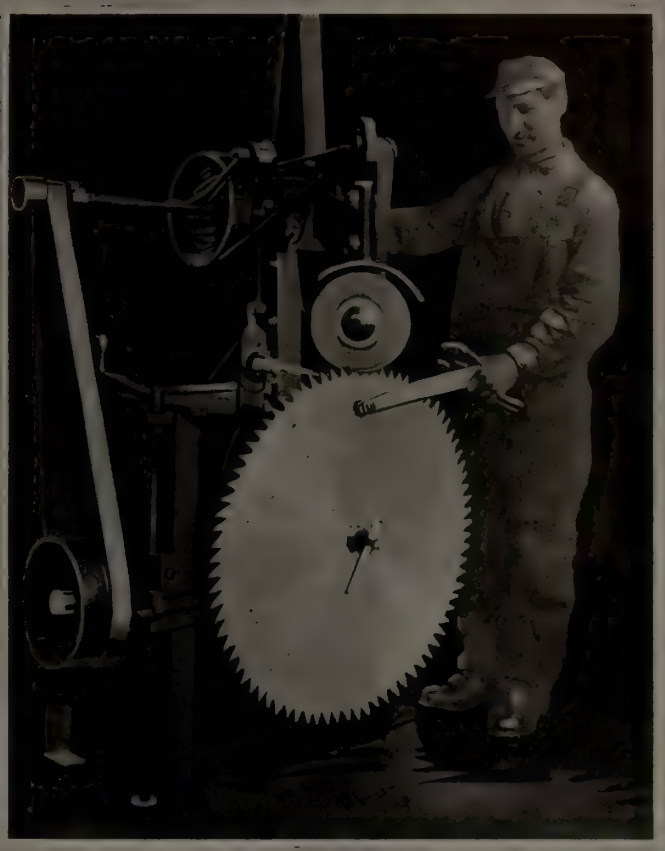
Successors to the Alaska Feather & Down Co., Ltd.

Montreal

"Alaska on an article means *high-grade every particle*"



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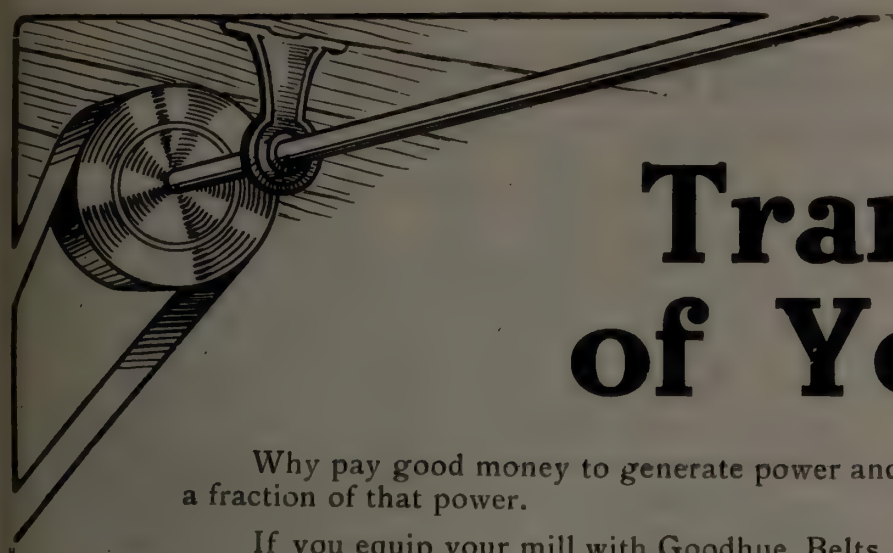

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If you equip your mill with Goodhue Belts you can transmit 100% of the power generated.

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Gillies Bros.	Braeside, Ont.	Eddy & Glynn,	Sault Ste. Marie, Ont.
Graves, Bigwood & Co.,	Toronto, Ont.	Chew Bros.,	Midland, Ont.
Victoria Harbor Lumber Co.,	Blind River Ont.	Donald Fraser & Sons,	Cabano, P. Q.

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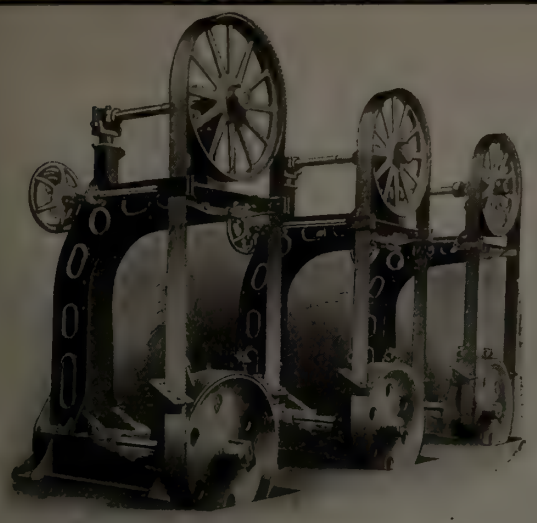

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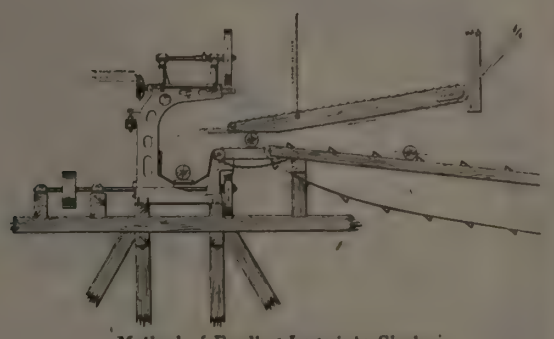

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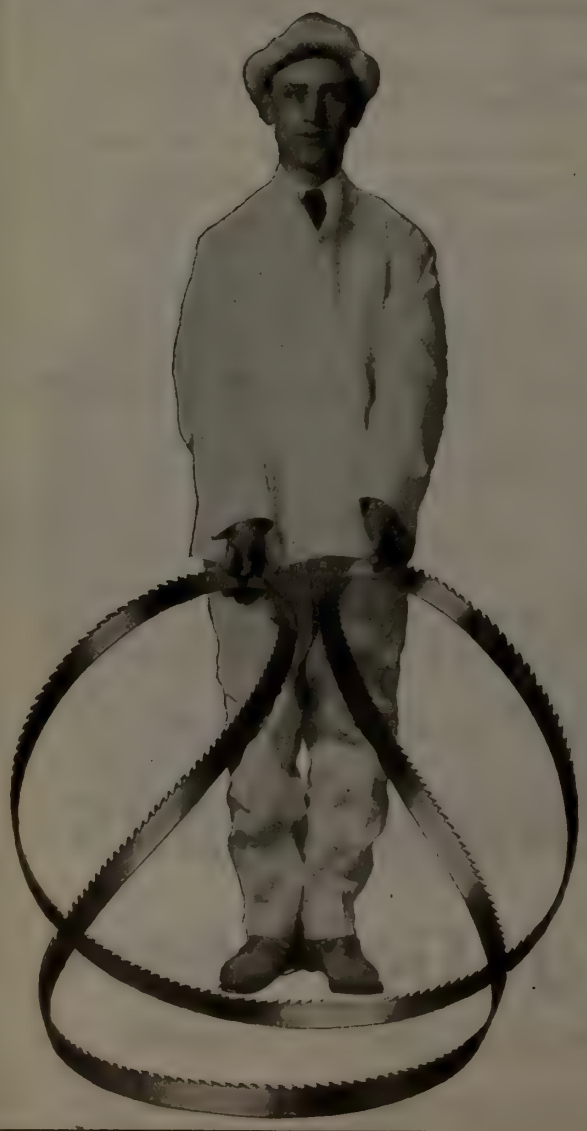

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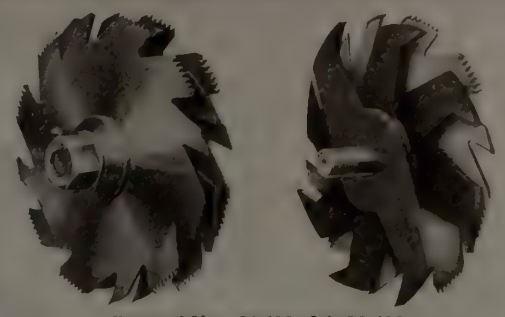

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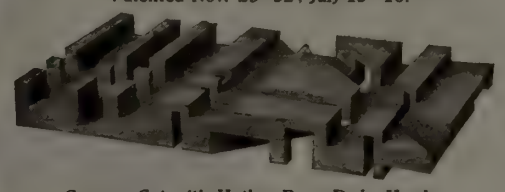

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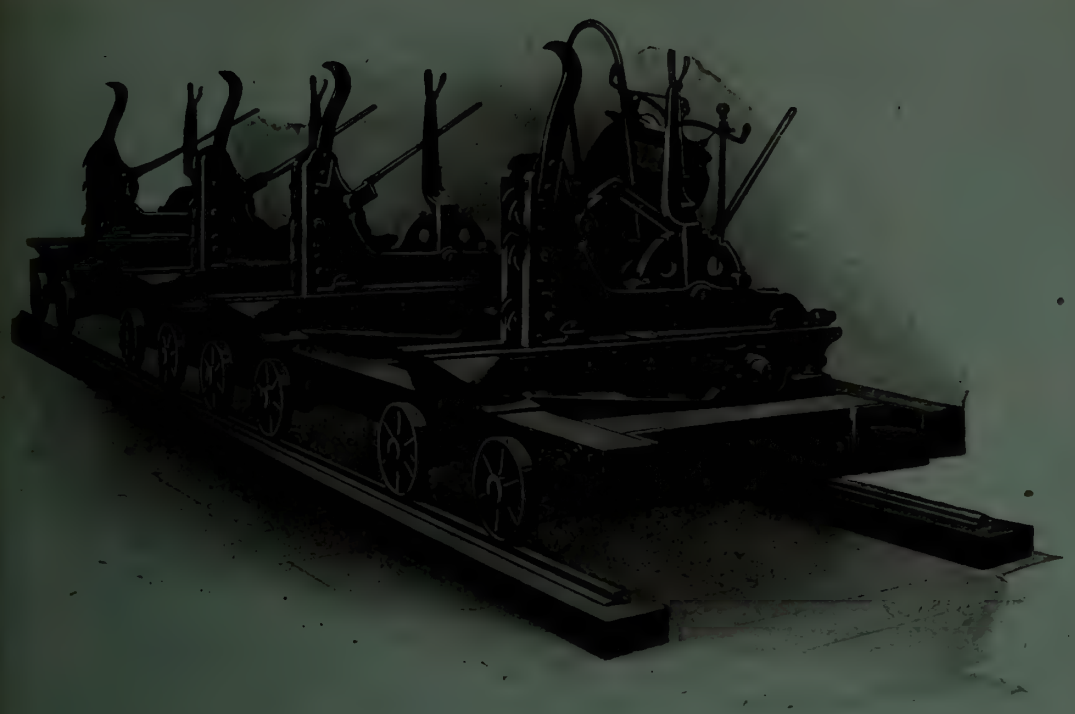

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Knees extra high, fitted with nigger hook and 5-in. spring-cushioned taper movement.

Waterous Inserted Tooth Dogs or Waterous New Model Dogs are provided.

Set works combine setter and receder in one machine. Waterous Steam Setter or our rope-driven Trout Power Set Works can be supplied.

Waterous Carriages

Built in Every Size to Suit Every Size Mill

SCREW CARRIAGES

Built in sizes to open 60 in., 72 in. and 84 in.

Frame of oak,—logseats, knees, running gear, dogs, set works, etc., of steel.

Knees provided with Cant Hook and Spud Dogs and steel top roller.

Logseats have deep grip plugs on frame, are reinforced on top with reversible steel facing strips.

Waterous Steam Setter or Rope-driven Trout Power Set Works supplied.

The Waterous Engine Works Co., Limited

Branch: Winnipeg, Man. **Brantford, Canada** Agency: H. B. Gilmour, Vancouver, B.C.

"FROST KING" METAL

$5,000,000.00
worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price 30c per lb., Fort William and East; West of Fort William 35c per lb., delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, 40c per lb.; West of Fort William, 45c, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

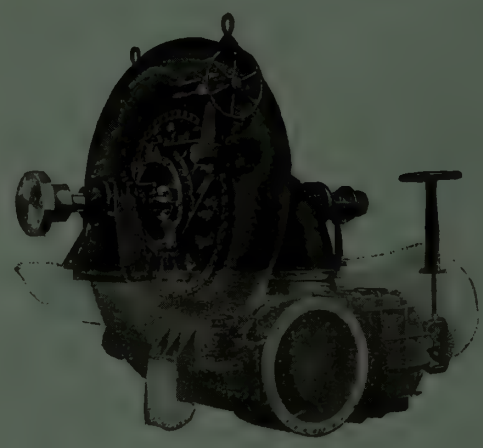
Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Smith Hydraulic Turbines

for driving the

Paper Mill and Pulp Grinder



This type of equipment specially designed for high head developments.

Our particular claim for these turbines is service, the kind of service that responds to the demand

Promptly and Efficiently

Write for Bulletin F

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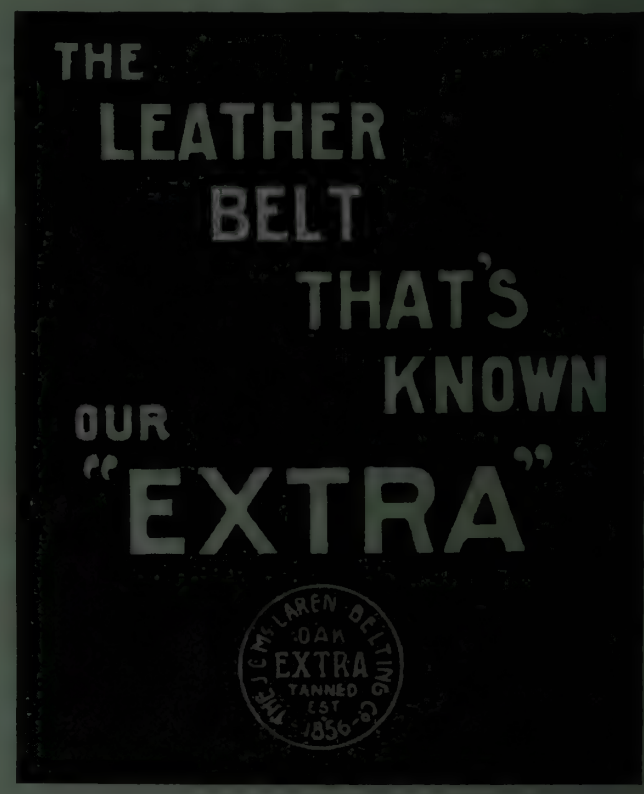
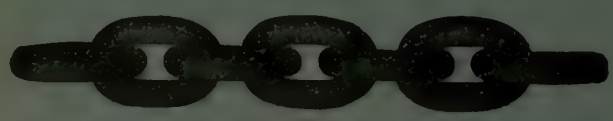
405 Power Bldg. - - - Montreal, Can.



Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.
Limited
General Mill Supplies MONTREAL



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Stocked by all principal jobbers everywhere.

General Agents for Canada
Drummond McCall & Co.
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Specialties: Boom Chains of all Descriptions, Rafting, Log Loading, Quarry, Mining, Crane and Sling Chains, All hand-made by expert workmen from Hingley's Netherton refined iron.

Agents for New Brunswick and Prince Edward Island
F. R. Whipple,
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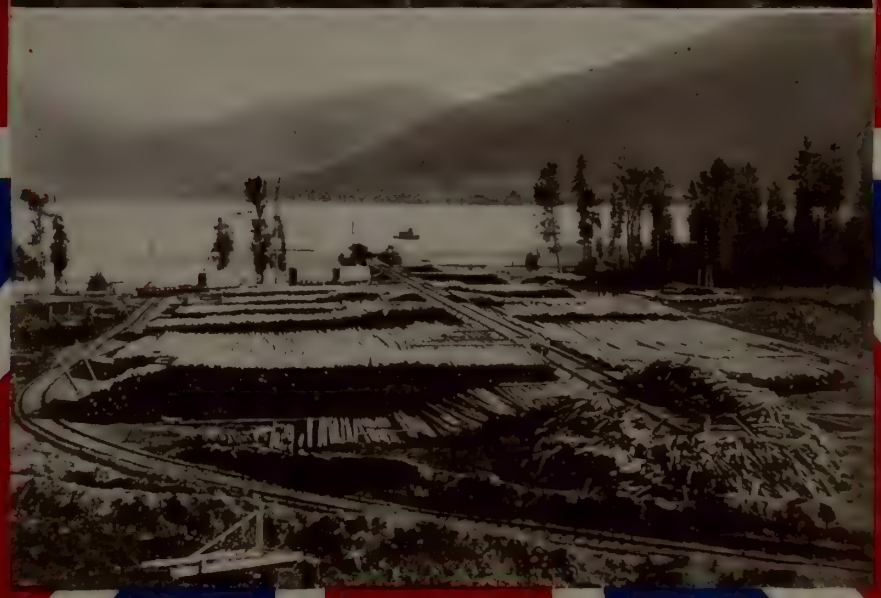
N. Hingley & Sons, Limited, Netherton Iron and Chain Works, Dudley, England

Vol. 36 Toronto, September 1, 1916 No. 17

Canada Lumberman & Wood Worker



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"LIDGERWOOD" PORTABLE HIGH SPAR SKIDDERS

OPERATING OVER

LONGEST SINGLE SPAN

IN THE WORLD

Skidding Logs over 3800 feet

"Lidgerwood" Cableway Skidders have two exclusive and patented features and these are essential to the success of this style of lumbering.

1.—"Lidgerwood" Cableway Skidders have a mechanical slack puller. The buggy is held stationary while the mechanical slack puller pays out all slack required in the skidding line to reach logs lying at a distance each side of skidder.

2.—"Lidgerwood" Cableway Skidders have a two speed device on the engine which returns the buggy to the woods at high speed.

We have paid special attention to the construction of Cableway Skidders required by conditions in British Columbia and the most successful machines now in use in that province were installed by us.

Exclusive Agents for Canada

CANADIAN ALLIS-CHALMERS

LIMITED

Manufacturers of Air Compressors, Boilers, Cement Making Machinery, Concrete Mixers, Flour Mill Machinery, Gas Engines, Hoisting Engines, Hydraulic Machinery, Lidgerwood Engines and Cableways, Locomotives, Logging Machinery, Mining and Crushing Machinery, Ornamental Metal Work, Rock Crushers, Rock Drills, Saw Mill Machinery, Steam Pumps, Steam Shovels, Steam Specialties, Steam Turbines, Structural Steel, Transmission Machinery, Turbine Pumps, Water Pipe, Water Wheels.

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Shell-Box Stock

WE are now running on SPRUCE and JACK PINE and are prepared to book orders for your requirements in 1 in., 5/4, and 4 x 5— Our Jack Pine is being used with good results by several of the largest shell-box manufacturers.

LET US SHIP YOU A SAMPLE CAR

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Limited

White Pine, Spruce, Norway and Jack Pine

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Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

The Long Lumber Company

HAMILTON, ONT.

Hardwood

45,000	4/4 Mill Run Maple	1915 Cut
14,000	4/4 Com. & Bet. Elm	" "
14,000	44/ No. 2 & 3 Com. Ash	" "

No. 2 Hemlock

1915 Cut Must Move

200,000	8/4 x 6 and up,	No. 2 Hemlock
250,000	8/4 x 4	No. 2 "

4 Cars 3 x BC Shingles in Transit

Get our prices on above and also on pine, spruce, etc.

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

HIGH GRADE

BRITISH COLUMBIA WOOD PRODUCTS

SOFT MOUNTAIN PINE — FIR — CEDAR — LARCHWOOD—SPRUCE and CEDAR SHINGLES

We specialize in these lines and can give you prices that will interest. Try us for a sample car. Very prompt shipment on timbers, all sizes and lengths up to eighty feet, also on cedar poles and piles, cedar silo stock and barn boards and all grades of shingles, lath, etc.

WE HAVE A LARGE AND COMPLETE LIST OF HEMLOCK

SEND US YOUR ENQUIRIES

We also have a very complete list of SPRUCE, WHITE PINE and NORWAY PINE in all grades and sizes

We have an exceptionally nice stock of 1 x 8—10 and 12 in. mill cull stock boards and a large stock of mill run and No. 1 spruce lath.

WE ARE OFFERING SPECIAL

100 M. 1 x 12 smooth box and common 15 per cent. box, 85 per cent. common.
50 M. 1 x 7 in. and wider No. 1, 2 and 3 cuts, 15 per cent. No. 3 cut, 85 per cent. No. 1 and 2 cut.
100 M. 1 x 4 No. 3 Clear Fir Flooring.
200 M. 1 x 8 in. Western White Pine mill culls.
100 M. 1 in. mill cull spruce.
100 M. 1 in. x 4 in. and up mill run spruce.

LET US QUOTE YOU

Very Prompt Shipments on RED and WHITE CEDAR SHINGLES. Several cars in transit.

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Murray & Gregory, Limited

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Our

Spruce and Pine Lumber, Laths and Pulpwood

cannot be beaten for Quality and Manufacture

Large Mills, Woodworking Factories and Glass Works at ST. JOHN, N. B.
Also Mills at St. Camille and Lac Frontier, Que.

Address all enquiries to our Head Office, ST. JOHN, N. B.

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PINE ■ SPRUCE

HEMLOCK ■ LATH

WE have a complete line of Spruce in good condition and dry Birch suitable for Shell Box manufacture, the latter being specially sorted in widths and grades for that purpose and enquiries will receive prompt attention.

We have a few lines in regular stocks which we desire to move immediately and will quote special prices for prompt shipment. Some of these stocks could be utilized in box-making.

Stock List sent on request.

C. A. SPENCER, LIMITED

McGill Bldg. MONTREAL, Quebec

QUALITY HARDWOOD

Birch
Beech
Maple

If you are interested in Hardwoods, you will be interested in us.

We are manufacturing high quality Hardwood Lumber, sawing and grading according to National Hardwood Association Rules.

The Logs are cut from our own soil-right Lands, and particular attention given to quality.

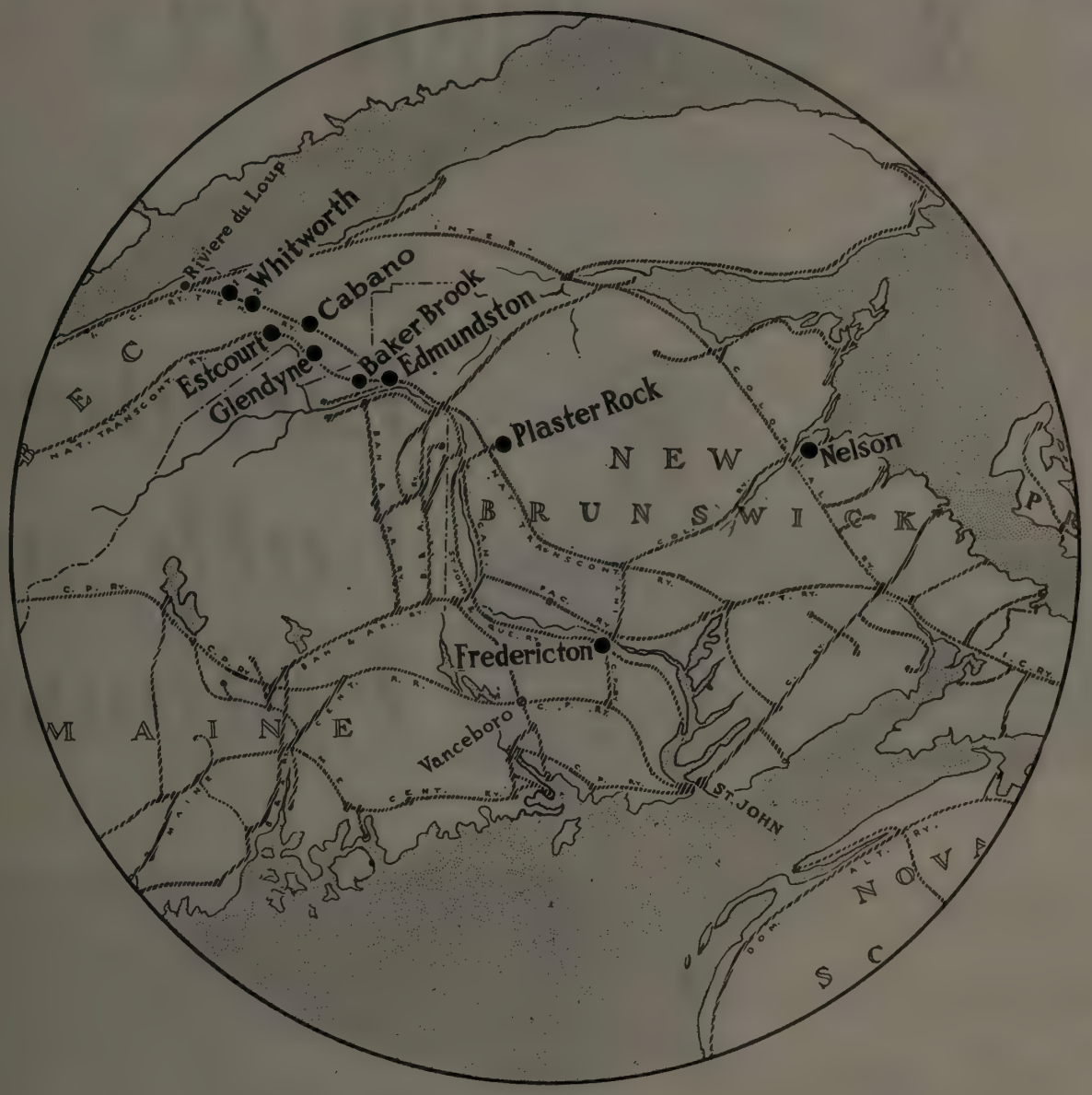
Our Mills are located on Canada Eastern Branch and Transcontinental Branch of the Canadian Government Railway, and in the heart of the best forests in New Brunswick.

Our Head Office in St. John will answer all enquiries.

Edward Partington Pulp & Paper Co.

ST. JOHN **Limited** **N. B.**

Ten Band Mills to Serve You



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Fredericton, N.B	Railway connection		C. P. R.
Plaster Rock, N.B.	"	"	C. P. R.
Nelson, N.B.	"	"	I. C. R.
Edmundston, N.B.	"	"	C. P. R. or Temiscouata Ry.
Baker Brook, N.B.	"	"	Temiscouata Ry. and N.T.R.
Glendyne, Que.	"	"	N. T. R.
Escourt, Que.	"	"	N. T. R.
Cabano, Que.	"	"	Temiscouata Ry.
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Fraser Limited, Fredericton, N. B.

ROUGH AND DRESSED SPRUCE, WHITE CEDAR SHINGLES, SPRUCE LATH, PIANO SOUNDING BOARD STOCK.

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St. Pacome, Quebec

Exterior of Mill at St. Pacome, Que.

Manufacturers of

Lumber Lath and Pulpwood

OUR Prime Quebec Spruce of most careful and unexcelled manufacture is the most serviceable lumber of the present day.

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CORRESPONDENCE SOLICITED FROM HOME AND FOREIGN BUYERS

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On the I. C. R. 75 Miles East of Quebec City

Mills at St. Pacome, and Crown Lake, River Manie, and Powerville, on Nat. Trans. Ry.

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The fact that our stocks are complete and well assorted assures you of **Satisfactory Service, Good Grades** and **Right Prices.** We want your inquiries and orders when in the market for

Railway Ties and Pulpwood
Rough and Dressed Lumber and Lath

We specialize on cutting to order all sizes of

Dimension Timber

Also in Dressing in car or mixed lots 1", 2" and 3" to customers' specifications.

Complete stocks always ready for prompt shipment.

We are the Largest Producers of Railway Ties in the Dominion

Austin & Nicholson
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Heavy Timbers

The illustration shows a corner of our yard piled with structural timbers. We can promptly load your order onto flat cars in our yard. If you need good timbers in a hurry, give us a trial order.

The Boake Mfg. Co. Limited
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Not Only
WHITE ENAMEL
But
STAINED and VARNISHED FINISHES
As Well Can Be Successfully Carried Out On

ARKANSAS SOFT PINE

Being a practically non-resinous wood in the finish grades, it is not necessary to shellac the raw surface, but instead the chosen stain of whatever color is applied **FIRST,** insuring a perfectly uniform absorption. Shellacs and varnishes are then applied and rubbed down.

We urgently recommend machine sanding as against hand work on the bench. All finish should be so worked wherever possible. This treatment in combination with the above method of final application insures a beautiful satin-like surface to the completed work.

Arkansas Soft Pine is properly suitable for woodwork in fine residences, apartments, churches and offices. It is being **NATIONALLY ADVERTISED.** It is identified by a registered trade mark. Its manufacturers **STAND BEHIND IT.**

What better selling arguments could you put to your trade, Mr. Dealer? Better let us quote on your next car.

All stock bearing the Arkansas Soft Pine Trade Mark is manufactured and sold exclusively by the following companies:

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Eagle Lumber Company, Eagle Mills, Ark.
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Freeman-Smith Lumber Company, Millville, Ark.
Fordyce Lumber Company, Fordyce, Ark.
Gates Lumber Company, Wilmar, Ark.
Southern Lumber Company, Warren, Ark.
Stout Lumber Company, Thornton, Ark.
Valley Lumber Company, Reader, Ark.
Wisconsin & Arkansas Lumber Company, Malvern, Ark
Arkansas Land & Lumber Company, Malvern, Ark.
Arkansas Lumber Company, Warren, Ark.
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To secure quotations with the least delay, price inquiries should be sent direct to any of the above companies. Literature, samples and information will be supplied promptly on request, by the

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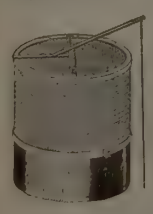

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Our spark arrester is substantially built and will last for years. Don't wait until a fire has visited your property, equip your mill at once.

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Canadian Hardwood. National Grading Rules

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All Thicknesses

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All grades and sizes.

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WE Buy, Sell and deal in all kinds of Lumber and Timber in Canada and United States: Spruce, White Pine, White and Basswood, Ash, Cedar, Douglas Fir, Beech, Birch, Walnut, Cherry, Chestnut, Cottonwood, Hemlock, Maple, Norway Pine, Short and Long Leaf Yellow Pine, Oak, Redwood, Birch, Maple and Oak Floorings, Pulpwood Ties, and Cedar Poles.

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SPRUCE BIRCH HEMLOCK

Merchantable 100,000'		1" Spruce
"	100,000'	2 x 4 Spruce
"	300,000'	2 x 5 and up to 8" Spruce
100,000'		1" Birch
300,000'		3" Birch
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Know how much timber you have? where it stands? How to get it out? Lines plain? Corners established? Have you correct maps? Want to plant those waste areas? Our business is to serve you. We have Experience, Technical Training, Thoroughness — "AND THE MEN."

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Timber Estimates and Valuations.
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Is prepared to make reports, and estimates on all classes and kinds of Timber, together with Maps, and cost of operating, also sell or buy for you.
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"Well Bought is Half Sold"

We offer for prompt shipment, the following attractive list of Hardwoods:

28 M′ 4/4 1st and 2nd Birch.
7 M′ 6/4 1st and 2nd Birch.
9 M′ 8/4 1st and 2nd Birch.
16 M′ 10/4 1st and 2nd Birch.
19 M′ 12/4 1st and 2nd Birch.
1 car 6/4 No. 1 Common and Better Hard Maple.
1 car 3″ No. 1 Com. and Bet. Hard Maple, winter cut.
2 cars 1″ No. 2 Common and Better Black Ash.
2 cars 1″ No. 2 Common and Better Basswood.
50 M′ 1″ No. 3 Common Hard Maple.
75 M′ 1″ No. 3 Common Birch.
50 M′ 3″ Birch Hearts.

Can ship promptly. Please let us quote you.

Graves, Bigwood & Co.

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Mills: Byng Inlet, Ont.

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NEW and USED
WOOD TOOLS
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No. 5 New Britain, chain.
M 190 Cowan hollow chisel.
Galt upright, compound table.
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Smart foot-power.

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24″ Fay double drum.
12″ C.M.C. disk and drum.
18″ Crescent disk.
8″ belt sanders (wood frames).

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13″ Clark-Demill four-side.
12″ Cowan four side.
10″ Clark-Demill four side.
10″ Houston four side.
6″ Cowan four side.
6″ Dundas sash sticker.

Wood Planers
36″ American double surfacer.
30″ Whitney pattern single surfacer
26″ revolving bed, double surfacers.
24″ Major Harper planer and matcher
24″ revolving bed, single surfacers.
24″ single surfacers, various makes.
20″ Dundas pony planer.
18″ Little Giant planer and matcher.
16″ Galt jointer.

Saw Tables
Preston variable power feed.
Ballantine variable power feed.
M138 Cowan power feed.
No. 3 Crescent universal.
No. 2 Crescent combination.
Ideal variety.
12′ Defiance automatic double cut-off.
Champion combination, wood top.
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6½′ Crescent iron frame swing.
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42″ Fay & Egan power feed.
38″ Atlantic, tilting frame.
34″ Major Harper pedestal.
30″ Ideal pedestal.
30″ Jackson Cochrane bracket.

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Humphrey No. 8 giant slab re-saw.
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Humphrey cylinder cutting-off machine.
Humphrey automatic lathes (6).
Humphrey double slotters (4).

Miscellaneous
Fay & Egan 12-spindle dovetailer.
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Elliott single spindle shaper.
No. 51 Crescent universal woodworker.
40″ MacGregor Gourlay band resaw.
Rogers vertical resaw.
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Galt blind-slat resaw.
Galt blind-stile borer and mortiser.
Egan sash and door tenoner.
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20″ American wood scraper.
4-head rounding machines.
24″ wood frame equalizer.
M63 Cowan spindle carver.
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Iron frame, 3-block sawmill.
48″ 3-saw edger.
No. 3 Hart automatic saw-filer.
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40″ Perkins automatic saw grinder.
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Woven from Camel's Hair Yarn

Manufactured and guaranteed by

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The Best Lath Market

WE NEED 100 MILLION LATH
annually and can use
SPRUCE, BALSAM, JACK PINE,
RED PINE, WHITE PINE or HEMLOCK

—Specifications—

⅜ x 1½—4 ft.—50 pcs. per pack
No. 2 and No. 3 grades preferred.

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"Lath Specialists"
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The
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Cedar Poles and Posts
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Center of business on Grand Circus Park. Take Woodward car, get off at Adams Avenue

ABSOLUTELY FIREPROOF
200 Rooms, Private Bath, $1.50 Single, $2.50 Up Double.
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100 Rooms, Private Bath, $2.50 Single, $4.00 Up Double.
100 Rooms, Private Bath, $3.00 to $5.00 Single, $4.50 Up Double.

TOTAL, 600 OUTSIDE ROOMS
All Absolutely Quiet

Two Floors—Agents' Sample Rooms. New Unique Cafes and Cabaret Excellente.

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1" and 1½" Dry Basswood
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The Victoria Harbor Lumber Co., Ltd.

Manufacturers of

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Mills at Victoria Harbor, Ont.

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The "Superior" Lath Machine is well constructed of high-grade materials. It stays on the job saving time and money. It gives satisfactory results. 15 to 20 horse-power will run it. Capable of taking four saws. Specifications are: Wooden frame. Belt or Chain Feed. Ring-oiling Boxes. Driving Pulley 10 in. diameter, 9-in. face. Capacity with two saws 40,000 to 50,000 a day.

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We also make Sappers, Cedar Cut Offs, Shingle Machines, Car Wheels, and Castings of all kinds.

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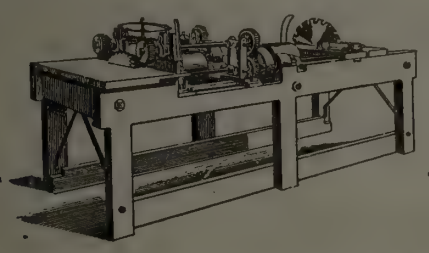

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250,000,000 feet constantly in stock insures filling any reasonable order promptly.

Our Canadian trade is constantly increasing and we are always striving to merit a still larger increase.

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2 x 4 — 10/16 feet		2 x 8 — 10/16 feet	
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2 x 7 —	" "	4 x 7 —	" "

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—"If QUALITY and SERVICE are paramount considerations in purchasing your (**Lumber**) requirements it is wise to confine yourself to old established manufacturers of ample resources." BENJ. FRANKLIN.

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Lumber, Lath, Shingles

We make a specialty of Hemlock Billstuff, and have the best assortment on the Georgian Bay.

All stock matched or sized, if required.

Over 61 years of service to the Canadian Lumber Trade is the best recommendation of our knowledge of what to ship you on that next order.

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Also Lath and Shingles

Orders filled carefully and promptly shipped

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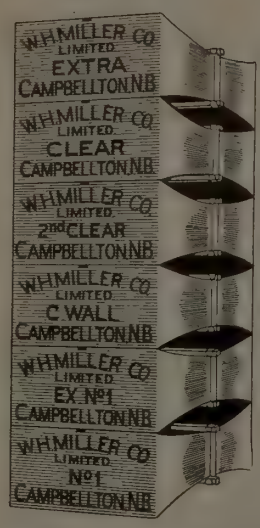
We manufacture and export all kinds of it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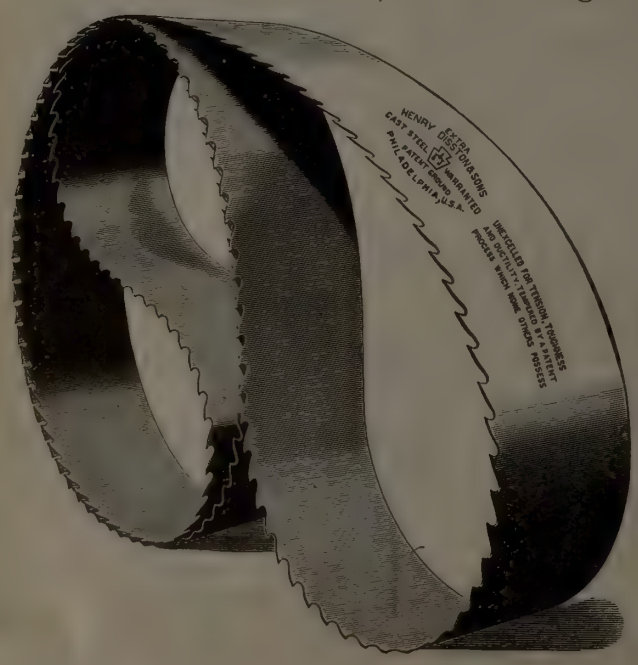
have been made from steel made by us in our own plant since 1855. More than sixty years experience in the manufacture of saw-steel coupled with a study of operating requirements extending over three quarters of a century have resulted in saws of highest excellence.

In tension—, set—and edge-holding qualities Disston Saws are as near perfection as the world's foremost saw-makers can make them.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PHILADELPHIA, U.S.A.
UNEXCELLED FOR TENSION, EVENNESS AND QUALITY OF TEMPER BY ANY PATENT PROCESS WHICH SOME OTHERS POSSESS

Where quality means economy, the proper test is service.

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Notify the Retail Trade that they have begun operating their new mill at

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We absolutely guarantee every Maple Leaf Saw. The fine Razor Steel used in all our saws is manufactured exclusively for us. Our secret tempering process refines and toughens the raw material to such an extent that Maple Leaf Saws will stand up under the most severe tests and last longer than any other saws on the market.

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Fir Flooring, Ceiling and Siding.
Clear Fir Finish, rough and dressed.
Fir Turning Squares in 4 x 4 to 10 x 10″

B. C. Red Cedar Bevel Siding.
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Cedar, Fir and Spruce Factory Lumber.

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Manufacturers of all grades and sizes of

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OUR SPECIALTY IS
Long Timbers and Prompt Shipment

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Heavy Fir Dimension
Is Our Particular Specialty

The Heavier it is the Better we like it

We Dress from 1 to 4 Sides up to 16-in. x 20-in., 60-ft.

Our grade is posstively right, and prices will please

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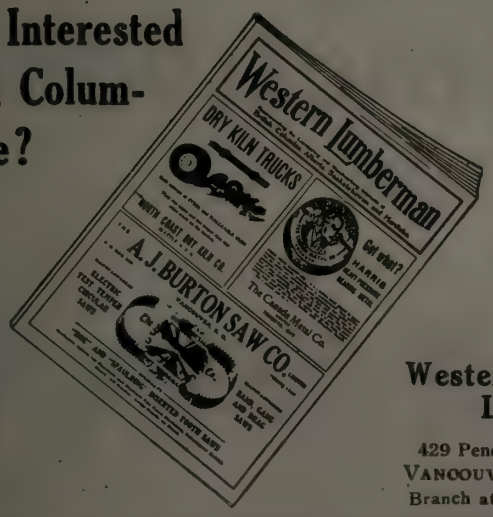
Mills at Craigs on the B.C.E.R.
Shipments by C. P. R., C. N. R., G. N. R., and N. P. R.

Are You Interested in British Columbia Trade?

The immensity of the Lumber Industry will within a few years make this Province the most important in the whole Dominion.



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429 Pender St. W
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Branch at Winnipeg

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British Columbia Red Cedar Exclusively

We beg to announce to the Trade that we are carrying in stock at Lindsay, Ontario, for less than carlot and sample shipments, the following stocks:

½ x 5 and ½ x 6 Cedar Bevel Siding.
1 x 8 to 12 Clear Cedar Finish, Rough or Dressed.
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Full particulars from our Eastern Agents.

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30 cars 4/4 No. 1 Common.
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QUARTERED OAK
15 cars 4/4 to 8/4 Red and White.

HICKORY
25 cars 5/4 to 16/4 log run.

ASH
5 cars 4/4 No. 1 Com. and better.
12 " 5/4 No. 1 Com. and better.
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We make a specialty of thick Oak, Ash, and Hickory for the Wagon and Implement trade. Try us and be shown.

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Quality and Service
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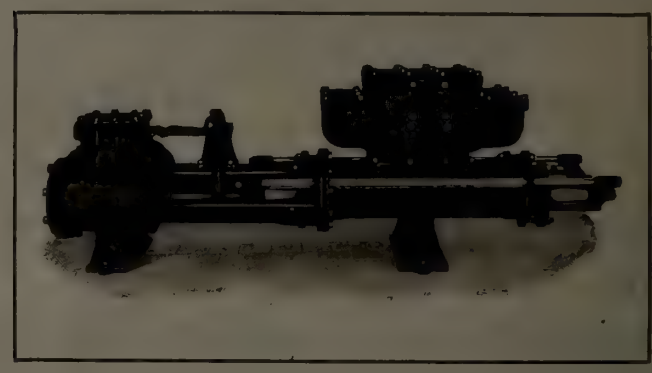
Pumping Machinery



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The Smart-Turner Machine Company, Limited

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California White Pine
California Sugar Pine
and Arizona Soft Pine

Best Stock for Factory and Pattern Lumber

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Logging Locomotives
Made in Canada

Our fifty years' experience in the design and manufacture of logging locomotives is at your disposal. Many of the largest logging operators in Canada are using our "Canadian Made" locomotives.

Our logging models are as carefully designed and built as our 200 ton sizes—oil or coal burning.

MAY WE SEND YOU SPECIFICATIONS?

This engine is 13½ ins. x 18 ins. and weighs 35 tons.

Canadian Locomotive Company, Limited, Kingston, Ont.
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Partial View of our Fir Mill and Yard at Vancouver, B. C.

FIR TIMBERS

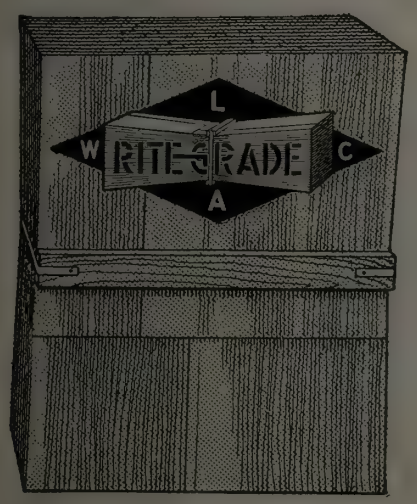
All Sizes up to 94 ft.
ROUGH OR DRESSED

Fir Flooring
Fir Ceiling
Fir Finish
Cedar Bevel Siding
Cedar Barn Boards
Cedar Silo Stock
Cedar Boat Lumber

THE

Vancouver Lumber Co.

VANCOUVER, B. C. LIMITED



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THE "PERFECT" SHINGLE

Inspected and Standardized
Absolutely Clear and Vertical Grain
No Sap
SIZES: 6 butts = 2″ 16″ long
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Manufactured in our own Mill shown below

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Service and Quality

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Representative:

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Interior View of our Shingle Mill, Roche Point, Vancouver, B. C.

FOR 1916

Look Into the Possibilities

of having a good stock cut perfect from

The Horseshoe Logs

White and Norway Pine

We have the best there is in raw material and our equipment for manufacturing is the latest in saw mill and woodworking machinery. A few of our specialties are: Boxes, Box Shooks, Wooden Pails and Tubs, Pine, Lath and Cedar Posts.

SEND US YOUR ENQUIRIES AND ORDERS

C. Beck Manufacturing Co., Limited

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"We aim to serve you with the Best"

The Power of Gravity is Free— Use it to handle Your Lumber

Our Steel Ball Bearing Gravity Lumber Carrier conveys boards, siding, flooring in bundles, timbers, etc., upon a grade of 4% (4 ft. fall in 100 ft.) The sensitive bearing moves the lumber.

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Canadian Mathews Gravity Carrier Company, Limited

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Dressed and Rough Spruce, White Pine and Banksian Pine

ALL WELL MANUFACTURED AND AIR DRIED

Our mills at La Tuque, P.Q. have first-class equipment for all sorts of dressing, also for resawing.

Let us send you our stock list with prices

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Sales Office: PORTLAND, MAINE

Plant of The Stearns Salt and Lumber Co.

Stearns Quality

Michigan Forest Products
Hardwood, Hemlock, White Pine
LUMBER and TIMBER

40 Million Feet Dry Stock in pile containing a complete assortment for rush shipment.

Grades— GUARANTEED —Quality

Hardwood Specialists

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1/30″ SLICE CUT VENEER
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Specialty:

QUARTERED WHITE OAK

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Yards at—Nashville, Tenn. Basic, Va. *Mills at*—Sumter, S.C. Winchester, Idaho

We can ship you promptly any of the above Stock, Carefully Inspected

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MANUFACTURERS OF

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Rough Timbers, Dimension, Flooring, Ceiling, Siding, Interior and Exterior Finish of all kinds including Mouldings. Fir, Spruce and Cedar Lath

Prompt shipment of Fir timbers in all sizes and up to 80 feet in length

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We specialize in supplying air dried Cedar Shingles, these cost more than kiln dried Shingles but make a better roof and last much longer

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Selling Agent
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Daily Production:—
60 Tons News Print
320 Tons Ground Wood Pulp (Dry)
90 Tons Sulphate Pulp (Dry)
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LUMBER of all kinds:—
Clapboards, Shingles and Pulpwood

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EAST ANGUS
BROMPTONVILLE
and D'ISRAELI, P. Q.

Manufacturers of

News Print Paper, Kraft Paper, Sulphate Pulp, Box Board, Ground Wood Pulp, Building and Fibre Papers, Clapboards, Shingles and Lumber

of every description

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We would especially draw the attention of paper Dealers to our celebrated BROMPTON KRAFT PAPER, which we claim to be the best and strongest paper of its kind made.

Our GROUND WOOD PULP is made from pure Spruce Wood, and is of a uniformly high standard.

Our No. 2 Mill and Yards on the Nepisiguit River, showing steamer loading for France.

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LUMBER — DRY SPRUCE AND PINE Rough or Dressed — LUMBER

LATH — SPRUCE, Fifty Pieces Per Bundle for Rail Shipment — LATH

SHINGLES — "BEAVER" BRAND CEDAR---Full Count — SHINGLES

MONTHLY STOCK AND PRICE LIST ON REQUEST

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BATHURST, N.B., CANADA

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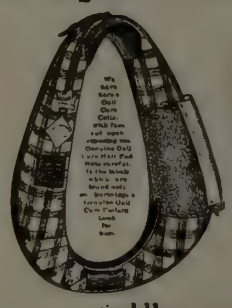
—Manufacturers of—

Harness, Horse Collars, Horse Blankets and Moccasins

for the Lumber Trade

Maple Leaf Kanthurt Horse Collars



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These Collars will not hurt your horses' shoulders.

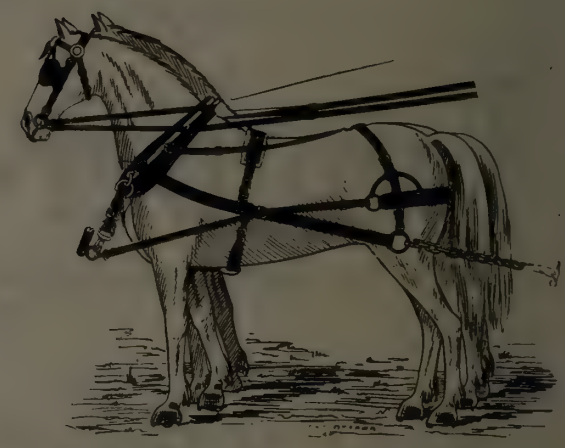
No. 62 Lumber, Hogskin face.

Saddlery and Moccasins

No. 10 Jute Blanket

6 ft. 6 in. long, 80 in. wide, 60 in. lined, made square with gusset and shaped at rump. Weight 13 lbs. 6 oz.

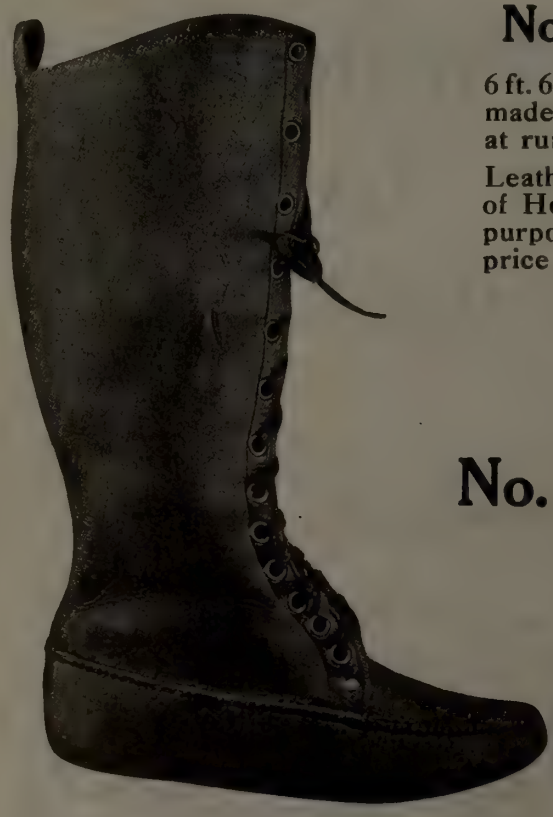
Leather Leg Strap extra. A full line of Horse Blankets for lumbermen's purposes. Write for catalogue and price list.



Michigan Lumber Harness

made in 2 in., 2¼ in., 2½ in., 2¾ in. trace. A full line of Lumbermen's Harness for all sections.

Write for catalogue.



You are Never in Doubt when you Buy of Borbridge.

Patented 1911

No. 152 Long Leg Seamless Heel Draw String Moccasins

The latest improvement in Moccasins, doing away with all seams at heel. Under the old method the heel would come down, and in a short time the wearer would be walking on it, wearing out the stitching, thus causing it to leak and rip. With the new process the heel will not flatten out, will always keep its shape, and there are no seams whatever, making a clean smooth Ripless and Waterproof heel. Made only in the highest quality, all heights of leg, with or without soles or heels.

WRITE FOR CATALOGUE AND PRICE LIST.

You are never in doubt when you buy from Borbridge. We have been dealing with the lumbermen of Canada for upwards of a quarter century.

(REGISTERED)
TRADE CARSS MARK
MACKINAW.

Carss Mackinaws

There is one sure way to create a permanent business among the lumbermen, especially clothing business.

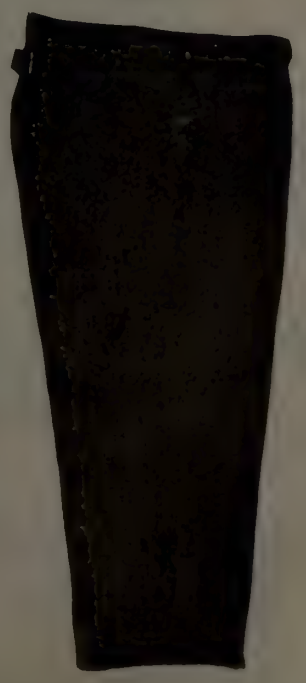
Start out by supplying a few with your garments. If they are good, the news soon spreads. All the men will want the same.

That is the way we did it years ago. Now Carss Mackinaws are recognized as the most serviceable, strong, warm and waterproof clothing for lumbermen.

Carss Pure Wool Mackinaws are the only genuine waterproof Mackinaws made in Canada.

Go where you will in Canada, and Carss are always the standard by which others are measured.

Write us for sample and prices.



THE
Carss Mackinaw Clothing
Company, Limited,
ORILLIA :: ONT.

(REGISTERED)
TRADE CARSS MARK
MACKINAW.

Grant-Holden-Graham

Wholesale Manufacturers **Limited**

Canvas Goods of all Descriptions

Lumbermen's Tents and Tarpaulins

Wagon Covers

Horse Clothing

Repellant Brand Duck Tents

Made from Double and Twisted Yarns,
Guaranteed free from sizing.

Watertight Duck Tents

Absolutely weather and mildew proof.

Feather Weight Silk Tents

Made in all styles.
Easy to pack.
Light
and
Durable

Waterproof Tarpaulins

Factory and Warehouse at 147 to 151 Albert Street

OTTAWA, CANADA

Mr. Lumberman, Your Attention!

WE EQUIP YOUR MEN FROM HEAD TO FOOT

OUR SPECIALTIES

Pure Wool Clothing, Mackinaws, Ettoffes, and Untearable Tweeds

Fancy Mackinaw Coats

Underwear
Long Stockings
Blankets
Towelling
Mitts
Gloves
Socks
Braces
Caps
Pipes
etc.

Top Shirts
Overalls
Sweaters

Draw String Moccasins
Table Oil Cloth
Snow Shoes

Grant-Holden-Graham

Wholesale Manufacturers and Importers **Limited**

Factory 147 to 151 Albert Street

OTTAWA CANADA

A Hubbard Oven In Your Camp

A number 3 Hubbard Oven, 31 square feet of tile baking surface, occupies floor space of 5 ft. x 5 ft. 6 in. Height over all, from 5 ft. 7 in. to 6 ft. 4 in. Shipping weight ***only*** 2,100 pounds. Also made in four other sizes.

The "Hubbard" portable baking oven equipped with "Perfect Rocker Grates" is a sanitary, economical and efficient baking device for lumber camp use. It is substantially built, compact in design, and consumes a surprisingly small amount of fuel.

Accompanying is a list of representative lumber camps using the "Hubbard" oven with perfect satisfaction

Every oven is carefully assembled in every detail before being shipped. This assures the purchaser that there will not be the slightest trouble in erecting the oven at its destination. No special tools are required, and every oven is shipped complete.

Write for prices f.o.b. your station.

Some "Hubbard" Camps

Abitibi Pulp and Paper Co.,
Iroquois Falls, Ont.

J. Lumsden,
Lumsden's Mills, Que.

Graves, Bigwood & Co.,
Byng Inlet, Ont.

Nipissing Mining Co., Ltd.,
Cobalt, Ont.

Quebec Constructing Co.,
St. Anselme, Que.

Morrow & Beatty, Ltd.,
Iroquois Falls, Ont.

The Warren Mfg. Co., Limited

782-784 King Street West Toronto

KLIM

SPELL IT BACKWARD
PURE SEPARATED MILK
IN POWDER FORM
FOR ALL USES
WHERE MILK IS NEEDED

The Canadian Government

knows all about Klim and, therefore, uses it exclusively in all soldiers' camps. Many lumber companies know about Klim and they all insist on having it. Here are six reasons—

Why You Should Use It

Klim is in dry powder form.
Klim is not affected by heat or cold.
Klim is cheaper than fresh liquid milk.
Klim is about half the price of Condensed Milk.
Klim is about a third the weight of Condensed Milk.
Klim has the flavor of fresh liquid milk.

Your Men Will Like It

Does this not prove to you that you should use KLIM the Lumberman's Milk.

Packed in ten pound tins, six in a case, costing $10.20 per case.

A pound makes a gallon.

Your Wholesale Grocer has it.

CANADIAN MILK PRODUCTS

LIMITED

Mail Building - TORONTO

STOCKED BY:

Plants—BROWNSVILLE, Ont.
BELMONT, Ont.
BURFORD, Ont.

W. H. Escott Co., Limited,
Winnipeg, Regina,
Calgary, Edmonton
Kirkland & Rose, Vancouver

Montreal Office—
508 New Birks Bldg.
MONTREAL, P.Q.

The Lumberman's Milk

Sulphite Mills at Hawkesbury, Ont.

The Riordon Pulp & Paper Co., Limited

Spruce and Birch Lumber,

Shingles,
Clapboards,

Railway Ties and Fence Posts,

Hawkesbury Impervious Sheathing.

Wood Supply—Merritton, Ont., Pulp Mills

Bleached and Unbleached Sulphite Fibre, Wood Pulp, for Paper Mills.

Saw Mills at Calumet, Que.

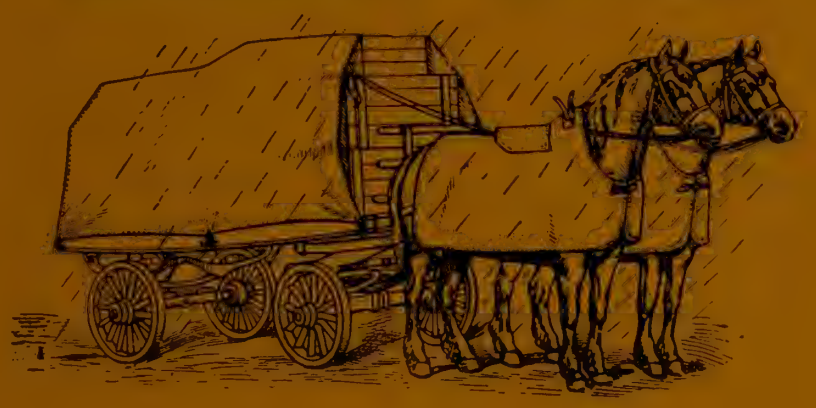
PULP MILLS at: Merritton, Ont., and Hawkesbury, Ont.
LUMBER MILLS at: Calumet, L'Annonciation, Boule, Quennouille and St. Faustin, Quebec
SALES OFFICE: No. 1 Beaver Hall Square, MONTREAL

Smart-Woods LIMITED CANADA

Tents, Horse Blankets

Tents are our chief product. We make a specialty of Tents for every purpose. Wherever Tents are mentioned in any part of Canada "Smart-Woods" immediately comes to mind. For lumbermen we have a particularly fine line of strongly made tents for stable use and also well planned camp tents for from two to eight men. A number of these are kept in stock at all times for rush shipments. We can make up any size or style at short notice from our own "Woods' Non-absorbent Duck." This duck is the finest for Tent use we have been able to find and it is used exclusively in Smart-Woods Tents.

Merchandise and Wagon Covers



We shall be glad to send you particulars and prices of any style of tent.

Lumbermen Should Not Neglect their Horses or Merchandise

Make sure you are well supplied with warm waterproof covers and blankets. We have large stocks of blankets and merchandise covers in proper shapes and full sizes. Let us quote prices and send you samples.

The lines we mention in these pages are by no means our complete list of equipment for lumbermen. We have an illustrated catalogue (84 pages) filled with interesting matter for you. Let us send you a copy to-day.

Smart-Woods LIMITED CANADA

Ottawa - Montreal - Toronto - Winnipeg

Smart-Woods LIMITED CANADA

Where Our Products Are Manufactured

Smart-Woods' Winnipeg Factory No. 1

Montreal Factory No. 2

Toronto Factory

Winnipeg Factory No. 2

TO give you an idea of the manufacturing facilities behind our organization we reproduce illustrations of several of our model factories.

The Smart-Woods Company for many years has supplied lumbermen, sportsmen, etc., with a superior quality of equipment. Our reputation for fair dealing and honest merchandising has travelled from coast to coast.

The result has been a tremendously increased demand from every quarter for products of the Smart-Woods organization. Our manufacturing facilities have been increased more than four-fold in the past few years.

Customers reap the benefits of larger production. We are enenabled to manufacture to better advantage and our distribution facilities have been brought to a point of lowest possible cost.

Send for our catalogue and note the prices made possible for you through our modern merchandising methods.

Smart-Woods LIMITED CANADA

Ottawa - Montreal - Toronto - Winnipeg

Smart-Woods LIMITED CANADA

How We Give Larger Values To Our Customers

INCREASED production means lower individual costs when production is efficiently managed.

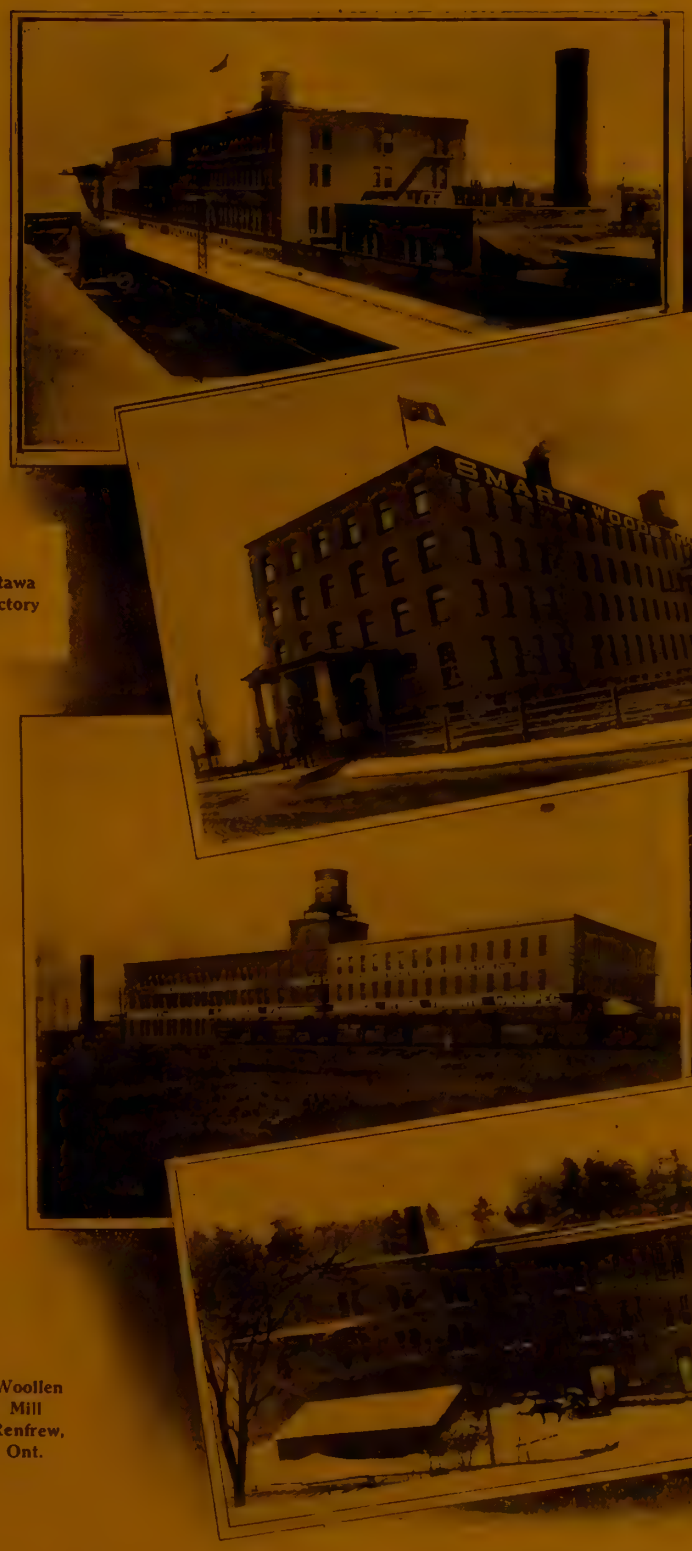
That was the idea upon which we worked when our many plants were organized under one managing head. Results have amply proved our contentions.

Never before have we produced better quality in all our many lines of equipment for lumbermen, etc. In the face of rising costs, which are staggering the majority of organizations, we have brought out our 1916 line at prices as low as last year.

Lumbermen are quick to appreciate better values in their buying. We have the greatest assurance from business already consumated that the present season will outstrip anything we have done heretofore.

We feel this business has resulted first, from our reputation for quality and fair dealing, and second, from our exceptional values as a direct result of our present production methods.

We shall be glad to hear from you in reference to any equipment you need.



Smart-Woods' Montreal Factory No. 3

Ottawa Factory

Bag Factory No. 1 Montreal

Woollen Mill Renfrew, Ont.

Smart-Woods LIMITED CANADA

Ottawa - Montreal - Toronto - Winnipeg

Smart-Woods LIMITED CANADA

Lumbermen's Supplies

Mackinaw Jumpers

Our Mackinaw Jumpers, as illustrated, are the finest for lumbermen. Take the place of rolled neck sweater and are more serviceable. Light and warm, button close up around neck, and are far superior to coat or sweater.

Socks, Mitts, Gloves

We make a very serviceable grade of Long Stockings in Worsted and All Wool. Any weight and in Black or fancy. Our special socks are made in our own factory and are strictly all wool. Our Mule Skin Gloves with cord fastener are made in large and full fitting sizes. Also made in Wetproof Horsehide and Calfskin. A complete line of mitts in wool, etc., for the lumber trade.

Mackinaw Coats

We have a complete line of Mackinaws suitable for lumbermen. Made in Norfolk style, with shawl and tab collars. 35 inches long and well tailored throughout. Made in Brown, Black Check, Red and Black Check, and several plain colors. Sizes 36 to 46. We also make regular Hunting Style Coats in Drill, Corduroy, and Bedford Cord.

Shoe Packs, Moccasins

Our own make of Horsehide Moccasins and Drawstring Shoe Packs are the very highest grade that can possibly be manufactured. Every pair guaranteed waterproof and rip-proof. We will replace any pair free of charge that do not prove satisfactory. Supplied in any size or length and in light and heavy weight leathers.

Underwear

Our line of men's underwear is knit to our special order. We can supply you with any style or weight of garment desired in ribbed or flat knit. In these lines we have introduced special features that can be secured only through our company. Our ever-increasing business in underwear is an indication that our new ideas are popular.

Knickers, Breeches

Men's Mackinaw (Bird's Pure Wool) Knickers can be supplied in Black shades only. They have top and hip pockets. Strap or wool cuff. Convenient and comfortable. These are made also in heavy tweed. We make perfect fitting Riding Breeches from Drill, Corduroy, Bedford Cord, Black and Fancy Mackinaws and Moleskin.

Smart-Woods LIMITED

CANADA

Ottawa - Montreal - Toronto - Winnipeg

Mill Construction Buildings

British Columbia Douglas Fir in a Mill Construction Building Being Erected in Toronto

MILL CONSTRUCTION FOR 100 YEARS HAS BEEN A STANDARD TYPE OF BUILDING FOR FACTORIES, MILLS, WAREHOUSES, AND STORES. IT IS DESERVING OF CAREFUL CONSIDERATION BY EVERY PROSPECTIVE BUILDER OF SUCH STRUCTURES. THE ADVANTAGES OF THE MILL CONSTRUCTION TYPE OF BUILDING ARE:—

1. A saving of from 10 to 35 per cent. in initial cost.
2. Reduction in insurance rates. (With sprinkler system the rate on mill construction buildings is less than that for fireproof types of buildings unsprinklered, and but slightly greater than the rate for sprinklered fireproof buildings.)
3. Permits alterations and additions to be easily and cheaply made.
4. It is specially adapted for structures for temporary use. Where the future development of any portion of a city cannot be accurately forecasted, making the selection of a type of building for permanent use difficult, the adoption of the mill construction type is indicated. Also where it is necessary to obtain an immediate revenue and conditions do not justify the erection of a permanent structure, the mill construction building will best answer the purpose.
5. Sanitary and healthful.
6. Saving of time. Of all types of buildings the mill construction type is the most speedily erected.

British Columbia Douglas Fir the Best Wood for Heavy Timber Mill Construction

British Columbia Douglas Fir is the strongest wood in the world available in abundance and in all sizes, for posts, beams, girders, and slab floors. It increases in strength with seasoning to a remarkable degree. It is very free from sap, does not twist, and is easy to work.

The superiority of British Columbia Douglas Fir over other woods for mill construction is recognized by the leading engineers and architects throughout Canada. British Columbia Douglas Fir is obtainable in every part of Canada at favorable prices.

For further information regarding British Columbia woods for use in mill construction buildings address the B. C. LUMBER COMMISSIONER, EXCELSIOR LIFE BUILDING, TORONTO, or the Chief Forester, Victoria, B.C.

British Columbia Has a Wood For Every Use

Nutritious Camp Food

TO get the best out of your men feed them wholesome, nutritious food. In the various products of our mills you will find the highest quality prevails. The following lines are excellent for camp use:—

Tillson's Rolled Oats

Rainbow Flour
Top Patent Manitoba—for high quality bread

Sunlight Flour
Strong Bakers Flour

Goldie's Star
Famous Blended Flour—for general use

Lily Flour
For Pies and Pastry

Split Peas, Pot Barley and White Beans

Bran, Shorts and Western Feed Oats

Canadian Cereal & Flour Mills Co.

Limited

Toronto, Ont.

SUPPLIES

TO you who are about ready to put in Camp Supplies, we have a special message—to tell you that we purchase in a very large way and are at all times able to make offerings of anything in the grocery line at attractive prices, and owing to our new and modern equipment are in a splendid position to render good service in connection with any orders for goods with which you may favor us. Our business is large enough to be run on a department plan and in consequence we are able to specialize in all the leading lines. We have Coffee, Tea, Canned Goods, and Dried Fruit departments, all of which are controlled by men who are skilled in their work and are experts in their particular line.

Our coffee plant is equipped with the latest and most improved machinery that is known to the trade, and we are able to produce as fine an article as is possible. In Teas we are very large handlers and buying and selling in big blocks we are enabled to pick up kinds which are particularly suited for the camp—good strong cup quality with some flavor and at a moderate price.

In Canned Goods we are recognized as perhaps the heaviest dealers in the Dominion and always have some attractive trades. You, who are not already dealing with us, get in touch now—perhaps we can save you some money and also give you some satisfaction.

We Offer:

Tomatoes	Gallons	3.75	Lombard Plums, heavy syrup, 3s		1.25
Refugee Beans	"	2.75	Santo Class Prunes, 60 x 70, 50s		8½
Pumpkin	"	2.45	Choice Muir Peaches, 50s		6½
Tomato Catsup	"	4.75	California Valencias, 50s		7¾
Rhubarb	"	1.65	Chests Camp Blend Mixed Tea		17
Peaches, peeled and pitted	"	3.85	Chests Camp Blend Black Tea		19
			Tins Camp Blend Coffee		19

H. P. Eckardt & Co.

Wholesale Grocers

Church and Esplanade - - - TORONTO

Saw Mill at Midland, Ont.

MANLEY CHEW

Manufacturer of

White Pine

and

Norway Lumber

Shipments by Rail or Water

HEAD OFFICE AND MILLS:

MIDLAND, ONTARIO

A view of yards, showing excellent shipping facilities.

"ASBESTOL" Meets the Lumberman's Every Requirement

The Lumberman above all Glove wearers requires a glove that wil stand the roughest kind of wear, also a glove that will resist rain, slush and long exposure.

ASBESTOL
REG. IN U.S. PAT. OFF.

EISENDRATH'S
CELEBRATED
HORSE HIDE

GLOVES and MITTENS

have been endorsed by thousands of Lumbermen to stand each and every one of these severe tests. What's more—**"ASBESTOL"** can be washed with warm water and soap and will dry out soft and pliable.

Dealers!—Your jobber will supply you with "ASBESTOL" Gloves and Mittens. Ask him to send you Catalogue showing "ASBESTOL" in many different styles.

Eisendrath Glove Co.

Chicago - Ill.

Manufacturers of

WOOD PRODUCTS

of Every Description

Experienced Production

Lumber,
Box Shooks,
Building
Material,
Sash, Doors,
Windows,
Hardwood
Flooring,
House Trim
in Pine and
Hardwoods

There is a certain quality about all our wood products that says as plainly as if labelled "here is a product that was fashioned by men who knew their business."

Dependableness and uniform good quality are as sure in our products as a smooth running organization can make them. Perhaps that is why our wood products are favored by so many discriminating buyers.

Portable Houses

We will gladly quote you on any line of wood-made article possible for us to make. We make only one grade and that the best, yet our prices are not above the market.

Write us.

Georgian Bay Shook Mills

Limited

Midland : Ontario

National Oats

An unbroken chain of careful supervision marks the progress of NATIONAL OATS from the field of the grower to the finished shipment in sacks direct to you.

Hundreds and hundreds of acres of the choicest grain is sent to us annually, to be handled by OUR MORE THAN SEVENTY ELEVATORS in the very best oat-growing sections of Western Canada.

From Field to You

National Oats—the nationally accepted standard of fine grain, purity, and cleanliness. Lumbermen all over Canada are ordering their winter supplies of National Oats right now. Quality has brought the reputation of our product to the point where the lumbermen who know naturally expect NATIONAL OATS when they order the best.

We make it a special point to use heavy, strong. well-sewn bags in our sacked shipments, in anticipation of the rough handling incident to camp use.

Send for prices to-day, while you can make sure of your shipments.

NATIONAL ELEVATOR CO., LIMITED

The Oat Specialists

Calgary, Alta. **WINNIPEG** **Port Arthur, Ont.**

McClary's Camp Ranges And Heaters

These are camp necessities.

Constructed specially for Lumber, Mining, and Railroad Construction Camps.

McClary's "Algoma" Steel Range, Burns Coal or Wood.

McClary's "Camp Comfort" Stove.

Keep the Bunk House Warm

—the crew contented and comfortable—when the nights are damp, chilly or bitter cold.

We carry all kinds of camp cooking supplies.

Write our nearest branch.

McClary's

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N.B., Hamilton, Calgary, Saskatoon, Edmonton

No. 36. Men's 10 in. Draw String

No. 20. Men's 6 in. Draw String

Palmer's

"Moose Head Brand" Oil Tanned Shoe Packs and Moccasins

Over 40 years ago we started manufacturing the "Moose Head Brand" lines. We were the first in this country to produce Shoe Packs. Our supremacy in this field has never been questioned.

Our range of Draw String non-rip Shoe Packs from 6 in. to 17 in. lengths is most complete.

Quality marks the manufacture of our footwear from start to finish. We select only first grade packers steer hides. Our waterproof oil tannage is the best in the world. For wear, comfort, and waterproof qualities they are unequaled.

If your supply house does not carry our lines write or wire us direct, and we will see that you are supplied. Orders filled promptly.

Let us send you our 1916 catalogue. We have sizes and styles to suit every lumberman.

JOHN PALMER CO., Ltd.

FREDERICTON, N. B.

McFadden & Malloy, SPRAGGE, ONTARIO

Lumber Manufacturers

SAWMILL AT SPRAGGE, ONT.

Red and White Pine Lumber

Shipments by Rail or Water

ACME

TRADE MARK

Lumbermen's Socks Sweaters Mackinaw Coats

Army Oil Tan Boot

Gloves Mitts Moccasins

SHOE PACKS and OIL TAN LARRIGANS

Write us for prices and samples

Acme Glove Works, Limited, MONTREAL

Specifications:—

Hardwood Frame,
1¾ x 3¾ in.
Dowels, ⅞ in.

Lower Spring,
17 in. from floor.

Upper Spring,
52 in. from floor.

Total Height 62 in.

Size,
2 ft. 6 in.—3 ft. 0 in.
x 6 ft. 6 in.

List Price,
$10.00

This New Spring is shipped K. D. and is easily set up.

Only 8 bolts to be handled; no braces, no riveting.

Dowels for pillows easily inserted.

Best value on the market

The Parkhill Double-Deck Wooden Bunk Bed

Just What Every Lumber Camp Needs

Sound sleep makes the men contented and contentment means better work every time. Sound sleep gives your men the health and vigor to accomplish better work the following day.

Give your men clean comfortable bunks and they will appreciate your thoughtfulness.

This wooden bunk is vermin-proof and sanitary at all times, because there are no grooves anywhere in the frame to harbor vermin—every piece is finished smooth and flush.

Plenty of room in the lower bunk, and the upper one is low enough to get in and out of conveniently.

The Parkhill Twisted Link Fabric Springs suspended with oil-tempered helicals give a maximum of comfort and strength.

Frame is of hardwood, and the whole is so constructed that the bunk is absolutely rigid, and capable of standing any shock or strain. ***Ask us for further information—to-day.***

The Parkhill Manufacturing Co., Limited

Successors to

The Alaska Feather & Down Co., Limited

Makers of Beds, Steel Couches, Springs, Wood and Steel Bunks, Mattresses and Pillows

MONTREAL — WINNIPEG
GUARANTEED
ALASKA
BEDDING
TRADE MARK REGISTERED

WINNIPEG MONTREAL VANCOUVER

New **RAILS** Relaying

12 to 80 pounds per yard.

LOGGING CARS

Jno. J. Gartshore

58 Front St. West, Toronto

PROCTOR VENEER DRYER

Dries enormous amount of veneer perfectly flat and pliable at minimum cost, without checks or splits

Send for catalog and list of users

The Philadelphia Textile Machinery Co., Philadelphia

"Canada First" Evaporated Milk

The handiest and most inexpensive milk for lumber camp use. No bottles to break. Milk cannot spoil. Always fresh and sweet. It is wholesome and appetizing in cooking, tea, coffee, over fruit or any place where ordinary milk is used.

Handy - Appetizing - Inexpensive

"Canada First" Evaporated Milk can be used to the last drop. There is none wasted in our handy cans. Lumbermen are reordering "Canada First" for all parts of the country. Better lay in a stock for your camp and be sure of a good supply of pure milk.

Send for special lumbermen's proposition

The Aylmer Condensed Milk Co., Limited

AYLMER - ONTARIO

Regina Branch:
Cold Storage Bldg., 7th Ave. and Halifax St.
S. McCrimmon, Mgr.

Winnipeg Branch:
704 Merchants Bank
G. W Nickerson, Mgr.

Tested to 20% Over Admiralty Proof.

Hingley's B. B. B. Chains

Stocked by all principal jobbers everywhere.

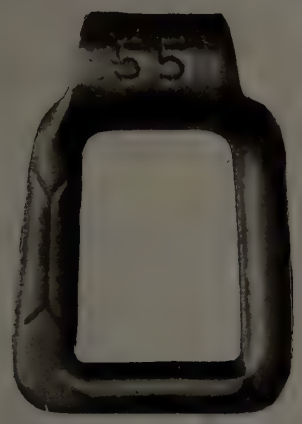
General Agents for Canada
Drummond McCall & Co.
Limited
Montreal

Specialties: Boom Chains of all Descriptions, Rafting, Log Loading, Quarry, Mining, Crane and Sling Chains, All hand-made by expert workmen from Hingley's Netherton refined iron.

Agents for New Brunswick and Prince Edward Island
F. R. Whipple,
West St. John, N.B.

N. Hingley & Sons, Limited, Netherton Iron and Chain Works, Dudley, England

The New LINK-BELT



The New Link-Belt

Ewart LINK-BELT, originated by us forty years ago, has been re-designed, and several sizes of the new design are now being supplied.

The distribution of the metal has been rearranged to produce a link one-fifth stronger than the old, without additional weight, without advance in price. Interchangeable with the old standard links and attachments.

This trade mark >——< on every link

CANADIAN LINK-BELT CO., LIMITED

1189 KING STREET WEST - TORONTO

A. R. Williams Machinery Company, Limited, Vancouver, B. C.

CROWN BRAND CORN SYRUP

Cheaper and Better than Molasses

Barrels, about 700 lbs.	Pound	.4
Half Barrels, about 350 lbs.	Pound	.4¼
Quarter Barrels, about 175 lbs. . ..	Pound	.4½
2 Gallon Wooden Pails, 25 lbs. each,	Per Pail	$1.50
3 Gallon Wooden Pails, 38½ lbs. ea.,	Per Pail	2.10
5 Gallon Wooden Pails, 65 lbs. each,	Per Pail	3.35

Prices subject to change without notice.

FREIGHT PAID

to all Steam Railroad Stations in Quebec and in Ontario East or South of Sault Ste. Marie, Sudbury, North Bay and Mattawa inclusive, to all Lake Ports during season of open navigation.

Any Wholesaler will Supply You

The Canada Starch Co., Ltd.

MONTREAL

DO YOU KNOW MR. LUMBERMAN

That we make the finest grade of Shoepacks in the country?

That every one we turn out is **absolutely** guaranteed?

That they are all Hand Made by expert workmen?

That our method is the Hand Sewn **Draw String** process?

That our Shoepacks are perfectly water tight?

After saying "Yes" to the above questions there is no reason why you should not have our latest Catalog. A Postal Card will bring one.

P. T. Gendron Shoe Pack Co.

Midland, Ont.

Over Half A Century

of experience in putting up camp supplies enables us to guarantee you every satisfaction in using our products.

The "Matthews-Blackwell" products are favourably known in all parts of Canada. A trial order will démonstrate their superior qualities.

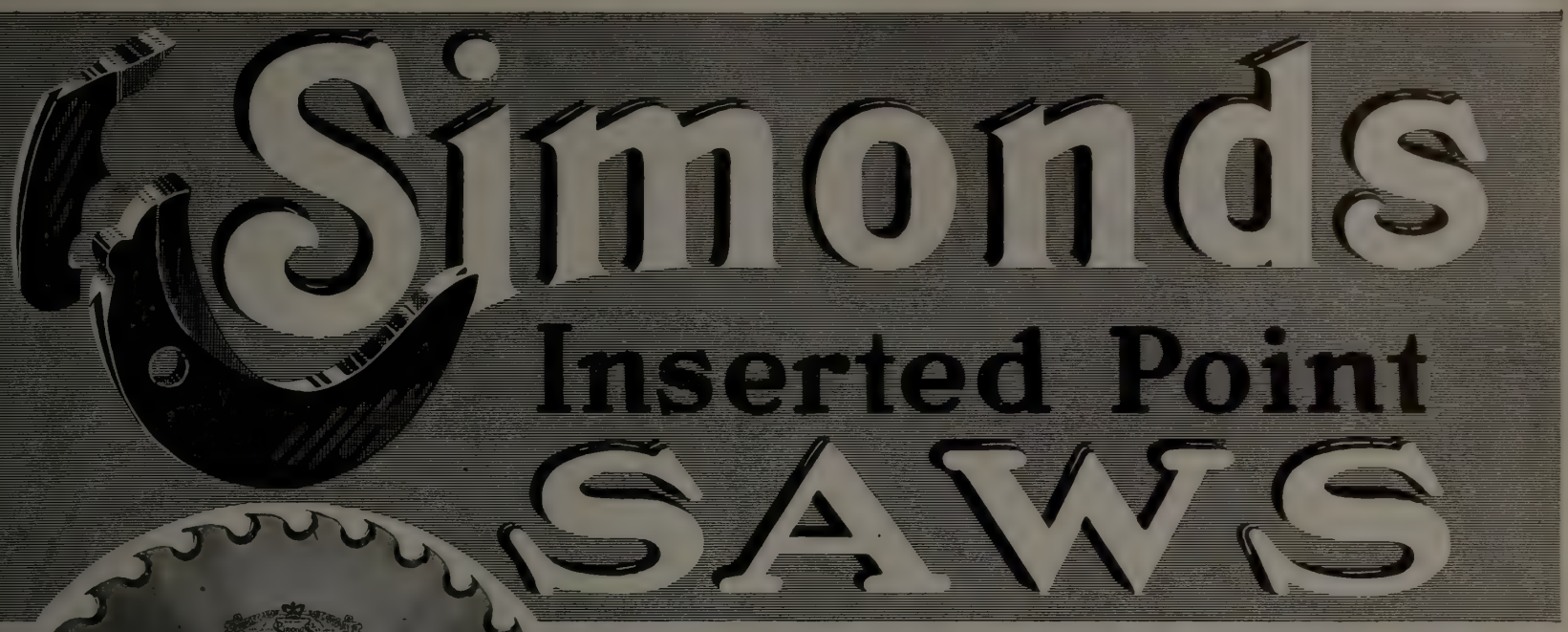
Heavy Canada Mess Pork
Heavy Short Cut Pork
Clear Fat Backs
Long Clear Bacon
Smoked Hams and Bacons
Pure and Compound Lard
Fresh Killed and Frozen Beef
Butter, Cheese and Eggs

Meats Specially Cured for the "Keep Over" When Desired

Write, wire or phone for prices, and our representative will wait upon you

Matthews-Blackwell Limited

Toronto Montreal Hull Peterboro Brantford



You can now secure practically any standard style of changeable tooth in the Simonds Saw plate. We furnish tooth styles known as B, D, F, K, 2, 2½, 3, 4, 5, or I X L in Simonds Inserted Point Saws. The superiority of these saws is demonstrated by their use. Simonds Saws stand up better and give universal satisfaction. Write us for more facts about them. Specify the sizes you want and let us quote prices. Send for 1916 catalogue.

Simonds Canada Saw Co., Limited

St. Remi St. and Acorn Ave.

Vancouver, B.C. **Montreal, Que.** St. John, N.B.

(In the U.S.—Simonds Mfg. Co.)

Complete Your Lumber Accounting
"Swift as Lightning!"

The marvelous simplicity of the Dalton, the almost human intelligence displayed by this wonderful ten-key adding and calculating machine in working the most intricate problems in multiplication and division that occur daily in the lumber business, is a revelation to those familiar only with the ordinary adding machine.

The Dalton automatically places the figures in the proper columns, and gives a printed record of the calculation. On account of the extreme simplicity of operation, it is not merely the fastest adding and listing machine on the market, but is also the most versatile, as it performs any calculation required in the lumber business.

Tell us what kind of calculations you have and we shall show you how easily the Dalton handles them.

Dalton

United Typewriter Co., Limited

135 Victoria St., Toronto

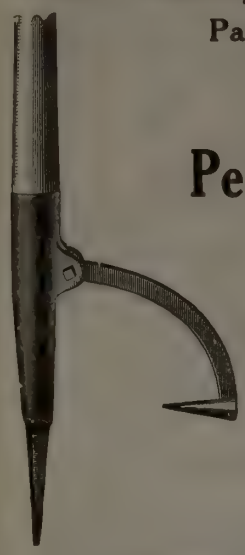
OFFICES IN ALL CANADIAN CITIES

The Peavey Manufacturing Company

Parker Street, Brewer, Maine

are now manufacturing their improved

Peavey Patent Cant Dog



with Taper Solid Socket, all in one piece.

This is the **Lightest, Strongest and Most Practical Cant Hook made.**

We carry a large assortment in stock comprising five sizes and are prepared to fill orders promptly.

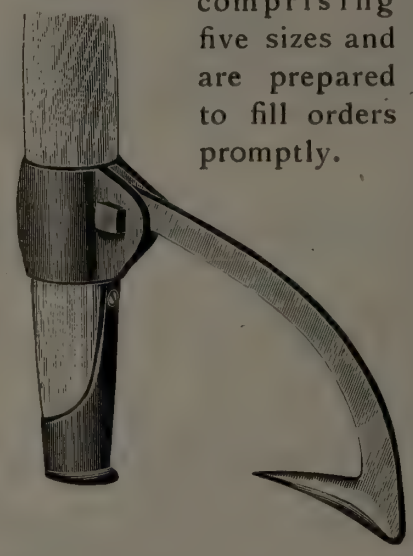
Malleable Clasp

Cant Hooks

with extension Toe Rings, Duck Bill or Round Bill Hooks.

New Catalogue showing full line of Lumbermen's Tools is now ready.

Would be glad to have you send for one.



Send us your name now and get it on our mailing list.

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TORONTO

Montreal Winnipeg

Canada Lumberman and Wood-Worker

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The Logging Outlook for 1916-1917

The approach of the logging season of 1916-17 finds the lumber manufacturers of Canada face to face with a series of problems such as they never had to deal with before, and for which there is little or nothing in the way of definite material upon which to base their decisions regarding the extent of woods operations that will be advisable.

Never before have the operators experienced such a uniform series of adverse conditions relating to logging operations as those with which they are confronted today. These conditions can be summed up briefly. In the matter of expense alone there is much good reason for a reduction of woods operations next winter. Labor has gone up rapidly in cost and has reached figures that have never before been dreamed of, while at the same time, the efficiency of such labor as is available is far below what it has ever been before; so that a simple comparison of wages does not tell the whole story. A comparison of outlay for labor, with log production, will show an astonishing state of affairs during the coming winter, if conditions continue as they are today, and no one at present can see the slightest indication of improvement in this respect.

The cause of the increased cost of labor is understood by everyone. It is scarcity of men, resulting from the great numbers who have gone to the front, or have found better pay in the production of munitions and other materials for which the war has created an urgent demand. This being the case, the inclination of all lumbermen is to take the matter philosophically and to say to themselves that the business of the war must have first place.

For reasons of a similar nature the cost of food and equipment for lumber camps has also soared, until today food stuffs alone are costing the camps from 25 per cent. all the way to 100 per cent. and even more, in excess of the cost in the days before the war; and again, it is a case of looking upon the bright side of things as far as possible and considering that the high cost is, in a measure, helping us to win the war, by maintaining steady employment for those who remain at home.

Then there is the market situation to consider. Like the other elements of the case, this is more or less of a mystery, so far as its future course is concerned. No one has any uncertainty about actual conditions prevailing today. In connection with nearly all markets, trade is abnormally quiet. Home consumption has been reduced to a minimum. Export trade has been spasmodic, especially the export trade with the United States. Periods of considerable activity have been common of late months in the demand from the United States, and following closely upon them have come periods of idleness, which indicate that such activity as the United States is enjoying today is very closely regulated by the volume of orders received, or in sight, for the production of war materials for the Allies.

The export trade with Great Britain has also been spotty, but on the whole characterized by a good demand for anything that can be delivered; but delivery has been the fly in the ointment, as everyone knows. Many an exporter has looked across the Atlantic, figuratively speaking, and felt that the English market resembled a fine fruit tree standing on the other side of a very high wall.

So we do not know what the future has in store for us in any direction, and the cue for all seems to be to act as nearly as our means will permit in a cautious and normal manner, so that we may be prepared to strike a happy mean, and be in shape to make the best of whatever industrial and trade conditions develop.

It is a time for considering our business activities in the light, not only of their effect upon our own bank accounts, but, so far as possible in the light of their effect upon our whole national well-being. Manufacturers who are financially able to do so, will be justified in operating to a fair extent for the sake of assisting in keeping the wheels of industry turning; and with such conditions as we have today there is no reason to fear that those who do so will be the losers thereby, for unquestionably the output during the coming winter will be curtailed to such an extent that available supplies next year will not be too heavy for the markets.

In the present issue of the Canada Lumberman we publish the views of a number of lumbermen upon this situation, and we have gathered together also an interesting variety of descriptive and practical articles about the logging industry, which will give our readers a good conception of its greatness and variety, and will show them, we believe, that even this time-honored industry in which methods have long ago reached a considerable degree of standardization, is continually developing new lines that result in important progress.

The Reader's Viewpoint on Current Topics

Shortage of Labor Creating Critical Production Situation

In the following letters we publish the opinions of a number of well-known operators in regard to the present labor situation. The interference with shipments which has already resulted from labor shortage and the curtailment of output which is likely to develop during next winter, are matters of great concern to everyone connected with the industry. There is such unanimity of opinion upon these points that, by presenting the views of a few prominent operators we feel we are giving everyone in the industry a fairly complete and quite reliable review of the situation which will enable them to regulate their own operations more intelligently than would be otherwise possible. We would be glad to have other letters upon this subject, especially from operators who have anything valuable in the way of suggestions to make as to the best course to pursue during the coming winter.

Wages Increased by Eighty Per Cent.

Editor Canada Lumberman:

Labor and supplies for logging operations are this year much more expensive than in former years. We find the comparisons work out about as follows:—

	1916-17 wages	1915-16 wages
Road cutters	$30 to $33	$16 to $20
General hands	34 to 37	20 to 22
Log makers and teamsters	37 to 40	24 to 26
Average	38	21
Advance	80 per cent.	

The cost of supplies this year is extremely high. Pork, beef, sugar and flour have all advanced about 100 per cent. above the prices prevailing before the war.

Labor, even at its higher cost, is restless, and men are hard to get who will stay steadily at work. We feel, therefore, that the cost of logging will be practically double what it was a year ago, and unless the price of lumber advances in proportion (which it has shown no signs of doing so far) the lumbermen must face a heavy loss if they take out logs this winter.

No building operations of any kind are in sight. The only markets of any consequence seem to be in the manufacturing lines and in box making.

Pulp and paper mills seem to be getting advances in box price of their finished product, corresponding with the increased cost, and so they can pay these higher rates, but up to date, no considerable advance has occurred in the price of lumber. The writer cannot see any encouraging prospect of such an advance becoming effective, so as to equal the increased cost.—Manufacturer.

* * *

Everything Going Up

Editor Canada Lumberman: Three Rivers, P.Q.

The labor situation is certainly serious. Men are very hard to get and when you have them you are sot sure of keeping them a day. Quite a number of young men from our mill have gone west for the harvesting, and then contractors that are putting up some buildings are paying all sorts of wages, so that it makes the men unsteady, and they jump from one place to another. I was telling a party the other day it was lucky the schools were not open or we would have to shut down as lots of the bigger boys are working.

Regarding winter operations it is hard to say at present what the situation will be. It looks as if it was going to be hard to get all the labor wanted, but, of course, all mills and most of the contractors will be shut down, which will give a few.

Supplies are high, which is likely to make the cost of getting out logs higher.—The Burrill Lumber Company.

* * *

St. John Not Actually Affected by Labor Shortage

Editor Canada Lumberman: St. John, N.B.

So far as St. John is concerned we have not felt the labor situation very acutely. There has been sufficient labor for our mill and factory during the entire summer, and we do not anticipate any shortage until the winter season starts in, when, as you know, the mills cease operation in this section of the country. At the present moment a number of the mills are idle, on account of the prices in the American market being so poor. Also, within the next few weeks several other mills will cease operations for the want of logs.

As to our mills in Quebec, they are somewhat off the line of the railway, in a brand new country, and labor, while plentiful, is not of the right kind. As to what the winter will bring forth for the seeds at our camps we cannot say. Operating costs are steadily advancing both on account of the quality of the labor and price of supplies. It looks very much as if logs would cost considerably more next winter than they have in late years. Of course, this all depends upon the situation when the war is over.—Murray and Gregory, Ltd.

* * *

Higher Lumber Prices Required to Justify Logging

Editor Canada Lumberman: Bathurst, N.B.

The labor situation in this district is a very serious one at the present time, owing to the shortage of men and the high wages. We find that not only do we have to pay more money, but we get very much less efficient service. We always find this to be the case, that the more you pay men the less service you get from them. The trouble today is that there are probably at least two jobs for every available man, and this makes for their independence. Wages have gone up here fully 25 per cent. above normal and we cannot get enough men to operate our mills and look after our shipping. This work is very seriously handicapped.

Regarding men going into the woods, up to the present we have been unable to start any camps owing to the fact that the men's ideas of wages are so extravagant that we do not feel it safe to put them in. We are simply waiting to see what will turn up, and we are hoping that when the harvest is reaped men will be somewhat more plentiful and more reasonable in their demands. The trouble is that the lumber business cannot stand the increased cost of raw materials and wages that we would have to spend this year if we were going to get out a new crop of logs. Unless there is a decided improvement in the value of lumber the lumbermen might as well lie back and do nothing this winter, as we see little prospect of getting costs back when we come to sell the manufactured article. We certainly should get an advance of 20 to 25 per cent. next year if the present conditions as to cost prevail throughout the winter, and we see very little prospect of their being lowered very materially.—Bathurst Lumber Company, Limited.

* * *

Logging Will Cost Three to Four Dollars a Thousand More

Editor Canada Lumberman: Blind River, Ont.

The labor situation is a problem in this part of the country. We find it very difficult to keep sufficient men to keep our mill running, and, so far as the woods operations are concerned, we do not intend to do over one-half of what we did last year. For instance, we ran six camps last winter, and I doubt whether we will run three this year. We find labor very scarce and unsteady and know that it will be very hard to get woodsmen.

Wages started off here at $26 to $35 per month, but I understand now that they are up to $30 to $40 per month and the men are still looking for more. Just where the wages will get to remains to be seen.

I understand that there are some lumbermen throughout the country who have had fires through their limits, who are really forced to go in and operate. Again, the pulp people are getting enormous prices for their pulp and they are after a full stock. The lumber prices do not warrant the lumbermen making this extra effort. Any well informed lumberman understands, if he intends to operate this year, that there will be an additional cost above operating last year of from $3 to $4 per thousand feet, and unless they can see a better lumber market coming, there is not very much inducement for him to go in. However, the companies that have plants and are organized, hate to stop and break up, as it means practically a new organization when they start again, and I presume some of them will keep going in a somewhat curtailed manner.—John R. Stover.

* * *

Will Operate on a Small Scale Only

Editor Canada Lumberman: Haileybury, Ont.

We are not figuring on doing very much this season until the first of November or thereabouts. Labor is going to be very scarce, or in other words, to get the labor high wages will have to be paid, higher than the lumber trade can afford, along with the high cost of necessities, provisions, etc. We have not felt the labor shortage so much until recently, when farm labor became in such demand. We are not preparing to do any definite amount of operating other than just go along with the conditions as they exist.—Conkey & Murphy.

* * *

Labor Scarce but the War Comes First

Editor Canada Lumberman: Waubaushene, Ont.

The labor situation here, I presume, is the same as at many other places, possibly a little more acute, as so many of our able-bodied men, both married and single, have enlisted. We are short of men and only able to run part of our mill. However, we are doing the best we can under existing conditions. We consider the war has first claim,—a successful ending is what is required.

We cannot say at the present time what condition will exist in the camps

this winter, as we have not commenced operating yet, but from present appearances we think there will be a shortage of men, and inferior workmen offering. This, together with the high price of supplies and all other material used by lumbermen, makes the future for those engaged in the lumber trade not very bright. The result must be higher prices next year for lumber, or those in the trade will have to go out of business.—W. J. Sheppard.

* * *

Expect High Costs Till End of War

Editor Canada Lumberman: Fassett, Que.

The labor situation is as bad here as we have ever seen it. We are experiencing trouble at our plant, as well as in the woods, and at the present time are short of men for grading the railroad. This work is usually done by foreigners, but it seems impossible to get them at this time. We contemplate cutting our usual amount this season, and while we expect to be more or less handicapped for want of labor to cut logs, we think that by the fall, we will be able to secure a fair number of men.

We find that wages have increased all around about two per cent. Supplies have also increased in price, but to what percentage, we are not in a position to advise.

We do not look for conditions to better so long as the war lasts.—Fassett Lumber Company, Limited.

* * *

Getting the Men but Paying Higher Wages

Editor Canada Lumberman: Toronto, Ont.

While we had for a short time some difficulty in obtaining men for our preparatory bush work, nevertheless, we have secured all the men that we require. During the past two weeks, we could have secured a large gang of men for bush work for our log operatioss had we required them, but inasmuch as we have not decided the question as to operations, we cannot very well advise as to the labor conditions as respects our operations.

Wages are, of course, much higher than in other years, and the price of supplies, principally pork, has advanced very materially. We consider that the lumbermen should increase the price to compensate for the increased cost of operations.

Ae regards the sawmill operations, we have not had any great difficulty in obtaining our requisite number of men. Wages have been increased proportionately with other labor.—Standard Chemical Iron and Lumber Co.

* * *

Everything Going Up But Lumber

Editor Canada Lumberman: Louiseville, Que.

It is early for us to say what the labor situation will be for next season's logging operations, but, so far as we can judge, labor will be scarce and wages high. As for our milling operations here, we had to raise the wages of our men about 10 per cent. only lately, on account of the high cost of living, as laborers find it very difficult to live with normal wages, everything being so dear.

We shall probably have to reduce the cut of our logs next winter on account of the scarcity of labor and also on account of high wages, and it is our belief that it will be quite a problem to cut the usual quantity of logs.

Everything manufactured has advanced in price. About the only manufactured goods that have not gone up, and in fact in some cases have gone down, is lumber, and, of course, if cost of labor keeps on advancing and price of lumber decreasing, production will be reduced. The same cannot be said of pulpwood, as it is in great demand and paper manufacturers are making good profits.—The Tourville Lumber Mills Company.

* * *

Throwing Away Stumpage

Editor Canada Lumberman: Blind River, Ont.

This is the worst fall I ever experienced in Canada, so far as the scarcity of labor is concerned. The men have all gone away to the front and I don't know what we can do. Last year we employed 600 men, paying them from $15 to $26 a month. This year we have cut down to 175 men and wages are running from $30 to $40 per month. The higher the wages are the less the results we secure from the labor. Every lumberman is cutting down around this vicinity. We have only started one camp yet and cannot get any men, but think that later on after the harvest, and when the mills have closed down, there will be more men available.

Our operating costs will be double this year. With the high cost of supplies and labor we will operate at a loss and throw away our stumpage.—J. H. Macdonald Lumber Company.

* * *

Labor Cost Increasing Production Cost

Editor Canada Lumberman: Penetanguishene, Ont.

The labor situation is indeed serious. For a while we had absolutely no shipping gang, and did not make any shipments for two weeks or more. We are getting very far behind with our orders. The labor, also, is not expert, and the increased cost of wages is driving up the cost of production. What the percentage is we are not able to determine, as it is spread over our season's operation.

At this writing we expect to do very little in the camps this year unless we are forced to go in, as there is every possibility of loading oneself up with a lot of logs at high cost with the probability of not being able to realize more than you are putting into them.—The C. Beck Mfg. Company, Limited.

* * *

May Reduce Cut by One-third

Editor Canada Lumberman: Lyster, Que.

We are experiencing a shortage of labor, both at our mills and in our camps. We are approximately 25 per cent. under-manned.

All of our work in this section is done by jobbing, and the price so far has increased 25 per cent. over previous years' operations.—The Lotbiniere Lumber Company.

* * *

Mill Wages Higher than Ever Before

Editor Canada Lumberman: Midland, Ont.

As yet, it is too early to give you the information asked for about our bush operations, as we have only recently sent our superintendent up to make a start. We anticipate, however, that labor will be scarcer than last year and wages higher, although this may be remedied to a certain extent as a result of some lumbermen not operating to the extent they did last year.

As far as our mill work is concerned we find a decided scarcity of labor with a result that wages have gone substantially higher than we have ever paid before with no prospects for any improvement for the balance of the season.—Chew Bros.

* * *

Supplies Costing Much in Excess of Normal

Editor Canada Lumberman: Ottawa, Ont.

There is so doubt that there is a shortage of labor for the lumber business, but I am hopeful that with the conclusion of the harvest these conditions will become less acute.

With regard to the prices of supplies for the bush operations, it is, of course, well known that the present prices are far in excess of normal, and the cost of the bush operations this coming winter will, therefore, be considerably higher than in previous years. This advanced cost will also be affected by the higher rate of wages now prevailing.—J. R. Booth.

* * *

Operating Costs 35 Per Cent. Higher

Editor Canada Lumberman: Burks Falls, Ont.

The labor situation is affecting us very seriously, both at the mill and at any work in the country we have undertaken. There is a very great shortage of labor and, in addition to that, wages are very high and the men extremely indifferent and exacting. These facts, together with the price of supplies and the general difficulties of the situation, we believe, have increased operating costs about 35 per cent, as compared with last year.—The Knight Bros. Company, Limited.

* * *

Operating Costing Twenty Per Cent. More

Editor Canada Lumberman: Riviere Trois Pistoles, P.Q.

The labor situation is getting very critical and good men are getting scarce for mill and bush work. Wages are too high. Men work less time and live the same, owing to increase of wages. Prospects for men for next winter's operations are not very bright. The increase of cost with us, in productios, owing to increase of wages, material and provisions, and depreciation in quality of men, is about twenty per cent. compared with previous years before the war.—Trois Pistoles Pulp & Lumber Company.

* * *

Logging to be Very Expensive

Editor Canada Lumberman: New Richmond, Que.

We have not experienced any trouble with our mill crew, nor do we expect to have any shortage during the balance of the sawing season. We are opening up our camps this month, but it is very difficult to secure crews. Wages will be 15 to 20 per cent, higher than last year, and the men will not be up to the average, as a large proportion will be inexperienced youths, which, added to the high cost of supplies, will make very expensive logging.—Montgomery & Sons Company, Limited.

* * *

Lumber Prices Must Go Higher

Editor Canada Lumberman; East Angus, Que.

We have not yet got started to any great extent, but so far as we can judge at the present time, the extra cost of labor and supplies will bring our operating costs for next year over and above last year at least 25 per cent. Owing to this enormous increase in the cost of getting the lumber from the woods, it is very evident that the manufacturers will have to get a much better price for their lumber next year.—Brompton Pulp & Paper Company.

* * *

Operations Costing Fully 25 per cent. More

Editor Canada Lumberman; Otter Lake Station

We are finding the labor situation a very difficult problem, but so far, we have been able to cope with it. We are contemplating starting two camps in the near future and evidently they will be started very short handed, but we are living in hopes that the situation may improve when the cold weather sets in. The cost of operation this season is fully 25 per cent. in advance of last year.—Hocken Lumber Company, Limited.

A Waney Timber Operation in Ontario

Detailed Description of a Camp, Its Construction, Output, Management, Costs and Other Features

IT is so many years since the production of square and waney timber was the chief activity in the logging camps of eastern Canada that nowadays it is a difficult matter to obtain skilled workmen for the operation of a camp of this class. A few years ago, however, quite an extensive operation for the production of waney timber was carried on by J. J. McFadden on the Jocko limits in northern Ontario. These limits are located in the district of Nipissing, just east of the townships of Lockhart and Garrow, and they comprise an area of 25 square miles each, 50 square miles in all. At that time the operation was commenced, it was necessary, in order to reach the camp from Jocko Station, on the T. & N. O. Railway, about 32 miles north of North Bay, to travel a cadge road running east for ten miles to a camp of the Hawkesbury Lumber Company, and to continue thence four miles further in the same direction to the McFadden camp. During this first winter's operation the product was drawn from the camp by sleigh, a distance of six miles, to a siding, whence it was transported by rail to Quebec. For the information contained in the following article we are indebted to an interesting logging report prepared by Messrs. F. McVickar and R. M. Watt, as a part of their studies at the Forestry Department of the University of Toronto.

The class of labor employed in the manufacture of square and waney timber comprises men who are specially skilled in their particular lines. With the decline of the square timber industry, the opportunities for young men to learn the hewer's art became scanty. Naturally, therefore, the men now available are all old-timers and receive high wages, both on account of their skill and because of their willingness and general dependability.

The method of procedure in the production of square and waney timber is entirely different from any other logging operation. To some extent the organization and handling of the crew resembles that of an ordinary logging operation, but there are many important differences. The agent, or walking boss, in the first place makes his selection of a foreman and the two of them proceed to hire their crew. In this particular case the crew was assembled at North Bay, and brought to Jocko Station by rail. Arrived at the station, they were put to work first of all upon building a cadge road. In this case the main cadge road had only to be constructed from the Hawkesbury camp into the limits, a distance of about four miles. As soon as possible, the crew were put to work upon the building of the camp.

Mr. McFadden's plan in connection with this operation was to take out all the waney stuff during the first winter and subsequently to remove the spruce and pine saw logs. Economic considerations dictated his course in not carrying on the two operations at the same time. Had the two operations been carried on simultaneously it would have been necessary to have built a double sized camp and to have employed double the number of men and double the number of teams. This would have necessitated a much greater outlay of capital for camp construction and pay roll, as well as for maintenance. All this capital would have to be invested before any returns came in. Consequently, none of the profits of one operation could have been used to finance the other. Moreover, if a larger and costlier camp had been constructed the loggers would not have been able to operate over any larger territory than from a small and less expensive camp.

The Logging Camp Crew

The average number of men in the camp in connection with this operation was about 110. This number varied naturally from week to week, a few men always deciding to "hist their turkeys" and strike out for other camps, and delay being involved in finding others to fill the vacancies. The camp crew was divided as follows:—

	Per Month
Executive force:	
Agent and foreman;	
Subordinate executives:	
Buck beaver ... . at	$50
Cook ... ... at	75
Clerical:	
Clerk ... ... at	35
Government Inspection:	
Scaler ... ... at	100
Subordinate Labor:	
Cookees ... ... at	30
Bull cooks ... . at	$25
Fallers ... ... at	45
Liners ... ... at	50
Scorers ... ... at	40
Road monkeys and general hands ... . at	28 to 35
Swampers ... . at	30
Teamsters ... . at	40
Hewers	55 to 70
Blacksmith ... . at	60
Filer ... ... at	45

The crew was made up of French, Irish and Scotch, the great majority being French-Canadians. There were also a few Poles who were employed as road cutters, a class of work for which they are particularly well fitted, because of their great physical strength and their amenability to discipline, such as is administered at the hands of an Irish foreman.

Camp Layout and Construction

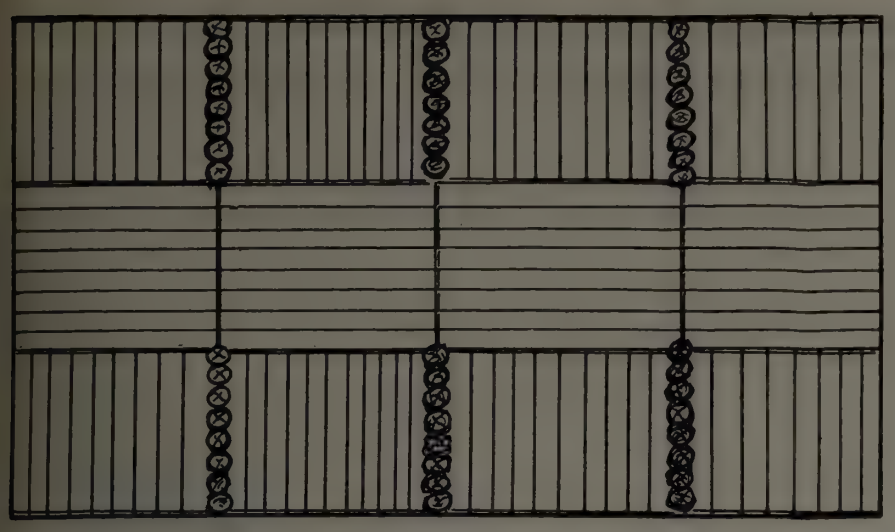
The laying out of a lumber camp is always associated with its individual problems connected with each new timber area that is to be logged. The camp at Jocko, consisting of 12 log buildings, covering an area of about one acre, was situated on a terrace above a slough. This location was chosen because it was the most central point for the waney timber, and also because of its proximity to a good water supply. The buildings were of the usual type found in the woods of northern Ontario, being constructed of logs, pine, spruce or fir, notched at the ends, and 8 to 10 logs high, the cracks being filled with moss or plaster. In most cases the logs were peeled before being used for camp construction, because this gives a cleaner log and less liable to attack from insects. The roofs and gable ends were covered with tar paper, which it is necessary to renew annually. The single exception in this regard was the cook house, which was covered with a prepared roofing. During construction, a crew of 25 men and four teams were employed for three weeks at a cost of from $1,500 to $2,000. The buildings put up were as follows:—Office, 18 feet x 24 feet; private camp, 16 feet x 22 feet; cook house, 28 feet x 50 feet; store house, 16 feet x 20 feet; two bunk houses, 68 feet by 44 feet; two stables, 36 feet x 28 feet; blacksmith shop, 18 feet x 24 feet; store house, 18 feet x 24 feet; filer's shack, 8 feet x 10 feet; and lavatory, 6 feet x 8 feet.

The Cook House: This building is exceptionally well ventilated and lighted, the kitchen occupying a space 16 ft. by 28 ft., while the remainder of the building is used for a dining hall, the men being served at three long tables.

The cook and his two helpers were well supplied with the necessary cooking utensils for the sanitary and economic preparation of food, these, with the other dishes required for serving could

Drawing Waney Timber into the Yard

End View of a Waney Skidway



Ground Plan of Stables

be replaced for $200. The management evidently believed in the old adage that the way to a man's heart is through his stomach, and by the careful selection of proper food and a good cook they increased the working efficiency of their men.

List of provisions required for a crew of 115 men for one week.

Meats:			Currants	lbs.	25
Beef	lbs.	1050	Condiments:		
Pork	"	175	Allspice	"	½
Bacon	"	150	Cinnamon	"	½
Fats:			Mustard	"	2
Butter	"	100	Ginger	"	2
Lard	"	100	Nutmeg	"	¼
Vegetables:			Pepper	"	1
Potatoes	"	750	Miscellaneous:		
Turnips	"	300	Cheese	"	50
Carrots	"	150	Flour	"	750
Beets	"	100	Baking Powder	"	9
Onions	"	40	Syrup	gals.	2
Peas	"	10	Pickles	pail	1
Beans	"	50	Vinegar	gal.	1
Cereals:			Corn starch	boxes	4
Oatmeal	"	10	Soda Biscuits	lbs.	30
Rice	"	15	Sugar, Cooking	"	200
Barley	"	10	Sugar, Table	"	100
Fruits, Dry:			Tea	"	25
Apples	"	50	Coffee	"	20
Prunes	"	50	Yeast	boxes	4
Figs	"	25	Soap	"	½
Raisins	"	35			

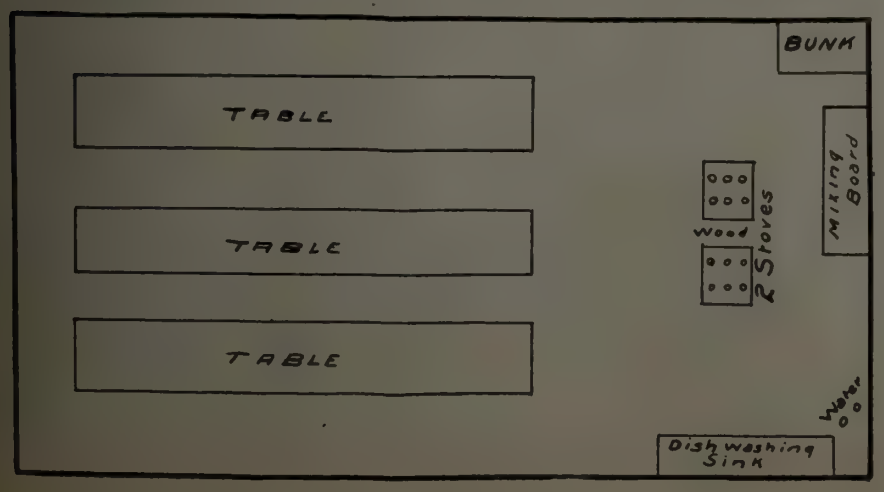
The average cost of food per man per day is forty cents.

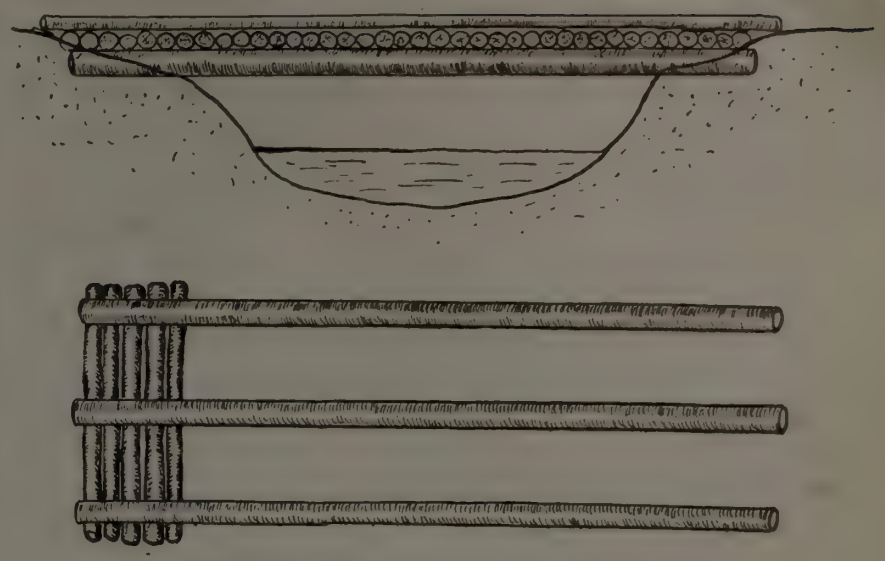
A store house and root cellar for provisions is located in the rear of the cook house.

The Bunk House: The two bunk houses accommodating 68 and 44 men respectively, are built higher than usually found in the woods, affording better ventilation and light, and are more cheerful and comfortable quarters for the men. The bunks are arranged endwise, two men to each bunk, and are supplied with three pairs of blankets per bunk. The total cost of blankets would be about $750. The bunk houses were supplied with soap and towels, and were kept exceptionally clean and well heated.

The Stables: Special attention was given to the stables; floors were made of fir, split and smoother, stalls double width, and kept very clean, by the chore boys.

The horses, thirty-two in number, are mostly Clydes, weighing from 28 to 32 hundred weight per team and valued at from $500 to $700 per team. The cost of maintenance per team per day is about a dollar, with the following feed, 1½ bushels of oats, 60 pounds of hay,





Small Bridge Construction—Position of Stringers

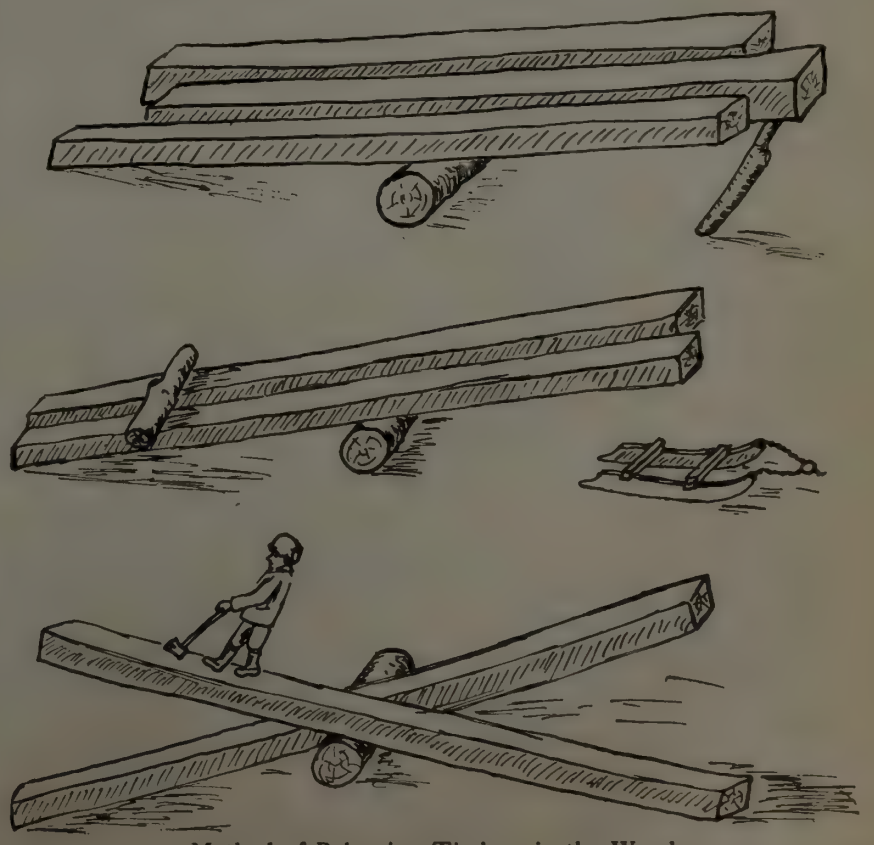
with an occasional feed of bran. Harness per team, $45 to $50. With the average life of a team at woods work, five or six years, and with $10,000 tied up in horse flesh, it can readily be understood why they receive the best of care.

A store house for hay and oats is situated to the rear of the stables.

The Blacksmith Shop: The woods blacksmith shop requires about the same equipment as the ordinary village "smithy." The blacksmith was well supplied with the necessary tools of his craft, also a stock of round and flat iron for general repair work. The entire outfit representing an outlay of from $200 to $250.

The Camp Store: The camp store, or van, occupied a few shelves in the office, a stock valued at $250 is sufficient to meet the immediate demands of the men. The following articles being stocked:—Tobacco, smoking and chewing; boots; oil tans; mocassins; gum rubbers; woolen underwear; woolen shirts; khaki shirts; mackinaw suits; tweed trousers; mittens; gloves; handkerchiefs; stationery; patent medicines. The system of keeping the accounts is very simple, indeed. The clerk or foreman, whoever happens to be in the office at the time of purchase, charges the amount of purchase into the "day book." At night the clerk transfers the account to the "ledger," to be deducted from the man's wages at the end of the season.

Roads: There is a series of ridges meeting the cadge road at right angles all the way in from Jocko, as well as a constant rise in general level. The road was built as well as possible under the circumstances, following in the main the contours of the country. However, in some places this would necessitate too extensive detours, so there are some pretty stiff grades. About 20 per cent. is the maximum for the haul from the railway to the camp, and of course, such grades are short. For the trip from the camp out with empty sleds,



Method of Balancing Timbers in the Woods

some short cuts have been cut across ridges, and as a result better time can be made. Some of these are so steep that they would appear impossible to the novice. The minimum grades are represented along swamps and sloughs and are consequently negligible.

Little or no grading has been done, chiefly owing to the rocky nature of the soil, which would make such work too expensive. The swampy places are corduroyed with poplar, fir and other wood of little value. The one bridge over the Jocko River is of very simple construction. Three stringers of unhewed spruce about 18 inches in diameter are used. The floor is of poles of any wood which was at hand when the bridge was built or last repaired.

No culverts are used; across wet places and small streams corduroy resting on stringers being employed instead.

A mile of road can be built in a week by ten men using two teams. The cost of each man in wages and food would average about $2.00 per diem. This, with the cost of horse feed, tools, etc., would bring the cost of the cadge road to about $175 a mile.

After snowfall the roads are ploughed with a snow plow of the ordinary wooden type, followed by a patent plow, and finally by a sprinkler. Oval shoes are used on the sleds, which gives the tracks a fine surface. No rolling is practiced in their operations. The foreman considered that rolling hardens the road from the top down, so that the horses punch through here and there instead of packing the snow down to a good firm road surface.

In case of wet snow, the lakes are tramped to penetrate the snow, allowing all parts of the snow to freeze with equal rapidity. At the same time the snow is prevented from forming a blanket over the ice, and thus preventing it from thickening properly. Holes are also sometimes cut in the ice in time of thaw to permit of flooding and freezing on the surface, and at the same time relieving the great strain put on the ice.

Logging roads are, as far as possible, laid out along the contours, or with a gentle slops toward camp. Grades here often run higher than on the cadge road, but only going towards camp. Their cost would be in the neighborhood of $100 a mile.

Two miles is the greatest distance from which timber is hauled, and is considered the maximum distance to which men can walk to their work without economic loss to the operation.

Logging Practice

From the standing pine to the waney timber at the landing, the work is divided between two distinct crews.

(a) Actual timber making, cutting crew.
(b) Skidding and yarding crews.

Timber making crew:

Crew	Tools	Cost of tools
2 Fallers	2 axes (pole), 1 cross cut saw, wedges...	10.50
1 Liner	1 chalk line and chalk	.25
2 Scorers	2 pole axes	3.75
2 Hewers	2 broad axes, right and left handed ...	5.00
1 Swamper	1 double bitted axe	2.00
		$21.50

This crew makes from nine to ten waney timbers per day; each swamper serves two crews; the liner several.

The first operation is carried out by the fallers who fall the tree, and do their own bucking.

The liner determines how much the log will square out, and lines it in by means of his chalked line.

He in turn is followed by the scorers, who hack to his line, removing the rough outside bark and wood.

The operation is finally completed by the hewers, who, working on each side of the log, right and left handed, are so expert in their trade that when finished, the waney timber presents a surface as smooth as though it had been planed.

The waney timbers are then left at the point of balance, ready for the yarding crew who simply tip them on to the sloops.

Yarding and Skidding

The snaking trails are built by the "road monkeys," to wherever the waney timbers are made and are merely brushed out so as to allow a team and sloop to get at them. The sloops are heavy bobs having ten-foot bunks and six-foot runs, the timbers are chained on to these sloops leaving one end free to drag.

The skidding trails are built so as to have the least possible grade, following the contours of the country to a great extent. Bad holes are filled, while low or wet places are corduroyed.

The skidways are located on the slough near the camp, at the mouth of the road leading to the railway. The number of timbers in a skidway varies from 100 to 150, remaining on the skids from the time they are cut at the beginning of September, till the last log is hauled to the railway, about March 15th.

Tastes Differ with Lumberjacks

What They Eat in an Ontario Camp and in a B.C. Camp —Comparisons of Food and Costs.

Feeding the men employed at a lumber camp is a much more extensive and complicated job than anyone who has not seen a logging camp in operation could possibly imagine. The vast quantities of food consumed at a camp, the difficulties which have to be overcome in the way of shipment from the place of purchase to the camp, the cost of keeping a sufficient supply continually on hand, the cost of preparing the food and serving it, all combined, furnish sufficient details to require a full sized man to look after them with any degree of success. Nevertheless, it is remarkable how the feeding of the camp employees has been reduced almost to scientific uniformity. Careful accounts kept by the cook and the foreman, and submitted to headquarters for periodical analysis should enable those who are responsible to check up the quantities and costs so that the amount needed for feeding a camp of a given number of men during a definite period may be estimated with sufficient accuracy in advance.

The statements of quantities and costs which are shown below were furnished to us by the companies themselves. In the case of the Ontario camp they refer to a crew of 100 men operating for seven months. The figures shown are reduced to a one month basis, by division by 7. The British Columbia figures furnished to us were for a camp of 50 men for one month. We have multiplied these figures by 2 in order to afford a basis of comparison with the Ontario camp. The figures shown are therefore on the basis of 100 men for one month in each case. A number of significant omissions will appear in some of these reports. In the Ontario case the figures shown are for the actual goods appearing upon a "board account" submitted by the camp cook for the season of 1915-16. Counting in the wages for the cooks and chore boys the actual cost of feeding the men in this camp works out at 53c per man per day. Other camps operated by the same company showed averages of 51c, 52c and 59c.

The British Columbia camp for which we have given figures presents a rather different result. Apparently, the party who drew up the B. C. list omitted a few items, though most of the items involving a cost of more than a few dollars are included. The B. C. list adds up in value to $1,799.88, which for a camp of 100 men for one month would show a cost of 60c per man per day. This B. C. average per man per day, however, includes only the cost of the food, while the Ontario list includes the cooks' and cookees' wages. Apparently, if these reports can be considered as typical, it costs about as much to purchase food for the men in a B. C. mountain camp as it does to purchase food and cook and serve it in the Ontario camp.

Following are the two lists:—

Article	Ont.	B.C.	Article	Ont.	B.C.
Allspice	$ .10	$ 3.00	Mustard	$ .20	.....
Apples	1.55	.....	Molasses	2.22	.....
Evaporated Fruits .	.....	7.50	Macaroni	.34	.....
Butter	63.51	75.60	Nutmeg	.64	.....
Beans	32.80	43.46	Onions	3.98	20.00
Baking Powder	3.55	.....	Peas	1.52	39.30
Beets	3.63	.....	Pears	.....	91.20
Barley	.44	.....	Pickles	4.62	.....
Beef	85.00	425.92	Pepper	1.02	.....
Bacon	273.38	46.00	Prunes	4.93	.....
Cheese	21.80	31|50	Peaches	2.67	91.20
Coffee	.....	10.00	Pumpkins	4.11	.....
Currants	2.64	.....	Potatoes	43.53	65.00
Cassia	.25	.....	Raisins	5.49	3.20
Canned Cream	.....	88.00	Rhubarb	2.26	.....
Cornstarch	1.85	.....	Rice	2.64	.....
Cream of tartar ...	1.07	.....	Rolled Oats	2.07	19.20
Cabbage	5.40	.....	Sago	.....	1.50
Corn	.....	26.00	Salt	1.11	1.00
Carrots	1.20	.....	Syrup	6.48	10.00
Eggs	.....	80.00	Sugar	49.69	144.00
Flavoring Extracts .	3.57	.....	Soda Biscuits	3.84	.....
Figs	1.43	.....	Saurkraut	2.50	.....
Flour	79.76	64.00	Tea	10.92	11.00
Fish	.....	136.00	Tomatoes	5.19	141.60
Ginger	1.02	.....	Turnips	3.90	.....
Ham	.....	92.00	Vinegar	7.07	.....
Jam	9.77	.....	Yeast Cakes	.51	.....
Lard	11.89	32.00			

The following comparative statement shows the quantity of the chief lines of supplies shipped in to a logging camp headquarters during the past three seasons. These supplies were for four camps in 1913-14, five camps during 1914-15, and four camps during 1915-16. It is not reasonable to use the figures for making comparisons of one year with another, as in certain cases stock was held over from one year to another, thus reducing the quantity purchased in the succeeding yeaf. As affording a fair idea of the quantity of the chief lines

consumed, however, the figures are instructive. They refer to camps of about 100 men each for seven months. The figures are as follows:—

	1913-14	1914-15	1915-16
Bacon ... lbs.	71,976	91,534	67,056
Beef ... "	21,057	32,108	29,294
Butter ... "	14,176	14,525	9,039½
Lard ... "	19,770	20,904	9,944
Cheese ... "	4,569	5,239	3,933
Potatoes ... "	162,488	173,232	150,278
Oats ... bus.	18,800	19,800	19,800
Flour ... lbs.	91,140	140,140	120,540
Bran ... "	8,000	10,000	10,000
Hay ... "	977,355	463,688	*1,184,419
Tea ... "	2,385	2,994	2,200
Sugar ... bags	464	531	356
Jam ... lbs.	3,510	5,010	3,930
Currants ... "	1,759	2,284	2,178
Raisins ... "	5,554	6,341	3,900
Prunes ... "	2,700	3,000	2,850
Figs ... "	575	1,226	1,115
Peaches ... "	900	1,500	900
Molasses ... pls.	30	43	39
Saurkraut ... bbls.	20	25	20
Tomatoes ... cases	100	215	154
Pumpkin ... "	69	80	45
Rhubarb ... "	70	86	45
Tobacco ... lbs.	3,720	3,417	2,485
Axes ... doz.	73½	102	58
Axe handles ... "	130½	163	132
Coal Oil ... bbls.	58	64	46
Matches ... cases	21	22	26

* Much of this held over for following year.

Interesting figures regarding the cost of feed for horses at camps in Ontario has been furnished also by the Ontario camp referred to in the above discussion of the cost of feeding camp employees. In four camps operated by this company the cost of feeding a team per day, as shown by actual results, worked out as follows:—

Camp A.

10 Bags Bran at $1.25	$ 12.50
714 Bales Hay at $1.08	771.12
712 Bags Oats at $1.53½	1,092.92
Freighting 174,384 lbs. at $14.70 per ton	1,281.72
	$3,158.26

1489 days team feed average cost per team per day, $2.12.

Camp B.

14 Bags Bran at $1.25 per bag	$ 17.50
842 Bales Hay at $1.08 per bale	909.36
1218 Bags Oats at $1.53½ per bag	1,869.63
Freighting, 243,516 lbs. at $14.70 per ton	1,789.84
	$4,586.33

2018 days feed teams average cost per team per day $2.27.

Camp C

19 Bags Bran at $1.25 per bag	$ 23.75
745 Bales Hay at $1.08 per bale	804.60
816 Bags Oats at $1.53½	1,252.56
Freighting 200,012 lbs. at $14.70 a ton	1,470.09
	$3,551.00

1667 days feed teams average cost per team per day $2.13.

Camp D

28 Bags Bran at $1.25 per bag	$ 35.00
133 Bales Hay at $1.08 per bale	143.64
982 Bags Oats at $1.53½ per bag	1,507.32
54¼ Tons Hay at $20 per ton at camp	1,085.00
Freighting 121,584 lbs.	893.64
	$3,664.60

1968 days' feed teams average cost per team per day $1.90.

Lumber Production Increasing in Cape Breton, N.S.

Until a few years ago, nearly all the lumber consumed in Cape Breton was imported from other parts of Nova Scotia and New Brunswick, the lumber manufacturing industry not having made any important steps in the way of development until quite recently. Of late years, a second growth of young trees, chiefly fir, or balsam, as it is often called, has attained such a size as to make it worth while for many farmers throughout the country to go in for the production of lumber. These farmers have put up small mills which now furnish practically all the framing and boards used in the farming sections. Along with the growth in the lumber industry there has also come considerable development in the woodworking line. The products of the Cape Breton woodworking plants of the firm of Chappell Bros. & Company, Limited, now find their way to every part of the island and include everything required in the line of finer building material.

The actual number of individuals or firms carrying on lumbering as a separate business, apart from farming or other lines, in Cape Breton is very small. Among them there are C. A. Fownes, Nyanza; E. W. Dryden, Baddeck; the Dominion Lumber Company, an American concern in Inverness County, and Chappell Bros. & Company, Limited, Sydney. The last named firm operate several mills and carry on lumbering in connection with their woodworking and contracting business. They also buy quite extensively from the other operators.

The Cape Breton Pulp Company own extensive limits in the northern part of the island and are now erecting a large pulp mill at Murray Ste. Anns.

Cape Breton may now be said to be self-sustained in regard to the production of small lumber suitable for framing for small buildings, while material for large buildings must be imported. The woodworking firms also have to import large quantities of boards, both spruce and pine, for manufacturing purposes.

A Logging Camp's Hardware Bill

Sufficient to Stock a Fair Sized Store—Lumber Price Cutters Should Read This Carefully.

The hardware supplies required in a logging operation include a great variety of articles. Under the heading of hardware, in the requisitions for a camp there come a number of articles that might be considered as scarcely of the hardware type, but for purchasing purposes they are grouped together, as a rule, for the sake of simplifying the work of making out requisitions. In connection with four camps operated by an Ontario manufacturer during the season of 1915-16, each camp employing about one hundred men for a period of seven months, the requisition for hardware included the following articles:

50 doz. D. B. axes.
86 doz. D. B. axe handles.
20 doz. S. B. axes.
50 doz. S. B. axe handles.
40 lbs. axe stones.
600 Cant hook bolts, 2 x 7/16 in.
10 Alarm clocks.
48 bbls. coal oil.
700 ft. ¼ in. B.B.B. chain.
514 ft. 3/8 in. chain.
4 doz. curry combs.
8 large dressing combs.
1 doz. 3 qt. dippers.
48 doz. 7-in. mill files.
34 doz. 6-in. taper files.
2 doz. 5-in. slim taper files.
1½ doz. 14-in. mill files.
4 Flour sifters (diam. 14 in.)
24 Grindstones, 1½ x 24 to 30 in.
1 box Glass, 10 x 12 in.
8 boxes horse shoe nails, No. 10
8 boxes horse shoe nails, No. 9.
10 kegs No. 5 horse shoes, assorted. fore and hind.
15 kegs No. 6 horse shoes, assorted, fore and hind.
1 doz. Farriers' knives.
1½ doz. 14-in. shoeing rasps.
24 doz. hame straps.
40 prs. heavy hames.
1 doz. 3 lb. wedge hammers.
4 only 6 lb. drilling hammers.
400 lbs. 5/16 round iron.
600 " 3/8 round iron.
800 " 7/16 round iron.
1600 " 1/2 round iron.
1600 " 5/8 round iron.
1200 " 3/4 round iron.
400 " 7/8 round iron.
600 " 1½ x ⅜ Swede iron.
300 " 1-in. sq. Swede iron.
200 " 1½ in. band iron.
50 " 1 in. band iron.
300 " 2 in. band iron.
300 " 1½ x ¼ in. Swede iron.
150 " 2 x ¼ in. common iron.
4 butcher knives, 10 in.
4 butcher knives, 12 in.
4 doz. lanterns.
36 doz. lantern globes.
24 doz. lamp glasses.
8 soup ladles.
192 yds. 1-in. lamp wick.
6 doz. lamp burners.
10 bbls. lime.
8 doz. pick mattocks.
8 doz. mattock handles.
½ doz. mirrors, 10 x 12.
3 kegs 2½ in. wire nails.
25 lbs. 7/16 nuts.
75 " ½ in. nuts.
75 " 5/8 nuts.
75 " 3/4 nuts.
50 " 7/8 nuts.
200 rolls tarred felt.
4 large mixing pans, 22½ x 19 x 9".
6 large dish pans.
20 lbs. putty in 5 lb. bladders.
8 doz. 1-in. harness snaps.
12 doz. 1¼ in. harness snaps.
6 doz. 2-in. harness snaps.
2 doz. R. M. shovels.
4 doz. Simond's cross cut saws, 5½ ft.
16 doz. Simond's "Olsen" saw handles.
24 bars C. H. steel, 1 x ½ in.
6 bars 1⅛ Oct. tool steel.
8 bars 2 x ½ in. soft steel.
2 doz. 5 x 1¾ in. sheaves.
2 doz. solid leather top pads for team collars.
8 tea boilers, 18 x 18 in.
5 doz. galv. pails, flaring, 14 qts.
1½ doz. wash basins.
1 doz. wash boards.
20 lbs. 7/16 washers.
20 lbs. 9/16 washers.
30 lbs. 11/16 washers.
30 lbs. 13/16 washers.
30 lbs. 15/16 washers.
30 lbs. 17/16 washers.
8 fire back grates for No. 25 Adam Hall cook stove.
8 fire front grates for No. 25 Adam Hall cook stove.
12 cross sections for top of No. 25 Adam Hall cook stove.
12 stove lids, 10 in., for Adam Hall cook stove.
1 fire front grate for No. 26 "Leader" Adam Hall cook stove.
1 fire back grate for No. 26 "Leader" Adam Hall cook stove.
4 doz. corn scrubbing brushes.
8 doz. corn brooms.
12 doz. knives and forks.

Any wholesale lumberman, or retailer, who has not had an opportunity of visiting a logging camp in operation will do well to look over this list and the lists of food for men and feed for horses, published elsewhere in this issue. The perusal of these lists will act as a good tonic for anyone suffering from price-cutting fever.

The Camp Food Bill Steadily Soaring

Where do the Provisions come from and why are they so expensive? The problem growing daily more difficult

How many lumbermen, aside perhaps from those who are actually responsible for the purchase of supplies for a logging camp, appreciate the extent of the business involved in furnishing loggers with good food? Everyone in a logging camp understands well enough how important it is, both from the point of view of results and from the point of view of the employees' health that a wide variety of palatable and good food should be furnished at the camp table. There is no doubt, indeed, that one of the chief factors in connection with the successful management of a logging camp is the furnishing of a good table. Of late years this fact has become increasingly important on account of the rising cost of labor and the readiness of the average employee to dig out for pastures new upon the slightest provocation.

In the solution of the food problem for a lumber camp the large wholesale provision houses and grocers at such centres as Toronto, Montreal, etc., play an exceptionally important part. With their skilled and extensive organizations, their large capital, their intimate knowledge of world-wide markets, and their specialized knowledge of the requirements of lumber camps, they have made it possible for the camp foreman to obtain, with little loss of time, a range of food stuffs that would have been considered entirely out of the question even a few years ago.

When one goes back to the early days of pork and beans and the few other lines that were then sufficient for the camp menu, and compares conditions in those days with the conditions of today, the contrast is almost too great to appreciate. Two factors have been of chief importance in bringing about this development. One, of course, has been the growth of railroad facilities in Canada, making it possible to deliver goods rapidly to the very threshold of the logging districts. The other factor has been the business ability of the great wholesale houses that have established their extensive buying connections and have created large warehouses to act as supply depots for the men in the camps.

Take the wholesale grocery business, for instance, and consider the lines that it furnishes. We do not intend to present an exhaustive list, but simply to indicate something of its variety. Some of the most important items are white beans, evaporated applies, coffee, tea, canned tomatoes, corn, peas, and beans, lard, butter, prunes, tobacco, salted meats, canned milk, canned apples and rhubarb, dried fruits, such as currants and raisins, rolled oats, corn meal, syrup, etc. These few lines are sufficient to indicate the variety and to suggest something of the extent of business centralized in the wholesale grocery establishments that cater to this trade.

Many Countries Contribute to the Menu

If we were to trace the origin of most of these articles we would have to journey to practically every quarter of the globe. Take the case of prunes, for instance, today they are coming almost exclusively from California. Not many years ago they were coming from Austria, Bosnia, Servia and France. Of late years the production of prunes in California has been developed to a great extent and today a very good grade of prune is coming from that market.

Every camp consumes a large quantity of sugar, both yellow and granulated. The war has had a great effect upon this article of food. Just before the war, yellow sugar at Toronto was selling at $4.11 a hundred pounds, and best granulated at $4.51 to the retailer. Today the respective prices are $7.46 for yellow sugar and $7.86 for granulated. The cause of this great increase is rather curious. First of all it is the result of the cutting off of the world's most extensive source of supply in the central districts of Europe, where the beet growing industry for the production of sugar had been developed to an enormous extent. These districts used to produce nearly one-half the sugar consumed in the whole world. The chief producing districts were Germany, Austria, Belgium and Northern France. In the other producing countries, the output has been increased as far as possible in order to offset the reduction of output in central Europe. Price advances, moreover, have resulted in a slight decrease in the consumption.

The Price Fluctuations of Sugar

At the outbreak of the war there would have been a far greater advance in the price of sugar had it not been for the fact that available stocks on hand were then greatly in excess of the requirements under normal conditions. In fact, during the summer of 1914, producers and holders of raw supplies were facing a situation which would unquestionably have necessitated reduced production if conditions had not been entirely upset by the commencement of the war. As it was, the enormous available stocks kept the price from maintaining its earlier advance. The advance that did occur was of a more or less sentimental nature, but it was soon offset, and not until last fall, when the over-supply had been worked off, did an advance based upon supply and demand take place. Since then the price of sugar has gone up about $2 a hundred pounds, but during the past month there has been a drop of about 40c a hundred pounds. Today the greater part of the sugar consumed in Canada comes from the British West Indies and is refined in Canada.

Tea is another staple article at all lumber camps. The principal tea consumed in the camps comes from China, Japan, India and Ceylon, being chiefly such as Japans, and Young Hysons and Congous from China. Coffees are brought from South America, Central America, Mexico, China and Arabia. The principal coffees used in the lumber camps come from Brazil.

Of the goods produced in Canada, one of the most important lines is canned products. All the canned fruits and vegetables furnished to the logging camps are grown and put up in Canada. Another exclusively Canadian product used in lumber camps is salted meat. The quantity of this line of food consumed is very great, and in this connection, the wholesale houses are of great service, because they enable the lumber camps to draw upon their supplies from time to time and thus obtain, on very short notice, exactly what they may require, without being obliged to carry large stocks at the camp. In times like the present when prices are high and stocks are scarce, it is of much importance to the camps to be able to make use of the ability of the wholesalers to anticipate the markets' requirements and carry sufficient stocks to meet the demand.

Speaking of market conditions, especially in reference to the goods required by the logging camps, a prominent wholesale grocer remarked with much interest upon the fact that the lumber camps today are using a much superior class of goods to that which they used twenty-five years ago. In the earlier days, camp employees were not so particular about their food. They were paid small wages and had to eat pretty much what was available. They had not been educated to an appreciation of good things to eat as they are today. Now-a-days, a camp employee wants the best he can get, and unless it is served up to him he will not stay. The improvement has been both in variety and quality and has involved a corresponding increase in the cost of labor.

Higher Prices and Their Causes

There is no doubt that the cost of provisions for the men in the camps today will average 25 per cent. higher than the cost immediately before the war. Take the case of cheese, for instance, it has advanced quite fifty per cent. Teas are about 25 per cent. higher. Meat products are at least fifty per cent. higher. Dried fruits are far more expensive than they were. An interesting line is mustard. Before the war practically all mustard seed came from Austria and was ground and prepared in England. The mustard manufacturers in England have had to scour the world since the Austrian source of supply was cut off and prices have naturally gone up to a great extent.

The prospect for canned goods this year is for very high prices. In fact the same thing may be said for nearly all lines of groceries. Canned vegetables are already scarce and the new pack will be light because the drought has dried things up. Moreover, the drought has had an effect upon consumption. People who in former years would be using their own garden stuff, are this year consuming canned goods, and have helped to produce a scarcity. There seems to be no question that canned goods will be both scarce and expensive for some time to come.

Meats also will be high in price. The chief factor in this regard is the war. The armies are consuming far more meat than the same number of men would consume under ordinary conditions. Their work is such that they need large quantities of meat food. The production of meat is also falling off. The high price of cereals induces farmers to sell their cattle earlier than under normal conditions, rather than hold them until they are larger and bring better returns. They think of the good price they can obtain for their cereals, as cereals, and think they are doing better by selling the cereals than by feeding

them to cattle and pigs. The wholesaler to whom we referred above expressed the opinion that this situation was likely to develop into something serious, and even suggested that governments ought to consider the advisability of regulating the sale of young calves and pigs by law, so as to prevent them being killed off at too early a stage.

Taking everything into consideration, it is no difficult matter to predict today that lumbermen will have greater trouble during the coming winter in securing foodstuffs for their camp employees than they ever had before, and that prices for practically all lines are certain to be high. Although these views are secured directly from a wholesale grocer, we believe that the experience of lumbermen will verify everything that has been said. Taken in conjunction with the advancing cost and the decreasing efficiency of labor, the situation becomes critical and seems to involve heavy reductions in the output of logs during the winter of 1916-17.

Portable Sawmill Problems—

Conditions under which this method is found profitable in Great Britain

The use of portable mills has become so widely prevalent in many parts of eastern Canada, and to some extent in other parts of Canada as well, that most lumbermen understand fairly well the conditions that are favorable to a portable operation. Not unlike the conditions in eastern Canada are those prevailing in Great Britain, though, of course, there are also many important lines of difference. The way in which the matter is viewed in Great Britain is outlined in an article in a recent issue of the Timber Trades Journal of London, Eng. Many contrary opinions have been expressed from time to time by men of long experience as to whether portable sawmills are a profitable asset to the timber merchant, this article says. Many of those opposed to them contend that they lead too much to decentralization, increase management expenses, and cause too much dissipation of energies. Others, again, believe that they are too wasteful, that they cannot economically utilize a great deal of offal which would be used up in a central mill, and consequently that it pays better to bring all timber home.

A great many arguments may be brought forward to support these contentions, but the most likely factor in creating the adverse idea in the minds of those who have lost money on portable sawmills is that they have not had the right man to manage them. It is a very easy matter to lose money, and a very different proposition to make it.

Many mistakes have been made by portable sawmillers in converting timber unsuited to such methods. In breaking down timber that is too large for the machinery a great deal of unnecessary waste is incurred. This particularly applies to sawing plank on a rack bench. Even if the timber is not too large, a big lot of wood is wasted in the excessive saw kerf. And with timber that is outsize, not only is there waste in saw kerf, but the slabbing cuts to reduce the log to the depth of the saw means a waste of valuable timber, and decreases the width of the plank by a very considerable percentage. If the sawyer attempts to keep the plank the full width, and turns his log to meet the cut, the chances are a hundred to one against the cutting being accurate; and this, again, would entail waste, and probably spoil the sale of the plank owing to bad cutting. In this sense, then, where portable mills consist solely of circular sawing machines, they are not profitable for planking, a process which should preferably be undertaken in stationary mills where proper log-sawing machines have been put down for boarding and planking logs in their full width.

Another objection to portable mills is that they are, as a rule, put down in out-of-the-way country places where there is no sale for the sawdust, and the inevitable accumulation of large piles of slabs and firewood—items which in a town mill bring the proprietor in quite a large amount annually. There is no doubt that this is often the case, as may be frequently witnessed in the piles of slabs and sawdust left behind after the mills have been removed. Very often, however, local farmers will buy up most of the slabs that may not be required for fuel for the engine at a good price for rough outbuildings and fencing. Then, again, the arrangement would probably be advanced by those who believe in the portable mill that all carriage would have been saved on this waste, even if no sale were effected, and that the cost of carriage would represent much more than its actual value.

The main question that is bound to arise in the minds of those interested in this subject is: When are portable mills profitable, and when do they reach that point where they cease to be a paying proposition?

Portable mills are undoubtedly useful to those merchants who possess no main stationary mill, and whose principal business consists of selling timber in the round. In a very large lot of home-grown timber of mixed varieties there is bound to be a considerable quantity of rough timber which would scarcely pay for the handling if put on the market in the round. In a case like this a portable mill is useful for converting the rougher timber to the best advantage, and thus obviating all carriage except upon the actually marketable article. By dealing with the timber in this way the merchant is enabled to make a selection of his better timber, and therefore can demand the highest market prices.

The merchant who possesses a stationary mill can work a portable mill on similar lines if his timber is at such a distance from his converting centre that the carriage upon the rougher timber would render it unprofitable to bring it home. But at the same time such a step would only be warranted by there being sufficient timber to keep the portable mill employed, and sufficiently close so that the hauling to it would not be an expensive item, and providing that no attempt should be made to convert the better-class timber which could be more profitably worked up in the home mill.

There are one or two classes of trade in which portable sawmills are profitable for converting practically the whole of the timber. One class particularly is that of dealing with a fir or pine plantation. In fact, many portable mills are already down, or are being put down today for this purpose, the timber being exclusively converted on the spot into sleepers, deals, battens, scantlings, and boards, as well as for mining and fencing purposes. Practically the last piece is worked up in this way, and the carriage is absolutely confined to the converted timber; and at the present high prices ruling for such goods some highly profitable business is being done in those cases where sufficient labor is available to keep all ends fully employed.

We are, however, not so much considering this question from the present abnormal point of view, where such operations are being carried on for temporary purposes only, as for normal times, when the usual competitive and low-cut prices have to be contended with.

Another class of trade in which portable mills are extremely useful is that of cutting oak wagon scantlings, providing the timber is not too large to be handled by the machinery with which the mill is equipped. A very good line to run in conjunction with wagon scantlings is that of oak fencing materials, in which case one or two cleavers should be kept on the spot for cleaving spokes and pales. As far as we can judge at present there will be a much increased demand for wagon scantlings immediately the war is over, and if present prices rule, standing oak will fetch higher figures, and merchants will necessarily have to study the most economical methods of handling their timber; and those who have their portable mills for converting coniferous woods to-day will find a good opening for them in this respect.

In some districts where merchants make their main business that of selling timber in the round, to help themselves with the rougher butts and large tops they hire the portable mills, and pay the owners upon a piecework basis of so much per cubic foot for the converted timber.

One of the greatest difficulties with regard to a portable mill is that of finding a suitable site near a plentiful water supply. During a dry summer the water has sometimes to be carried a long distance, and this necessarily adds considerably to the working expenses.

To sum up, we may say that the chief points to be studied in using a portable mill are:—

(a) The right man to manage, so that expenses are kept down to a minimum.

(b) The conversion of timber that is unprofitable to deal with in any other way.

(c) The necessity of having an ample accessible supply of such timber to keep the mill fully employed.

(d) The proper roofing-in of the mill, so that work can be carried on, wet or dry.

(e) The cultivation of a local trade, as far as possible, for the profitable disposal of sawdust and offal.

B. C.'s Timber Scale for June

The timber returns for British Columbia during June, issued by the Department of Lands, show that the total scale of sawlogs for the province amounted to 120,023,869 feet, board measure, in addition to 375,905 lineal feet of poles and piles, and 28,840 cords of ties, shingle bolts, etc. The sawlogs scaled in the various forest districts include Vancouver, 78,439,270 feet; Cranbrook, 12,744,444 feet; Island 11,333,874 feet; Vernon 7,339,997 feet; Nelson 4,288,647 feet; Prince Rupert 629,736 feet. 160,263 lineal feet of poles and piles were scaled in the Nelson district, 70,619 lineal feet in Prince Rupert, 50,178 lineal feet in Hazelton, and 55,080 lineal feet in the Vancouver district. Of the ties, poles, etc., 20,196 cords were scaled in the Vancouver district; 5,225 cords in Cranbrook, and 2,289 cords in the Nelson division. Timber sales recorded during June cover an estimated total of 6,195,500 feet of sawlogs; 19,800 lineal feet of poles and piles, and 300 cords of bolts, etc.

Logging Flume Construction and Its Use

Description of Methods Adopted in Modern Practice of Fluming in the Western Mountain Districts

By W. D. Starbird*

Water, in one way or another, is a factor in almost all methods made use of by loggers and lumbermen in moving forest products from one point to another any considerable distance. The lakes and streams of this country have been and are still being extensively utilized for floating logs, lumber and other timber products from the forests to some desirable point for the location of mills and factories.

The method most commonly used is to dump large quantities of logs into some running stream and float them with the current to the point where the manufacturing plant is to be located. This is commonly known as log driving, and, in some instances has proven a very economical and satisfactory means of transportation; but as the lumber business has developed and grown in magnitude the forests lying along such streams as were readily adapted to this use have been denuded until now those that can be made available for the purpose at all generally require expensive improvements before they can be utilized in this manner. This is particularly true of the mountain timber districts in the west, where many of the streams flow through rough and rugged country, in rocky channels, with such steep grades and swift currents that it is impractical to make use of them in floating logs, consequently many large and valuable tracts of the finest kind of merchantable timber can only be made available by some other means. Railroads can be made use of to advantage in some instances, and have been built and utilized extensively. They are, however, frequently impracticable owing to steep grades and the high cost of construction and operation.

Wherever such conditions prevail, a flume will usually solve the problem, and frequently will prove a cheaper and more satisfactory means of transportation than any other, even when the other methods mentioned are feasable.

The transportation of logs by flume is feasible wherever there is an available supply of water that can be diverted into the flume box at a point having sufficient elevation above the desired point of delivery, to insure flowage. These are the only two essentials—given them, all other difficulties and obstacles may be overcome.

The extreme flexibility of the flume as to grades and curvatures, and the ease with which it may be constructed over extremely rough, rocky and broken country by trestling instead of making costly cuts, gives it a great advantage over the railroad in any mountainous country, and makes its use entirely practicable in places where the latter is utterly impossible.

Transportation flumes are ordinarily built on trestling, and a difference of a few feet in the height of the trestles adds but little to the cost of construction, and none to their successful operation. It is largely due to this feature that they can be built much cheaper than a railroad, especially in the mountains. On hillsides, where grading for a railroad would be heavy, all that is required for a flume is two, or at most four, footings every sixteen feet. Where large boulders and rocks are encountered they can be passed over with a flume by means of trestling, when building a railroad would entail expensive blasting, cutting and filling. When trestling for a railroad is practicable, they must be constructed much heavier and more expensively than for a flume. A flume can be built at a practicable cost, and successfully operated on steep and rocky hillsides, over or around rock cliffs, and through narrow, rockbound, winding canyons, where a railroad could not be considered possible at any cost.

With reference to the engineering and construction of flumes for transportation purposes, I will endeavor to outline as briefly as possible the more important features, as shown by my experience and study of the subject.

Triangular Box Gives Best Results

First, it should be understood that all of the information and data given is based on a flume box of triangular shape. This design has been fully demonstrated to be the most desirable and efficient in operation. Several slight variations, such as flattening the bottom or building the side walls with a greater or less angle than 45 degrees from perpendicular, have been tried, but in every instance I am convinced the triangular box would have given better results. The principal reasons for this are that, in fluming a log or other stick of timber of any size, in a box of triangular design, there is always a space between it and the bottom of the flume box, where water will be flowing, which assists in buoying it up and keeping it in motion. The 45 degree angle of the side walls seems to be exactly what is required to carry water around curves with the least amount of disturbance and slopping, which results in waste and reduces efficiency. This angle of the walls also seems best adapted to carrying around curves logs which are either too large in diameter or too long to lay at their normal level in the water, on account of the curvature. When such condition occurs the water rises toward the top of the flume box on the outside of the curve, taking with it the end of the stick being floated. This leaves the front of the log well down in the flume box, and with its back end forced up, sometimes above the top of the flume, thus relieving the tendency for it to bind in passing around the curves. It can readily be seen that if the flume box had perpendicular sides this would not be possible, and that if the sides were at a steeper angle than 45 degrees from perpendicular, this action of the water and the log would not occur so readily.

The grades on which a flume may be built and successfully operated can be as steep as 25 per cent., and under certain conditions even steeper, or as flat as one-tenth of one per cent., although such extremes are seldom necessary. Uniformity of gradient is not essential to the successful operation of a flume. If engineering and construction are properly done the grade may be changed from one extreme to the other in a comparatively short distance without materially affecting its efficiency, although it is always desirable to avoid making any change in grade too suddenly or more often than the conditions require, because of their tendency to increase wear on the flume box

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Milwaukee Land Co. Flume—Note 20 Degree Reverse Curves at Bottom of 17 per cent. Grade.

W. C E. Koch Flume—Note Sweeping Vertical and Horizontal Curve, with Change of Grade, also Piling and Pole Bents.

and to cause jams or clogging of material being floated. The curvature permissible in log flume construction will depend on so many different factors that it can only be determined, in each particular case, after all the conditions and requirements have been ascertained and are understood. The principal controlling factors are: The dimensions of largest timber to be floated, the volume of water available, and the percentage of grade at the curve. Given an ample supply of water and a flume box of suitable size, any stick of timber could be floated around any curve. It is seldom, however, that there is any necessity for curves sharper than twenty degrees, although thirty and even forty degree curves are sometimes practical.

Generally speaking, if the size of the flume box is figured close to the requirements necessary to float a log of the largest diameter to be handled, a maximum curvature of twenty degrees can be allowen for logs up to twenty-four feet in length, ann twenty-five degrees for logs over twenty feet in length. Under similar conditions a curvature of from eight to ten degrees would be the maximum for logs forty feet in length. It must be remembered, however, that increasing the size of the flume box (in proportion to the size of the log) at the curves will permit of their being made sharper, assuming that there is a sufficient supply of water. These statements are based on the presumption that the longest logs handled will not be cut from timber of the largest diameter, and that the sharpest curves will not be necessary where grades are exceptionally flat.

Small Volume of Water Necessary

The water supply necessary to make the use of a flume practicable also varies to a considerable extent according to controlling conditions. Many people have a greatly exaggerated idea of the volume of water that is required to operate a flume successfully, especially a log flume. As a matter of fact, less water is necessary for the successful floating of logs up to four feet in diameter than for floating lumber of the dimensions commonly known as yard stock. In fluming logs the volume of water which it is absolutely essential to have is only enough to slightly more than fill the space in the flume left under the largest log to be floated when it is lying in the flume box and being supported by it. By taking the precaution in shipping of placing smaller logs behind the larger ones, a still smaller volume of water will be sufficient to flume them successfully. This statement applies to any gradient which the flume may have at the point from which the logs are started, providing it is steep enough to give them headway before they arrive at either a flatter or steeper grade in floating down the flume.

The steeper the grades are the greater capacity a flume will have without increasing the volume of water required. Owing to the velocity attained by a log running on the steeper grades its buoyancy is increased, and this added buoyancy, together with its momentum, causes it to move faster than the water on which it is floating. The result is that it banks the water in front of and around itself, creating an increased body on which to float. On flat grades, up to four or five per cent., if a log is too large to float free without riding on the sides of the flume box, its progress will be retarded and the water will accumulate around and behind it, forming a head sufficient to keep it floating, providing there is enough water in the flume to fill the space under the log, as before mentioned. This is, of course, assuming that the flume box is large enough to carry the required depth of water to float the log free. Increasing the size of the flume box and the volume of water permits the use of sharper curves.

An unlimited supply of water is, needless to say, always an advantage, but the point I wish to make perfectly clear is, that it is not essential to the successful operation of a log flume.

When the natural flow of water available for a flume project is not sufficient to meet the requirements, storage ponds can generally be constructed without incurring prohibitive expense, and plenty of water secured for fluming a part of the time. The capacity of a flume for floating logs is so surprisingly great that it will usually handle all that is required in four hours or less per day. By using storage ponds the natural flow of water could be increased during shipping hours from four to six times.

The length to which a flume may be extended without prejudice to its practicability or economical operation, is limited only by the possibilities for obtaining a sufficient supply of water and the maintenance of a descending gradient. I have had supervision over the engineering and operation of one flume in particular which was continuous for a distance of over thirty miles. There are flumes in California, used for carrying lumber, which I am informed are fifty to sixty miles long. Any flumes more than two or three miles in length should, if possible, be provided with feeders at frequent intervals; that is, an additional supply of water should be secured and run into the flume to replenish what will have been lost by leakage, splashing and evaporation. The water for these feeders may be obtained from the same stream as the original supply, or from tributary creeks and springs. Even when all the water visible on the surface has been taken from a mountain stream at any point, a considerable further supply will usually appear within a comparatively short distance down its channels. This fresh supply, or that from any other source, can be conveyed to the main flow by means of cheaply constructed flat-bottomed feeder flumes built on a very flat grade, which ordinarily avoids the necessity of their being of any considerable length. It is not essential to have these feeders except when the original water supply is very limited, but they are always a benefit in operating.

Long Length Timber Handled Successfully

In the engineering of the flume on Rochat Creek, in Idaho, which I built several years ago for the Milwaukee Land Company to float logs up to forty-eight inches in diameter and twenty-four feet in length, and poles and piling up to thirty inches in diameter and forty feet in length, grades to 17 per cent. and curves to 20 degrees were put in. This flume was the first of its kind built for floating logs, and it proved a very efficient and satisfactory means of getting out their timber when every other means had been given up as impossible or too expensive. Logs were successfully run through this flume with less than two cubic second feet of water available.

In considering flumes the essentials necessary to make them efficient, practicable and desirable for logging purposes are simplicity of design and economy in construction, combined with strength and rigidity of the structure. Foundations should be carefully prepared and the trestling and stringers of ample dimensions to give the necessary strength without waste of material. The entire structure should be carefully and judiciously designed to meet the requirements of each particular proposition. No fixed rule can be made that will apply in all cases with regard to the dimensions of any part. Varying conditions necessitate different methods and styles of construction. Where sawn lumber and timbers are difficult and expensive to procure, round timber can be used for everything except the brackets and flume box. I have used round sticks entirely in erecting the trestling for several log flumes where sawn timbers were difficult to obtain, and expensive. In other instances I have made use of poles for high trestles in pre-

Crows Nest Pass Lumber Co. Flume—Note Creek Cross Rig and Cribbing Along Banks of Creek to Prevent Washing out of Foundation.

Adams River Lumber Company Flume—Junction of a Feeder With Main Flume.

ference to sawn timbers, when they could be conveniently procured adjacent to the line of the flume. In one instance a trestle 80 feet high and several hundred feet in length was constructed entirely of this kind of material.

The flume box may be built of rough sawn lumber of any width and suitable thicknesses to meet the requirements. A single thickness can be used with battens between brackets on the outside, or two thicknesses can be used with joints broken and cracks lapped, or a single thickness may be used by planing with tongue and groove. When wide plank can be obtained I prefer to use a single thickness and batten, but when box material must be used in narrow widths it is preferable to tongue and groove, or use two thicknesses.

The cost of constructing a flume will depend on its size, the difficulties encountered, and the cost of labor and material. A flume having sides 54 inches high, measuring along their surface, which would be large enough to carry logs from 48 to 60 inches in diameter, depending on the species of timber and its specific gravity, could under the most favorable conditions be built for as little as $4,500 per mile if all sawn lumber and timbers were used in its construction and delivered to the construction crew at a price not exceeding $10 per thousand feet, providing common labor could be secured at a wage of $2.25 per day.

A fair average cost for such a flume would, however, be somewhat higher, probably from $5,000 to $6,000 per mile. These figures are intended to include the cost of engineering and the construction of a telephone line, which should always be a part of the system. Flumes of larger or smaller size and capacity would cost proportionately more or less, according to their dimensions and length, except that the cost of engineering and telephone line would be approximately the same, regardless of the size of the flume, The heavier material necessary in large flumes can be worked into the structure at a somewhat lower cost per thousand feet than the lighter material used in the smaller one.

The material required to build a flume of the size mentioned, viz., with 54-inch sides, would be from 225,000 to 300,000 feet of lumber, and from $250 to $300 worth of nails and other materials, per mile.

Cheap Means of Transportation

The cost of shipping logs by flume is surprisingly low. The principal items of the total shipping cost are getting the logs into the flumes, patrolling and maintaining. There are various methods for loading or placing logs into the flume. When practicable the cheapest and best way is to provide ponds into which the logs are dumped, and from which they can be floated into the flume direct or through a short branch flume. In this way one or two men will ship out as many logs as the flume will carry up to 40,000 or 50,000 feet per hour. Where a pond is not feasible, skidways can be utilized, built up along the side of the flume to a convenient height for rolling logs in over the top of either side. If the shipping point cannot be located where this method is practicable, a "jammer" can be used to good advantage. In several instances log chutes have been extended to the side of the flume and paralleling it, where there was an ample supply of water, and the logs were shot or propelled to the point where they would drop into the flume.

The maintenance cost of any flume will depend largely on the skill and care with which it was designed, engineered and erected, and the quality of material used in its construction. The principal items of cost will come from leaks caused by faulty workmanship, settling of the flume box by reason of these leaks or poorly prepared footings for the foundations, and the wear of the flume box, the greater part of which can generally be charged to impracticable curves, either horizontal or vertical, or perhaps both. The wear of the flume box is ordinarily very slight, even when there is a short supply of water. The surface of the flume box soon becomes water soaked, and the wood becomes more tough, stringy and slippery in consequence. The water keeps it thoroughly lubricated and reduces the friction until it is almost completely impervious to the wearing effects of the logs or other material being shipped, even when dragging or riding on account of scant water supply.

As an example of this, and the low cost of upkeep on a well-constructed flume, I will again refer to the one built for the Milwaukee Land Company. There was shipped through this flume during the first year of its use about twenty million feet of logs without any expense for repairs, and with no patrol. The greater part of the fluming was done after the available water supply reached a low stage, and was insufficient to float a large percentage of the logs handled, except as they accumulated their own head to carry them. The only visible wear on the flume box was on the curves and steep grades, where the sides were smoothed off almost as though they had been planed. The most remarkable feature in connection with this record was that the flume was completed late in the fall previous to the shipping mentioned, which was done the following summer. During the winter there was an unusually heavy snowfall that buried the flume to a depth of several feet, and in the spring there were freshets and extremely high water in the creek along the banks of which the flume was built, and in the canyon through which both passed. For some time portions of the flume were completely submerged, and yet the shipping was commenced and finished for the year without any repairing of the structure.

Generally speaking, there should be a telephone system in connection with the flume to be used for transportation purposes, especially if it is to be of any considerable length, and instruments located at intervals along the line of the flume. These points are commonly designated as stations. There should be one of these stations at every dangerous point, if there are any, and, in any event, every two or three miles. Men should be placed along the line of the flume to patrol it from one station to another. The duty of these men should be to inspect the structure and watch for weakening places, and repair them if possible. In case of serious trouble of any kind pertaining to either the flume itself or its operation, which they are unable to remedy alone, they would report by 'phone to headquarters, which is usually at or near the point at which shipping is being done. Barring serious accidents the cost of keeping these men on duty will be the only cost of maintenance except for a few nails and an occasional piece of lumber.

Maintenance Cost is Surprisingly Low

The ordinary life of a well-constructed flume built of such woods as fir, larch or spruce, and kept in operation and in reasonable repair, should be at least twenty years, and under favorable conditions much longer. The only wear on a flume is in the box, and this can be lined with one inch, inch and a quarter or inch and a half lumber when it has worn enough to require it, and relined as often as necessary to keep in good working order. There being no wear on the balance of the structure, deterioration comes from decay only, and its life will depend on the species of timber used and climatic conditions.

To illustrate the durability of this class of flume, I will cite the following example: In 1893 the first section of what later developed into a very extensive flume system was built in Wyoming by a company with which I was connected. Lodge pole pine, which is about the only kind of timber in that part of the country, was used in its construction. After this flume had been in successful operation for about three years I severed my connection with the company and left, but returned to resume the management of its affairs again in 1908. In the meantime the company had been operating intermittently, and many miles of additional flume had been constructed. Several miles of the first section built was still being used, however, and all of the hundreds of millions of feet of logs, ties and lumber that had been handled were shipped through it. The flume box had been relined three times in places, while other parts had been lined only once or twice, and some not at all. The entire original structure was intact and being used, except where slides or other mishaps had made it necessary to replace a few bents, and was continued in use until 1913, when the company quit operating.

Before leaving the subject of log flumes it will, perhaps, be proper to make some mention of the lighter, more cheaply constructed class of flumes used for the transportation of lumber, ties and other products of the forest. A flume any size from twenty-four to thirty inches high, and of much larger material throughout than that necessary for a log flume, is generally all that is required for such service, and can be built for about half the cost of the smallest practicable size of log flume. Much sharper curves are usually permissible and practicable in their construction. I have constructed flumes of this kind for as low a cost as two thousand dollars per mile, and obtained entirely satisfactory results in their operation. They can be utilized to advantage whenever the conditions will warrant having the sawmill located in the timber for carrying the rough lumber to a shipping point on a railroad. The flume can be built in such a way as to receive the lumber as it passes over the trimmer without extra handling, carry it to a yard or planing mill at the railroad shipping point, and there dump it on sorting chains, which, so far as handling is concerned, accomplishes the same result as though mill and yard were immediately adjacent to each other, and with no additional expense after the flume is constructed except the cost of its operation, which will not amount to more than a few cents per thousand feet.

There are many other purposes besides those mentioned to which flumes can be adapted as a means of transportation, where they will prove more economical and effective than any other method. Probably the reason for flumes not being in more common use is that a large majority of the people who would have the greatest interest in them as a means of transportation have never had an opportunity to become familiar with their possibilities, or the advantages to be gained in using them; consequently when a means of transportation is being considered, a flume is likely to be entirely overlooked, or, if thought of, discarded as not being feasible or of advantage. However, the interest now being shown in flume construction by loggers in general throughout the west would seem to indicate that this means of transportation will become more generally known in the near future.

Damaged Timber Flume Quickly Repaired

That the operation of a logging flume is accompanied by a certain amount of risk is shown by the accompanying illustration, which represents a broken section of the flume operated by the Slocan Valley Lumber Company, at Koch's Siding, B. C. The break in the flume occurred about midnight on May 16th last and, so far as the company are able to discover, was the result of a washout of earth upon which the trestle was placed. The amount of damage done was greatly magnified in the first reports, although, from a superficial survey immediately after the occurrence, there seemed to be a very discouraging prospect of getting the company's stock of logs flumed out before the water in the creek receded. The damage was located at Robertson Creek at a point where the flume crosses the canyon, about 60 feet below. With so much twisted lumber and broken trestle lying about in criss-cross shape at an almost inaccessible angle for the workmen to get started upon repairs, a long tie-up threatened, but as soon as scaffolding had been put into place the necessary repairs were completed within four days and sluicing was then resumed. The flume is now in first class shape and the company expect to sluice out a considerable quantity of timber, saw logs, poles and

Break in W. C. E. Koch Flume—Thought to be Result of Washout.

piling from logging operations that will be commenced early in the fall. The capacity of the intake of the flume is easily one log per second of the average run of mountain timber.

This flume was constructed by Wm. C. E. Koch and is now operated by his successors, the Slocan Valley Lumber Company, who have leased the mill for the purpose of sawing out the timber standing upon the areas from which the log flume empties, from the dam at Robertson Creek to the Slocan River, about one and one-half miles south of Slocan City.

The flume is 1¼ miles long, V shaped, with four-foot sides, 2-in. material from 6 in. up to 12 in. in width, tongued upon both edges having been utilized. Although the flume was erected some three years ago, there is little sign of wear and it has given very efficient service up to date. In some places the flume traverses very precipitous canyons. In fact the whole substructure rests upon trestling, which was adopted in place of square timber. In the construction of the flume there was consumed somewhere in the neighborhood of 250,000 feet of timber. It will capably flume sticks up to 80 feet long. Boom sticks of this length were sluiced through and used for the storage of logs at the dump-off in the Slocan River.

Jas. D. Lacey & Company, Portland, Oregon, advise us that from July 31st, the special partnership heretofore existing between Jas. D. Lacey, Wood Beal, Victor Thrane and H. D. Langille under the name of Jas. D. Lacey & Company, has been dissolved by H. D. Langille retiring. The others will continue to conduct the business under the same firm name and at the present address, 1310 North Western Bank Building, Portland, Ore.

Philip T. Coolidge, the well-known forest engineer, with offices at 31 Central Street, Bangor, Me., reports that there is a good demand for the services of forest engineers in the North Eastern States at present. During the past month he has been estimating timber on two townships in the north part of Penobscot County, Maine.

On Sunday, August 20, Mr. R. M. W. McLaren, secretary and managing director of D. K. McLaren, Limited, Montreal, died suddenly at his residence, Westmount, P.Q. He leaves a widow and two children.

Log Handling for Timber Flume

How They Are Drawn to the Skids, Loaded into the Flume and Forwarded to the Mill.

THE engineering and construction features in connection with logging flumes are discussed in considerable detail in the article by Mr. W. D. Starbird, M. Can. Soc. C. E., which is published in this issue. More complete details regarding the actual operation, and also, to some extent dealing with construction, in connection with the flume of the Adams River Lumber Company, whose sawmill is located at Chase, B. C., are given in the present article, for the information in which we are indebted to an interesting report by C. R. Mills and H. A. Parker, submitted as a part of their studies at the Department of Forestry of the University of Toronto.

The topography of the timber berths operated by this company, and its facilities for water transportation are accountable for the company having decided to erect a logging flume. The limit under operation at the time this report was prepared is about 1,000 feet higher than the mill at Chase. The whole berth slopes to a central valley, running through which is a creek emptying into Adams River. Big Shuswap Lake, a short section of the Thompson River, and Little Shuswap Lake complete the water route to the mill. On account of the smallness of the logs, comparatively speaking, horses were used for skidding, instead of donkey engines. From the stump to the flume is always down grade and pole chutes are used, four or five logs being drawn at a time by horses. Climatic conditions enable the company to conduct their logging operations throughout the year with the exception of about one month during the winter, when the snow is too deep in the bush. The flume, however, cannot be used in the winter, or for about six weeks in July and August. During these times the logs are skidded to the side of the flume, ready to be shot down when the water is available.

In the logging operations two men fell the trees, lop the branches and cut them into log lengths. Careful work is necessary in lopping the branches so as to reduce the wearing of the flume to a minimum. The logs are neither nosed nor peeled. Before the completion of the flume, skidding was confined to those areas in its immediate vicinity. The logs were skidded by horses on skidways having their head blocks within five feet of the flume. When fluming started, a couple of skids were thrown across onto the flume and two men with peavies put all the logs that were on or above the level of the flume into the water. Logs below this level were hoisted onto the skids by horses and decking line.

Chuting Logs to the Flume

The main skidway to any point consists of a three-log chute, with a road alongside for the use of horses pulling the logs, as the slope down hill was not sufficient for chuting by gravity. A team of heavy horses was used to haul four or five logs at a time. This team pulled on the rear log by means of a chain and dog, the latter being driven into the log by a light sledge hammer. The lower end of the chute meets the upper edge of the flume at an angle of about 25 degrees. The first two logs are forced into the water when the horses are drawing towards the flume. To put the remainder of the logs, except one, into the flume, the horses are turned and hitched to a wire rope passing through a stationary pulley at the flume back to the rear log, where it is fastened by a dog. A platform is built in the obtuse angle between the chute and the flume for the use of the horses. Two men are employed at the end of the chute, the teamster and a man to look after the dogs.

Skidways were built beside the flume. In the construction of a skidway, a head block consisting usually of the butt of some large tree which has been cut off because of its punk heart, is placed on the ground parallel to the direction in which the skidded logs are to lie. Two notches, the distance apart depending upon the length of the logs to be skidded, are cut in it to receive the front ends of the two skids. For skids are chosen two large trees, 8 or 10 inches in diameter at the base, and which carry this diameter well up. They must be strong, and as they are usually left on the ground after the logs are removed, are preferrably of a species which is of little use for saw timber. These are placed at right angles to the head block projecting over it by not more than a foot, and with their small ends away from the flume. Should there be a bend in the skid, the convex side is always placed upwards. Unless the number of logs to be placed on a skid is very small, a support is placed under each skid. If a suitable non-merchantable log can be found it is used, or if not a crib work is built up. The number of logs on a skidway varies, sometimes running as high as 125 to 130.

Whenever possible, in the construction of the flume, sections were

put together at the mill where the timber was sawn. Each section which forms the frame work for the V has a sill of sufficient length to reach across the stringers and project far enough on one side to support a plank walk. The V to which 2-in. plank are nailed is supported by two beams, one on either side. Where trestle is necessary it is built of unsawn timber. The largest trestle is about 75 feet high and 500 yards long. In several places the flume runs through cuts in small ridges, thus cutting off the small turns of the creek bed.

The trough of the flume is of two-inch plank, rising at an angle of 45 degrees to a height of four feet. Care is taken that there are no rough joints in the planking which would hold up a log and cause a jam. The cracks between the planks are battened with 3 in. x 1 in. strips. The plank walk extends along the side for the use of the men on guard to prevent jams during the fluming. The grade of the flume varies from 2 to 25 per cent. On the 25 per cent. grade, the water runs at such speed that the depth is greatly decreased. To overcome this, a feed enters just above. It is built with flat bottom and vertical sides, of dressed inch lumber, held in place by 2 in. x 4 in. scantling. At the upper end of the main flume the flow of water is controlled by a dam constructed of rough timber, stone, earth, and plank. Two sluice ways control the supply of water in the flume. Each guard has about a mile of flume to watch, and has near at hand a telephone connected with the skidways and main camp.

The logs after leaving the flume are left to float down the Adams River to Shuswap Lake of their own accord. Here they are caught in a boom, held around the mouth of the river by piling. The boom is fastened together by ring-dogs and chains. From here they are towed in bag booms by a stern-wheel steamer, or an alligator, across the end of the lake, down the short section of the Thompson River to Little Shuswap Lake, and through it to the mill at Chase. There are usually six in the boat crew; captain, engineer, fireman, two deck hands, and a cook. The boom is attached to the bow of the boat, the boat travelling stern foremost. These boats are also used for gathering up stray logs along the shore of the lake. To gather these the logs are rolled into the water by hand or with the help of horses. The boat is furnished with a boom, one end of which is fastened to it, while the other is held at some distance shoreward from it by means of projecting beams. As this passes along, the logs are caught in its open mouth. Wood, birch and fir chiefly, is used as fuel for the engines in the boats.

Progressive Methods in Northern Ontario

Spanish River Lumber Company's Operations—Supplies Hauled by Motor Truck —Model Headquarters at Massey

RANKING among the oldest and largest commercial enterprises of the North Shore, is that of the Spanish River Lumber Company, Limited,with head office at the town of Massey, Ont., and the Soo Branch of the Canadian Pacific Railway and about eighteen miles east of the Georgian Bay. The town is situated on the north bank of the Spanish River at its confluence with the Sable River.

The company have operated from this point for about thirty-five years, but in 1904 their affairs passed into the hands of the present owners and from that date their operations have constantly expanded until at the present date they are among the largest operators in the province.

The company control an area of timber lands considerably in excess of one thousand square miles, and operate from eight to fourteen lumber camps annually, in addition to a number of small jobbers, so that their annual production runs into several hundred thousands of logs, consisting mainly of white and Norway pine.

The Spanish River Lumber Company own two large mills, situated at Aird Island, in the Georgian Bay, and at the village of Cutler, on the Soo branch, the two mills being capable of taking care of all the raw material produced in the company's limits. The product of the Aird Island mill is shipped entirely by water, but the mill at Cutler has both lake and rail shipping facilities. Until a few years ago the company sold their product exclusively to the wholesale trade in United States centres, but four or five years ago they established a large wholesale and retail yard at Sarnia, Ont., under the superintendence of Mr. Harry Turnbull, and from this point they entered the retail market of western Ontario. At this yard is maintained a large and well assorted stock of white and red pine, hemlock and spruce lumber, together with lath, pickets, cedar posts and British Columbia cedar shingles.

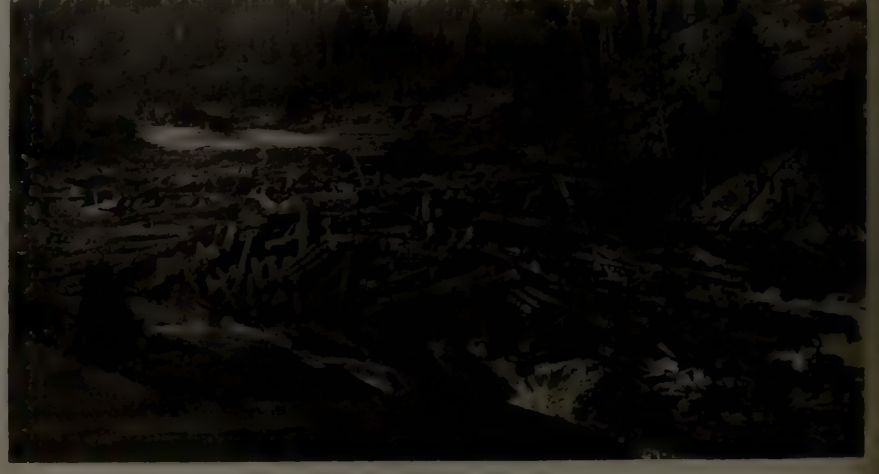
The company's mill at Cutler was built in 1915, the old mill having been destroyed by fire in the spring of that year. A unique feature of the Cutler mill is that the entire foundation is constructed of concrete. This feature, together with the fact of the mill being equipped exclusively with band saws, makes it probably the most modern and up-to-date plant on the North Shore.

Special Road Built for Supply Truck

Obtaining large new limits in the Nipissing forest reserve on and near Sable Lake, which forms the head water of the Sable River, the Company commenced the construction of a road from Massey to Ritchie Falls depot (the distributing point for the new limits) a distance approximately of fifty miles, and by the time the operating season of 1915 opened, they had completed about twenty miles of the road to an extent that admitted of the use of a three-ton Packard motor truck in the transportation of lumbering supplies; an innovation in saw-logging operations that must be admitted as being sufficiently modern to make uneasy the rest of the departed lumber jacks of the old school.

The truck operated by the company is a three-ton Packard, 1915 model. Last summer and fall they forwarded supplies north of Massey with this truck, making an average of 75 miles per day with a full load and doing the work of nine pairs of horses and wagons. Their

Spanish River Lumber Company's Three Ton Packard Taking Supplies to Camp.



A Log Jam on the Sauble River, Near Massey, Ont.

tote road has now been completed and put in shape for truck or automobile traffic for a distance of 30 miles north from Massey. They still have about thirty miles to finish, which may not be completed until next year, on account of the present scarcity of labor. The illustration shows the truck on one of its trips loaded to capacity with three tons and 500 lbs. of sacked oats. The road was constructed at a cost of $500 per mile.

In connection with these limits the company constructed a very large reserve dam on the Sable River at Ritchie Falls depot, which carries a head of from seventeen to twenty feet of water, Sable Lake is five miles distant from the dam, and the lake, having a very large natural area, it is not difficult to understand that such a thing as a stuck drive on the Sable River from drought, does not enter into the company's calculations.

Another large limit is situated on the North Shore of the Georgian Bay, about twenty-five miles northeast of Little Current. The operations there are carried on under the local superintendence of Mr. Henry Bell, with headquarters on the limits at a point known as Bay Finn. An exceptionally fine quality of pine is obtained from this limit which is about ninety square miles in extent.

Other operations of the company are conducted from Cartier on the main line of the C. P. R., the logs watering in the main Spanish River. Also at Thor Lake, on the main line of the Canadian Northern Railway, about sixty miles north of Sudbury, the logs reaching the Georgian Bay through the upper reaches of the Wahnapitae River.

The disastrous wind storm of 1914 which laid low so many millions of feet of valuable timber throughout northern Ontario, affected the company to a considerable extent, but until the present season the company have been most fortunate with respect to forest fires, when the extent and exposed position of some of their limits is taken into consideration. This season, however, the almost universal forest fires entered their district and caused considerable loss, both of timber and river improvements. A little adversity, however, only seems to let loose reserve energy, and if the opposition of the elements has in any way upset the plans of the company, it is not discernible to the onlooker, and causes no interruption to the regular routine.

Naturally, the company employ a very large and varied number of employees, of almost every conceivable capacity, and their monthly pay-roll forms an item in dollars and cents big enough to make any reasonable person sit up and take a little notice. Needless to say, their operations are of large importance to the district lying between Sudbury and Sault Ste. Marie.

The company mills at Aird Island and Cutler have always been under the superintendence of Mr. J. O. Smith, of Bay City, Mich., a gentleman of so genial a disposition that he is hail fellow, well met, wherever he happens to put in an appearance. Unfortunately, he is at present on sick leave, but if numerous good wishes are of any avail, he will soon resume his activities. During his absence the supervision is in the hands of Mr. A. J. McDonell, the secretary-treasurer of the Spanish Mills Company.

There are considerable quantities of valuable hardwoods on the company's limits that have not yet been dealt with, but it is quite within the probabilities that at some suitable future date hardwood production will be added to the company's activities.

Headquarters at Massey, Ont.

At Massey, the company occupy quite a large plant, consisting of general offices, warehouses, barns, boarding houses, etc., and close to the town on the bank of the Sable River are several large feed barns, each one hundred by thirty feet, in which the company spring out their horses between seasons. In connection their is also a chopping mill, in which all hay, oats, etc., are cut up and then steamed in bins by means of piping from the mill boiler. The prepared fodder is then carried to the barns by means of an overhead carrier in a large steel bucket, and it is interesting to note how quickly a couple of hundred horses are fed, and with how little waste. The location of the premises are ideal. They are bounded on the south by the Spanish River, and on the west by the Sable, the horses having a matter of about one hundred acres of land in which to exercise, part of which contains a considerable number of trees that offer excellent shade.

The extensive operations of the company are managed by Mr. B. W. Arnold, of Albany, N.Y., who is the president of the company, with a branch office in that city. Mr. Arnold has very large interests in his native city and at other points, but finds time to visit his Canadian interests regularly. Mr. W. J. Bell, of Sudbury, who is the vice-president and general manager, devotes a large part of his busy life to the management of the company affairs, and is ably supported by the general superintendent, Mr. J. A. Ferguson, of Massey, who controls the entire woods operations and many other interests of the company from the headquarters at Massey. Mr. Ferguson hails from Renfrew, and is a typical example of that Scottish-Canadian race who, since the first days of the Hudson Bay Company, have ever been conspicuous in the first ranks of the political and commercial life of Canada.

How to Build a Camp Fire

Most lumbermen know how to build a camp fire and how to put it out when they have finished with it. It is often the expert swimmer, however, who gets drowned, and by the same line of thought we do not need to apologize for reproducing the following instructions about handling camp fires, published by the U. S. Forest Service.

There are several varieties of camp fires, most of them simple and effective and easily constructed even by a novice in camping. There must be considered not only the kind of camp fire which gives the best service but the kind which is least dangerous. The man who is careless with his camp fire should not be allowed in the woods, for all too frequently he is responsible for forest fires which do tremendous damage.

Camp stoves should be taken whenever they can be transported. They are safer than open fires, more convenient, require less fuel, and do not blacken the cooking utensils. Collapsible sheet-iron stoves may be obtained.

In the absence of a stove an open fire must be built. A safe and serviceable fireplace can be made of rocks placed in a small circle so as to support the utensils. Where rocks are not obtainable, poles may be used.

For permanent camps it pays to build a stone fireplace. A piece of sheet iron will prevent the blackening of the pans and makes a better draft.

For temporary camps the fire should be built as follows:—

Dig a hole about a foot deep and about three or four feet in diameter. Shovel away the side toward the wind. Lay green poles across the hole to support the pots and pans, and build the fire underneath.

Fire irons are often a great convenience. A piece of three-eighths-inch round iron four feet long is bent at right angles a foot from each end and the ends are sharpened. Two of these irons are placed side by side, the ends are driven into the ground and the fire kindled beneath them. Instead of being made in one piece, the pegs and crossbars may be connected by rings in the ends. They will then fold and be easier to pack.

Camp fires should never be larger than necessary, and the utmost care should be taken to prevent sparks from being carried into the neighboring forest. Clear away the litter for a considerable space about the fire. And be sure to put the fire out before you leave it.

A shovel is nearly as important a tool as an axe in camping. Do not count on finding one along the way, but put one in your outfit.

During wet weather look for kindling in burned pine butts or in pine knots. The under side of a leaning tree will usually contain dry material. Dead branches that have not yet fallen are drier than those on the ground. Bark from fir snags is excellent fuel.

Where matches are scarce or when the weather is stormy, first light a candle and kindle your fire from that.

Hints on fire protection are always timely and fit particularly well with these instructions about camp fires.

The first thing is prevention. Be particularly careful with camp fire, matches, and tobacco.

Scrape all inflammable material from around the fire before lighting it. Make a fireplace either by digging a hole or by poling up rocks. The fire will then not only be safer, but will draw better.

Before leaving camp see that the last spark is extinguished. Pour water on the embers and then cover them with earth.

Don't make your fire too large. Large fires are not as convenient to cook by as small ones and are more trouble to put out.

If you discover a fire, go to it at once and put it out if you can. A small fire can be put out easily by throwing handfuls of earth, sand, or dust at the base of the flame. The flames may also be beaten down with sacks or with branches, but care must be taken not to scatter the fire.

If the fire is spreading too rapidly to be attacked directly, cut and scrape a trail some distance ahead of it. Do not back-fire; this is work for an experienced man. If a fire is serious enough to require this treatment, the work should be left to a ranger.

The best tools for fire fighting are the shovel, axe, and hoe or rake. In open pine forest very little axe work will be required. Shovel or rake a trail through the needles down to mineral soil, and guard the trail.

To stop a fire burning in brush the trail must first be cut with the axe and then scraped. The brush should be thrown to the side away from the fire. The litter may be scraped toward the fire.

Pick a route for the fire trail that will avoid brush patches if possible. The crest of a ridge is an excellent location, since the fire naturally checks at the top.

Do not give up because the fire is gaining headway or because you lack tools. The fire has probably already been reported by lookouts, and rangers hurrying to it properly equipped. Stay and help them; and in the meantime do what you can to keep it in check.

See that a fire is cold before you leave it.

Forest Telephones and Fire Protection

Immediate Communication All-important in Preventing Conflagrations—Recent Developments that Make Effective Work Possible

By W. N. Millar*

Government officer describes methods worked out on forest reserves which are bringing good results and are applicable in large measure to privately owned timber holdings.

FOR the improvement of fire protection on the Dominion Forest Reserves, the Forestry Branch of the Department of the Interior has, during the past four years, followed out a policy of gradual extension of telephone lines into the large reserves under its charge in the four western provinces. The total mileage thus constructed is at present about 710 miles, distributed approximately as follows:—

British Columbia Reserves	75 miles.
Alberta Reserves	265 miles
Saskatchewan Reserves	50 miles
Manitoba Reserves	320 miles
Total	710 miles

Compared with the 320,000 miles of forest telephone lines constructed by the United States Forest Service on the National Forests during the past eight years, this is, of course, only a small beginning, but the intention is to enlarge the work of telephone construction as rapidly as proper experience and skill are secured in the work, and as funds permit. In line with this intention the Forestry Branch inaugurated during the present field season a systematic course of instruction in certain specific phases of telephone work. Four meetings were held which were attended by some sixty forest rangers and supervisors of the permanent field staff in Alberta and Saskatchewan. Each meeting lasted from six to eight days, and the entire time was devoted to lectures on the special types of telephone equipment used on forest protection lines, illustrated by samples of the equipment itself, and to practical work of line construction and the installation and operation of equipment. All the meetings were held on, or immediately adjacent to forest reserves, where it was possible to build a demonstration line under normal average field conditions, using the regular standard equipment and methods prescribed by the Forestry Branch. This work was under the charge of the writer, who, in addition to a theoretical knowledge of telephony has had eight years of practical experience in the construction of hundreds of miles of forest telephone lines, beginning with the first lines of this character built by the United States Forest Service in Northern Idaho in 1908.

Special Line Construction Required

It is not, perhaps, generally realized that the type of line constructon adapted to forest protection purposes has, in the past five years, become very thoroughly specialized and that it differs materially from the ordinary methods of rural and commercial construction. This specialization is rendered necessary by the fact that many forest protection lines must, for reasons of economy, be built through heavy timber without clearing the wide right-of-way demanded in commercial construction. Of course, where a suitable open right-of-way is available construction methods and specifications are similar to those employed on ordinary rural lines, but this is the exception rather than the rule.

Briefly described, forest protection telephone systems consist of grounded lines built of number 9 B.W.G. galvanized iron wire hung on trees instead of poles, and using a special split tree insulator instead of the usual well-known type of glass insulator employed on poles. To prevent damage from falling timber and swaying trees, certain rules of construction must be very carefully observed. These provide for a careful equalization of spans, for the leaving of a very large amount of slack, for the placing of ties on the concave side of all curves, for the staggering of supports out of a straight line, and for the employment of special methods of attaching the insulators to the trees so devised that when an excessive strain comes on the line wire, as through the fall of a tree the wire will be detached from the support and carried to the ground, but will not break. The whole construction aims to produce a line that, while resisting all ordinary strains, yields at once to excessive strain in such a way as to insure absolutely against line breakage. In this it differs radically from the well-known methods employed in ordinary commercial practice, which produces a line of extreme rigidity because the open right-of-way insures against the danger of falling timber to which the forest line is constantly exposed.

* General Inspecfor of Dominion Forest Reserves.

The instruments used are the most powerful types of magneto sets employing local batteries and code ringing. Such a set is the 1317-S set of the Northern Electric Company, equipped with a 2500 ohm, unbiased ringer and a .5 microfarad condenser wired in series in the receiver circuit. With these sets and a well constructed line it is possible to get good service over about 125 miles of No. 9 wire, to which from 20 to 25 such instruments have been attached. For installation on lookout peaks and other exposed sites, a special armored mine telephone is employed, while for temporary camps a light self-contained ten pound set has been specially devised.

Perhaps the most cleverly designed of all the equipment, however, is the aluminum pocket telephone, weighing only two pounds, which is used by the rangers for getting into communication with headquarters from any place along the telephone line in the forest. This is a new type invented by R. B. Adams, of the U. S. Forest Service, and fills a long felt want for a thoroughly practical long distance telephone, that at the same time would be so light as to form only an inconsiderable addition to a ranger's pack while on patrol.

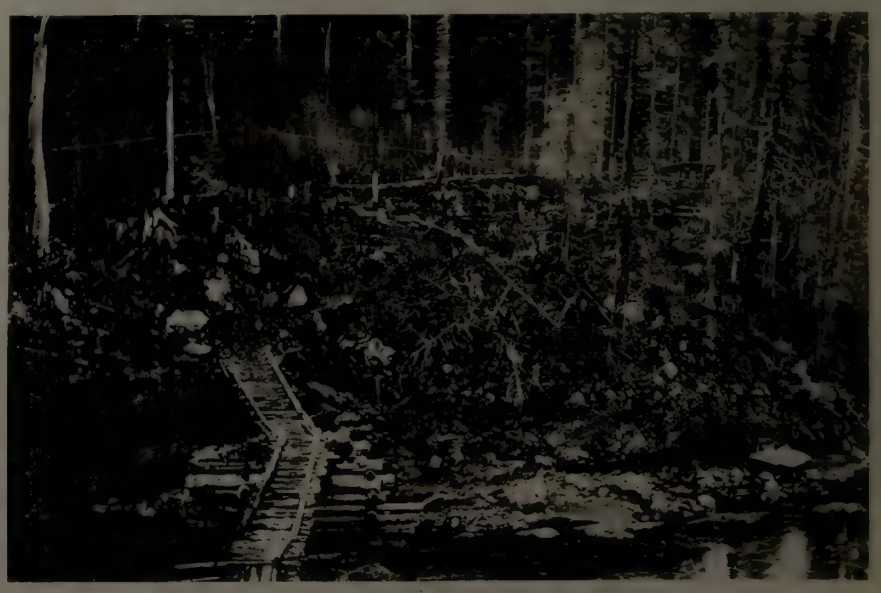
Cost of Construction and Maintenance

The cost of telephone construction and maintenance is naturally an element of great importance in forest protection for such lines almost never serve any other purpose unless used in connection with a logging operation, and, of course, produce no direct revenue. As already indicated, the special tree line methods and equipment evolved from the experience of the past eight to ten years are all aimed at the production of a line having a low initial cost and a high degree of dependability with a maintenance problem adapted to the lines' peculiar conditions of employment. Four distinct cost elements enter into an estimate for a forest telephone line. These are materials, transportation, line clearing and wire stringing.

Present material prices are so abnormal that little construction is now being attempted, but under ordinary conditions the per mile cost of line materials lies between $9 and $12, according to freight rates from nearest market. Of this, only about $2 to $3 is for insulators and ties, the rest being for line wire. The equipment for each station costs from $15 to $18.

Transportation covers the distribution of materials along the line and camp moving. It naturally depends on the distance involved and the facilities available. Four hundred pounds of material per mile of line must be delivered. In any ordinary case it is a small element in the total cost.

Line clearing is often a large element and always a variable one, as it depends entirely on the character of the timber through which the line is built. Of course, only a very narrow clearing is required, 6 to 8 feet as a rule, and often a road or trail is already available. The



A typical B.C. Forest trail, passing through a clearing, with telephone line on left.

cost will vary from $2 up to $25 per mile, but a good average figure is $10 per mile.

Wire stringing with experienced men under proper supervision is a minor element of the cost. It will run from $4 to $8 per mile, but tremendous difficulties have been met in the Forestry Branch work in securing qualified men for this work. Ordinary linemen have nearily always proven wholly unfitted for forest line construction, because, no matter how skilful in their own particular methods, they lack the intelligence required to adapt their skill to the peculiar methods of tree construction, and nearly always use the pole line methods to which they are accustomed, with disastrous results to the forest line. It was this difficulty experienced in securing men skilled in tree line methods that caused the Forestry Branch to adopt the plan of providing special facilities for the training of its own men in these methods of line work.

Given normal prices for material, a line starting at a railroad, standing green timber through which to build, and proper skill in construction and supervision, a first class tree line can be built as low as $25 per mile, but will usually run from $35 to $45 per mile. Where the haul is longer or where supplies must be packed on horses and especially where dead timber or heavy underbrush is encountered, this cost may be increased to from $50 to $65 per mile. Station equipment and line construction tools are, of course, additional. The latter cost about $100 for a crew and last for many years.

Maintenance on a properly constructed tree line is very low unless the line runs for a long distance through standing dead timber. Ordinarily an annual or semi-annual overhauling at a cost of not more than $1 per mile is sufficient, in addition to requiring patrolmen to repair all injuries to the line in their district as they occur. In green timber these are inconsiderable, but in dead timber where trees are constantly falling, at least one man day per month to each 15 miles of line for maintenance work should be planned for. Of course, nearly all forest telephone line maintenance is carried on in connection with fire patrol, from which it is difficult to separate it, in a cost record. Such lines have a life of from fifteen to twenty years.

How the Telephone is Used

A brief description of how the telephone is utilized as an aid in forest protection may be of interest. It is quite obvious that the instantaneous communication which a telephone makes possible, regardless of the distance involved, renders possible the rapid summoning of assistance by a fire ranger in a remote section of the forest, and thus the control of fires that might otherwise grow to uncontrollable proportions. Also, it is equally obvious that where, as in all but the most primitive of fire ranging services, there is a separation of the field force into an executive and an administative staff, it is possible by means of the telephone to link up the supervising officer with his subordinates and thus provide for coordination of the work of the rangers over a large district and for mutual assistance under the direction of a central intelligence. This is about as far as any fire ranging service in Canada has as yet carried the utilization of the telephone in forest protection, while it is unfortunately true that some of the very largest and most costly of all, notably the fire ranging service of Ontario, make no use of the telephone whatever, but depend on the individual, unaided and undirected efforts of a large untrained staff, with what results the recent fires in the north have shown. As a matter of fact, however, only the outer fringe of the possibilities of the utilization of the telephone in forest protection has been touched when it is used only to the extent above indicated.

Forest protection in recent years has taken enormous strides in America, and it has been realized at last that the problem of preventing forests from burning up under the conditions existing in America is every bit as difficult and involved a technical and administrative problem as is, for instance, the operation of a lumber business or any large commercial undertaking. The result has been the development of what is known as specialized forest protection and a special class of trained experts in the art of protecting forests from fire. Two fundamental problems present themselves. The one is the prevention of fires. The other is the suppression of those not prevented. Since nearly all fires are due to human agencies, fire prevention is of very great importance, but it is, on the whole, largely a problem for the advertiser, and the forest telephone has only an indirect relation to prevention work.

Fire suppression, however, is a wholly different problem, and one which, despite all prevention efforts that may reasonably be anticipated, we may confidently expect to face for many years to come. Northern fire suppression methods are based upon a very simple and very obvious fact, namely, that every very large fire was once a very small fire, and that the one sure way to prevent the large destructive fire from occurring is to put all fires out when they are small. There are only two ways by which this may be accomplished. The one is to employ an overwhelming force of men during the fire season, distribute them over the forested area and depend upon a very intensive patrol to locate and extinguish all fires in their incipiency. This method has the merit of simplicity, at least. No special training or qualifications are required in the personnel. No elaborate organization or inspection is necessary, and very many jobs are made available. Accordingly, this system has been very much favored by certain governmental fire ranging bureaus, which saw in the comparative obscurity of the fire rangers' work a chance to reward many lesser party workers at public expense without the fact being too glaringly conspicuous.

Ontario's Extravagance and Failure

So, in Ontario, for instance, there has grown up what it will surprise most persons to learn is the largest fire ranging staff in the Western Hemisphere, a staff consisting all told of more than 1,000 men, whose sole duty is fire protection. Of course, fire protection can be secured by this means, but only at enormous expense, and expense commensurate in fact with what would be required to protect our cities from fire according to modern requirements, but employing only the old-time bucket brigade. Such an expense is wholly impracticable over any large timber area, and so we have, even in Ontario, with its strikingly high per acre expenditure for fire protection, a constant and widespread destruction of forests occurring, year after year, throughout the north, but brought to general public notice only at irregular periods when by chance one of these large fires happens to involve a village or town as in Porcupine in 1911, or again during the present season at Matheson and Cochrane. Of course, under this system forest telephone lines are not utilized because each ranger acts for himself independently of all others. There is only a rudimentary development of direction by a central intelligence, and there is therefore no need for direct and speedy means of intercommunication between the various elements of the fire ranging staff.

The modern method of specialized forest fire protection operates on a wholly different plan which would be entirely impracticable were it not for the telephone. There is nothing mysterious about these methods, however. They are, in fact, nothing more or less than the application to forest protection of the same factors that have produced our modern industrial development, namely, specialization of function, training of workers and the use of mechanical aids to increase human effectiveness.

Obviously three things must be provided for if all fires are to be extinguished in their incipiency.

They must first be discovered while they are still in the controllable stage.

They must then be reached by a force of men of sufficient numbers and properly equipped to put them out.

They must finally be put out by this force and that so thoroughly that all danger of recurrence is rendered impossible.

How the Staff Co-operates

The modern forest protection staff accomplishes these things in the following manner:

Fires are discovered and their exact location determined by a special corps of lookouts who have no other function to perform. These lookouts are placed on commanding peaks or towers where they remain continuously during the daylight hours throughout the fire season. Each is provided with a special lookout map of his district, with a fire locating device and with a telephone connecting him with a central headquarters at which all lookout reports are received and where the actual work of determining the precise location of fires is done. A large amount of special equipment has been invented in recent years to facilitate the rapid and precise location of fires from such lookout peaks, so that now in certain large forest areas of the western states, it is a matter of minutes only from the time a fire starts until it is detected and accurately located by a lookout. The vital necessity for telephone communication at the lookout station is evident, for obviously, since the lookout merely locates fires and does not extinguish them, he would be useless without some means of conveying his information to some other agency. Many factors enter into the problem of the number of lookouts required, but as a rule each covers an area roughly approximating a circle thirty miles in diameter.

Once the fire is exactly located, however, and this information conveyed to a central headquarters, the next obvious step is to dispatch a force for its suppression. Since an intensive lookout's equipment should discover all fires while they are still incipient, this force need not be larger than one man. This man must, however, be immediately available at all times, and must be both capable of reaching the fire and equipped to attack and control it when he does reach it. These requirements are best met by a strong active woodsman, thoroughly acquainted with his own district, who is kept permanently stationed at some centrally located point in this district and connected by telephone with the center's fire central headquarters for the entire region. Such a unit is called a "smoke chaser," and immediately when the discovery of a fire in any district, the "smoke chaser" for that district is to go immediately to the fire and put it out. In doing this he also has various aids. Improved routes of travel, such as trails or roads through his district are of prime importance. Means

of transportation adapted to the country are obviously necessary and may vary all the way from his own two legs to a motor car. Special tools for fire fighting, light camp outfits and the new light telephone are part of a "smoke chaser's" equipment. Everything possible in the way of permanent improvements and mechanical equipment is furnished to this smoke chaser with the one object of assisting him to get to the fire with the least possible delay and be able to make the best possible fight against it when he arrives.

Emergency Safeguards

Finally, there is the question of providing supports and reserves so as to be safe against any emergency. Even though the lookouts and smoke chasers successfully discover and extinguish 99 out of every 100 fires, there is always the chance that that odd hundredth fire which some unforeseen slip in the fire fighting machine has allowed to escape, will do a large amount of damage. Therefore, it is necessary to organize the entire available labor force of the local community so that it may be relied upon to act as a reserve fire fighting force in case the regular staff is unable to cope with the situation. In this, the telephone is an invaluable assistance, making possible as it does immediate communication with all sources of extra labor and rendering feasible the summoning of such labor to the points where an emergency threatens to develop.

To some, the system above outlined may appear somewhat complicated or even fanciful. As a matter of fact, this system is to-day actually in operation over timber lands in the United States bearing at least double the total timber stand of all Canada. In these forests a fire that covers a couple of hundred acres is now considered a disaster and an immediate investigation to determine the cause of the breakdown in the system is begun. Compare this with the recent fire in the north, where at least 750,000 acres were involved in one fire, and it is only one of hundreds, noticed only because it involved a few villages and destroyed many lives, while the others destroyed only one of the vital resources of the province, and being remote from the railroad can be easily concealed.

Finally, abundant figures are available to prove that this system is not only efficient but cheap. Every business man appreciates the fact that labor-saving machinery is cheaper than human labor, and that although skilled employees draw higher pay than unskilled, this pay is very far from representing the increased efficiency of the skilled over the unskilled man. Specialized fire protection is made cheap by using labor-saving machinery and skilled men for the very same reason that factory made products are cheaper than hand made, but specialized fire protection and political patronage methods of employing rangers are two things that are wholly incompatible in actual practice. The proof is simple. The combination simply does not exist.

The Telephone in B.C. Logging Camps

By J. D. Gilmour

Speedy and reliable means of communication is one of the necessities in fire protection; it is also very desirable in the logging business. In some places on the coast of British Columbia and in some of the heavily timbered valleys of the interior, there is no likelihood of commercial telephone lines being built for many years. Until recent times many logging camps were situated in such locations, without any means of communication with the outside world except an infrequent mail service, or in case of emergency long trips had to be made by launch or trail. Conditions, however, are gradually being changed, and now many logging camps previously without direct connection are linked up by Forest Branch telephone lines.

Such lines are not only a great convenience to the logger, but are of inestimable advantage to the Forest Branch during the fire season. There is considerable fire risk inherent in the logging business, not only on account of the hazard created by the crew, but hazards due to steam logging with donkeys and locomotives. In many parts of the province logging camps are the only available men for fire fighting and by means of the telephone may be summoned quickly from the nearest camps to the scene of the fire. The fire season of 1915 on the Coast was the first bad season since the telephone line to the Coast logging camps was constructed, and its worth was conclusively demonstrated many times.

Outside the fire season a system of co-operation in maintenance of such telephone lines has worked satisfactorily, the loggers being willing to contribute part of the cost during the winter months. During the summer the Forest Branch bears the whole cost of maintenance.

Existing commercial lines are used wherever possible, and the Forest Branch lines are nearly all connected to other lines belonging to the Dominion Government and private companies. Precedence is given to messages regarding fire by all operators. Ranchers are glad to become voluntary members of the fire protection force, and report any fires starting in their neighborhood, in return for connection with the Forest Branch lines. Such instruments are free to the public, toll charges being collected only by the connecting commercial lines over which the message may have to be transmitted. In the districts served by the telephone lines prompt and reliable information about fires is quickly obtainable through the co-operation of the public.

On the Coast, six submarine cables have been laid—a total distance of 18,450 feet. These all cross deep channels, subject to strong tidal influence. The shore end of one of these cables is shown in one of the accompanying illustrations. All of them have given good service without any trouble.

The land lines are hung on trees, by means of the Thomas split tree insulator, with an oak bracket on each seventh tree. In a few sections poles had to be erected, and brackets used throughout. Tree lines should not be too high, or excessive swaying of the tree affects them, They require plenty of slack so that falling trees will bear the line to the ground without breaking it.

The standard main line wire is No. 9 B.W. gauge, galvanized iron, but No. 12 B.W.G. will serve for branches up to twenty miles in length. The standard instrument for inside use is the wall telephone set. For outside use an iron set is used. Repeating coils used to connect a ground circuit with the metallic circuit of commercial lines, have given good satisfaction.

The following lines have been built in the last four seasons by the B. C. Forest Branch:—Hazelton to Suskwa River, 20 miles, Terrace to Lakelse Lake, 17 miles, Gowland Harbour to Green Point Rapids (and branches) 68 miles, Princeton to Five Mile Creek 20 miles, Kelowna to White Mountain lookout station 12 miles, Vernon to BX lookout station 18 miles, Grand Forks to N. Forks Kettle River 44 miles, Erie to Second Relief Mine 14 miles, Arrow Park to Mosquito Creek 7 miles, Lardo to Duncan River 40 miles, Revelstoke to Big Bend, 120 miles, Creston to Goat Mountain lookout station 3 miles, Cranbrook to Baker Mountain lookout station 7 miles, Canoe Falls to White River 20 miles, Natal to Upper Elk River 60 miles; total 470 miles..

80,000 Miles Travelled by 60 Rangers

How much ground well-disciplined forest rangers can patrol is shown by the record of the Lower Ottawa Forest Protective Association. During 39 days, between April 20 and the end of May, 1916, the sixty rangers employed by the Association covered 21,678 miles of trails and highways, along all of which distance they maintained a vigilant lookout for fires, and performed numerous other duties. This works out to an average of about ten miles per day of climbing along difficult tracks through forest country and must be considered an excellent performance. The rangers, of course, were far from being continuously on patrol, as in the 39 days they issued 350 permits to settlers for slash burning and built trails, repaired 'phone wires, etc. Last year the Lower Ottawa rangers travelled 80,000 miles.

The fires encountered through April and May were ten in number, of which six were ascribed to railways, and one each to settlers, hunters, fishermen, and a sawmill.

From the Canada Lumberman of Thirty-five Years Ago

Toronto, June 1st, 1881.—Large quantities of square timber are coming down the Nipissing Railway. Between the Northern Elevator and Queen's Wharf five firms have their men at work forming the timber received per Northern, and Toronto, Grey and Bruce Railways into rafts. The following is the business here of only one of these, and the others being pretty much on a par with it the total trade may be judged according to information supplied by the foreman:—They will send off five rafts altogether this season, all for the Quebec market. The timber to be used consists of 150,000 feet of rock elm and 15,000 feet of white pine, per the T. G., and Bruce. The Northern brings down for the same firm 30,000 feet of white oak, 15,000 feet of red oak, 250,000 feet of white pine, 45,000 feet of ash, 500 traverses and 300 floats of tamarack, and about $1,000 worth of withes are used in binding these rafts. The foreman referred to says that the past year has been an extremely good year for the timber trade, plenty of snow in the bush for hauling, and enough water by the spring thaws to float the logs down the rivers to the shipping point. The men in his employ are thirty-five in number, and are all English-Canadians, with the exception of twelve, who are Frenchmen. The figures mentioned above are those of the whole season's business of the firm; as yet only a comparatively small quantity of timber has been received. So far the Northern Railway freight office officials report that no timber has as yet come down from Collingwood or Muskoka, 123,000 feet of white pine and 73,308 feet of hardwood comprising the total consignments of timber received; this is all from stations along the line between Toronto and Collingwood.

Northern Ontario Forest Destruction

Situation Demands Practical Protection — Problem a Simple One Based on Co-operation—Ontario Government's Duty

By R O. Sweezey, M. Can. Soc C.E.

THE manifestly urgent necessity for the enactment of a new and sensible forest fire protection act by the Province of Ontario, has been so persistently and convincingly shouted from the house tops by Mr. Robson Black, the energetic Secretary of the Canadian Forestry Association, that most right thinking people realized the seriousness of the situation some time ago. Now, however, since the great conflagration in northern Ontario, even the stupid may understand what Mr. Black meant when he drew pictures with uncanny accuracy, forecasting the fate that awaited Boards of Trade, etc., what pitiful reading today in the light of those the north country. And all those petitions from municipal councils, terrible and recent events they so nervously sought to forestall.

The cause of the great northern Ontario fire was settlers' fires. The cause of these fires was the lack of laws governing same, because the Provincial Government has always been afraid to offend settlers and thus lose votes. Were these pioneer settlers composed of people experienced in bush life it would have been comparatively easy to educate them as to the terrible dangers. But they came, most of them, from parts where there has been no knowledge of bush fires. Many of them cannot handle an axe when they come to the north. Others come from foreign lands and know even less of pioneer conditions. Did the Government try to warn them? Was anything done to avoid or forestall recklessness even after the great Poreupine fire of 1911 had swept through the country? Well, if any efficient measures were taken they have not been heard of by the writer, after years of experience throughout the entire north region.

Incredible as it is, one is almost forced to believe that the policy has been one which was recently spluttered in some prattling nonsense by a Toronto daily, advancing with Teutonic logic some sophistical theory that it is better to burn the northern forest anyway.

Nothing further need be written descriptive of the losses and damages of the fire except merely to state that hundreds of square miles have been burnt, with freakish pranks selecting a section here and avoiding another there.

The problem facing us is to prevent the recurrence of such discouraging losses, to save the forest for economic development and to clear the land in such manner as to derive the greatest benefit for all. With this end in view, no doubt the Ontario Government is already preparing a new Act. But will it be of the right kind? Will it be prepared by lawyers and arm-chair experts or will the advice of experienced woodsmen be sought? Then perhaps the fear of spending a dollar to save a million may be a ruling influence.

Timber Owners Have Shown the Way

May we therefore, in view of these forebodings, commend to the attention of the Government such efficient fire protective organizations as the St. Maurice Valley and Lower Ottawa systems. Or may not attention be directed to the efforts for protecting the large timber areas of Mr. M. J. O'Brien in the Upper Ottawa and the extensive limits of the Mattagami Pulp & Paper Company in northern Ontario. As several interesting papers have already been published concerning the first two, attention may now be directed to the success attending the systems of protection for the O'Brien and the Mattagami Company limits.

In 1914 Mr. M. O'Brien, realizing the importance of proper protection, tried to secure the co-operation of adjoining limit owners in establishing up-to-date methods. Failing in this because old haphazard methods seemed too deeply rooted with many of his neighbors, Mr. O'Brien inaugurated a system that has proven most efficient in protecting not only his own areas, but necessarily much adjoining property where, time and again, small fires have been detected and extinguished before they got fairly started.

Fires Nipped in the Bud

When a small fire starts from any of the several causes, the elaborate system of look-out stations and well-kept trails enables the fire rangers to spot it before it gains headway. Heliograph signals by day and powerful flash lanterns by night permit of constant communication with all look-out stations commanding a detail view of over 2,000 square miles of territory. These heliograph and lantern equipments,, with binoculars cost about $180 per main station. For the sub-stations the equipment costs only $40 or $50. About ten main stations operate an area of over 2,000 square miles. Telephone connections from one or more of the main stations to the nearest telegraph office enables head office in Montreal or elsewhere to get daily reports of the entire area if desired. To operate such a system successfully the rangers need only know reading and writing by way of education in order quickly to master the Morse code for signalling purposes. The international code as used by the British and Canadian forces is the one used. ,

The duties of the rangers include intercepting all persons entering the limits. These travellers are treated with extreme courtesy and promptly educated as to fire dangers. Every possible assistance is given them and when they pass on, their presence and destination is flashed to all stations. Though all this may sound elaborate, the cost of such a system is no greater than the old fashioned method of having rangers poke along like moles, oblivious of all that is going on except in their immediate vicinity. Indeed, if all adjoining limit owners were to co-operate, the cost would be less than the old, inefficient method.

Mattagami Company's Successful Protection

Learning of this system of fire protection Mr. A. G. McIntyre, who, as a technical man has already done so much for the forest industry in Canada, gave instructions for the organization of such a system on the extensive timber areas of the Mattagami Pulp & Paper Company in northern Ontario. During the present summer this system has been introduced and plans are developing for its greater elaboration in detail. So successful has been the operation of this system that, even in its incompleteness, small fires were detected and extinguished before they could gain headway, and from the several prominent lookout stations on these limits dozens of settlers' fires visible thirty and forty miles distant were reported long before they were fanned into the recent great fire. But what could the rangers do? The Act permits settlers to burn their brush at any time of the year, and though sensible and experienced pioneers know better, it must be remembered that most northern Ontario settlers are from parts where bush fires are unknown, and therefore their consequences not appreciated. ,

Had the Act provided measures against the setting of such fires, the fire rangers of the Mattagami Pulp & Paper Company could easily have prevented the spread of these scattered fires by reporting to proper authorities, but alas, if there are such authorities as field men, their presence is not much known in the north. And that the Mattagami limits, though surrounded by the recent big fire, suffered no damage, is not entirely due to good luck, the system claims some credit. Not only can the Mattagami fire rangers cover every square mile of their limits from their stations, but they can now see across settlers' and Crown lands a distance of thirty-five to forty miles into the limits of the Abitibi Power and Paper Company. It is therefore hoped that the latter company, with the Ontario Government, will link up and co-operate with the Mattagami system, and thus it can be extended to the O'Brien limits, where from their stations several station sites are visible on the Abitibi limits. ,

An efficient system at less cost than the present haphazard methods can thus be organized to cover the whole of northern Ontario.

Good Results of Quebec Laws

During the last session of the legislature of Quebec, several amendments were made to the Fire Act, which are calculated to add materially to its strength and efficiency.

One of these provisions requires that settlers engaged in clearing operations must, between April 1 and November 15 of each year, secure a burning permit from an authorized forest officer before setting out clearing fires. Wherever this provision is properly enforced, it will undoubtedly bring about a very material reduction in the forest fire loss. One of the most serious features of the fire situation in all the provinces of Canada is the tendency of settlers to burn debris during dry periods, when fire is likely to spread and cause serious damage. A similar provision is urgently needed in Northern Ontario, where there is practically no control of settlers clearing operations.

Another amendment to the Quebec Act provides that the debris from settlers' clearing operations must, before burning, be piled in heaps or rows at a distance of at least fifty feet from the forest. On this basis, it is much more practicable to control the fire than where the old method of broadcast burning is resorted to.

Holders of timber licenses on Crown lands are required to clear

away the debris on a depth of one hundred feet from railway rights of way. This is an excellent provision, but should be made applicable to privately owned lands as well. In many cases, the efforts of railway companies in the direction of fire protection are largely neutralized through the presence of large quantities of the most inflammable debris on lands immediately adjacent to railway rights of way.

Another excellent provision of the new Quebec Act is that any fire ranger or other forest officer may summon any male citizen between 18 and 55 years of age to assist in extinguishing any forest fire, the rate of pay being specified, and penalty being provided for failure to obey the summons.

The fire laws of the province of Quebec are among the most progressive in Canada, but larger appropriations are needed to make them fully effective. In particular, provision should be made for a larger staff of inspectors. The present staff is not sufficient to exercise proper supervision over the fire rangers on licensed lands, nor is there adequate provision for the protection of Crown lands not under license.—C. L. in "Conservation."

Ontario's Unscientific Fire Ranging

The criticisms expressed in our editorial of August 15th regarding the forest fire situation in northern Ontario are forcibly corroborated in a letter that we have received from one of our readers who is in close touch with conditions in the country that was recently devastated by fire. Although our correspondent does not care to have his name published in this connection, his views seem to us to be so fully in accord with the facts and to justify the criticisms we published so fully, that we feel we should reproduce them in full. Writing under date of August 15th this correspondent says:—

"I have spent two weeks studying conditions very closely in the North country since the recent fire, and would like to make a number of suggestions to you for your thought and investigation.

"1st. The very inadequate and unscientific policy of the government in connection with fire ranging, with which you are familiar.

"2nd. The necessity for the government restricting the townships for settlement, in some proper proportion to the number of settlers annually going into the country. In this way, they will then be in a position to provide such settlers with proper roads, schools, etc., and this will permit large clearings to be made in one place, which will protect the settlers' property.

"The lesson unquestionably demonstrated by this recent fire is that the only safe protection against forest fires is cultivated land. Instead of allowing settlers to go into the bush and cut down two or three acres, setting on fire hundreds of acres more, it would be a great deal preferable to have them in communities and close together, so that each settler's clearing would be a protection to himself and to the community, whereas a small clearing in the middle of the bush is no protection whatever.

"3rd. The main lesson to be taken from the Northern fire, it seems to me, is that the government should certainly give to limit holders the right and authority to maintain and protect their limits. At the present time, they are not allowed to prohibit access to these limits to anyone, with the result that campers, hunters, gum pickers, prospectors, etc., are continually wandering through these limits, setting fires promiscuously.

"When the government sells or leases such a limit to a company, who proceeds with development, they should give that company the right to exclude any or all persons from these limits without a pass or permit from the officer in charge of the limit.

"The only successful method to combat the northern fires is to prevent them before they start, because once a forest fire is under way with a good heavy wind, no human means can stay it.

"With proper fire ranging and such safeguarding, three-quarters of the fires in the country would never start. The balance could be so minimized that the danger would be gradually reduced to a negligible item.

"You will notice in the Toronto World recently, an item relative to this discussion, claiming that the forests are a menace instead of an asset to the province. This statement should be very forcibly disputed because under proper protection and system, the forests and timber lands go hand in hand with the settler in the development of the country; the rights of such should be maintained and can easily be arranged not to overlap in any way."

A Story of Lumber Camp Life

The fascination of life in the virgin forests of Canada has been the theme of many a novel in recent days. Unquestionably there is a wide fiield of romance and tragedy waiting in the north land of Canada for the pen of some literary genius to turn into many a stirring tale. A good story of northern logging life is told in "The Man Trail," by Henry Oyen, published by Geo. H. Doran Company, New York, and sold in Canada by the Musson Book Company, Toronto, at $1.25. The story gives one a capital, though somewhat lurid view of the way in which things are done in a lumber camp. Possibly there is a shade too much melodrama in the book, but it is none the less a stirring tale and one that holds the reader from first to last. Naturally, as one would expect in such a novel, there is a full grown love story running through it and the incidents of the book centre chiefly around the efforts of the hero to make good as a camp foreman, in order to win the hand of the logging king's daughter. The successful way in which the writer keeps up the interest throughout the book is best shown by reproducing the following typical portion:—

"Main Camp was on the last week of the work assigned to it, and Bart, despite his exuberance and good humor, apparently was determined that the job should wind up with a record breaking output. . . . . Under his electric driving the crew swept upon the remaining timber like farmers upon standing grain. The big Norways, white pine and hemlocks fell like wheat before the sickle. In the woods there was the constant Whoosh, 'Look out!' and cannon-like crackle that told of another forest giant thumping in the snow. On the ice roads there was cursing and straining of logging chains as the teamsters vied with each other in moving record loads; and on the rollways there was all day the steady, dull boom-boom-boom of logs rolling down to their berths on the ice-covered river."

" 'The King Pines,' a new forest about to be exploited, rang with the noise of their destruction. Norbya and his crew had completed the erection of the camp buildings. Brackett's gang were through with the work of building a road. The complete crew now was in the woods, sawing and skidding, and, there being little or no swamping required, the log piles at the skidways along the road grew with unprecedented rapidity. At night the sprinkling tank moved up and down the newly made road, the water freezing almost as soon as it struck the snow. By the third morning a narrow ribbon of solid grey ice divided the pines in two parts, and the road by which the giant sleigh loads of logs were to slip to their berth on the ice of the Brule was ready. The haul was short, the road sloped gently toward the river, and, once a load was started, no matter how high Brackett piled the top, it did not stop until it swung up to the rollways on the river bank ready for unloading. Then the chains were taken off, gingerly the cant hooks worked out a bottom log, and boom-boom-boom! Like a volley of cannon shot the logs were rolling down the bank, leaping and tumbling far out upon the solid, snow-covered ice. By the night of the third day a single row of logs five deep spanned the river from bank to bank.

"And now mid-winter clamped its icy hand upon the Big Woods and held them in a grip remorseless. . . . . Wolves, bobcats, lynxes gave up their nightly meat-hunting and slunk to their caves, curling themselves up, waiting impatiently for the days when the sun, drawing nearer, would warm earth to a degree when living things once more could walk abroad. In the brush the spruce hens burrowed deep in the snow beneath the cedar bushes, and the deer, close-huddled for warmth, grew lean in the bare swamps where they yarded. Out-of-doors was an enemy to man. It fought him the moment he stepped out from the shelter of four walls. It leaped upon him, striving to clog the blood in his veins, forcing him into brisk motion to keep the mere breath of life in his body. . . . . These are the days—when all out of doors is a place to flee from the moment work is dropped, and many men must herd together without any entertainment through hours each day—that tempers grow frayed and sullen in logging camps, and short words, blows, and even worse are to be expected as a matter of course. Then, if ever, the camp boss is tested to his marrow. Upon his ability to dominate the rough men under him, to note and quench trouble before it breaks, and to keep his men satisfied when dissatisfaction is the natural state of mind, depends the success of his job, even his own life and the lives of some of his men. The Canadian poet-logger, Dr. Drummond, who made it obligatory on the successful applicant for work in his camp to answer affirmatively at least one of the four questions: Can you sing, play an instrument, dance a jig, or spin a yarn? knew well what such accomplishments meant to the frost-bound camps. . . . . To fight the cold weather and beat it was a matter of pride with the lumber jacks. They were snow country men; they knew that no man had any business in the North who cannot whip the frost devils; and they increased rather than lessened their efforts when the bone-searching cold would have driven less hardened men to hug the fire.

"The ice-covered Brule was being steadily chocked with logs from bank to bank. The sleighing held up into the middle of March, when only a fringe of pines remained along the river, within skidding distance through the mud and slush. One afternoon a stream of sawyers began trickling into camp while the sun was yet high above the timber. 'What's up with you bums?' he queried. 'Matter, you red-headed shrimp! Everything's the matter. We've hit the river, and this —— —— everlasting job is done.' . . . . Came a morning at last when the bare, moist woods were redolent with awakening life. The sun warmed the men, lazily as they emerged from the bunk-house. The men were laughing as they went to breakfast. Down in the stables the horses were whinnying restlessly; and in the silence of morning there came from the river a sudden growling rumbling that held every man in camp instantly spellbound. A second rumble and every man let out a yell. 'She's going—she's going out. Hip, hip, hooray. Come on, you river hogs; she's going down stream!' And thus the drive was started."

Hardwood Logging in Northern Ontario

Standard Gauge Railroad and Steam Operated Jammer Simplify Operations at Marksville by the Stone Lumber Company, Limited

One usually thinks of the logging industry in Northern Ontario as being confined to the production of softwood logs, but there is quite an extensive and growing industry concerned in the production of hardwoods. In the early days, the hardwoods were ignored because of the impossibility of getting them to a place where they could be manufactured. Not being floatable, the hardwoods had to wait for the arrival of the railroads and it is this development that has brought about the extensive production of hardwood that is now taking place in districts that were at one time more celebrated for their softwoods.

From time to time we have had the privilege of describing various hardwood operations in northern Ontario. It is our pleasure now to give readers of the Canada Lumberman an idea of the way in which hardwood is being produced by the Stone Lumber Company, Limited, of Sault Ste. Marie, district of Algoma, Ont. This company operate two mills, one of which is located at Marksville on St. Joseph's Island, near the North Shore of Lake Huron, and one at Day Mills on the C. P. R. line from Sudbury to the Soo. These two mills are operated almost entirely on hardwoods, though a million feet or more of hemlock and pine are included in the year's production.

The company are the owners of extensive limits on St. Joseph's Island. When commencing operations they decided that they could not log profitably with horses and they found it necessary to build eight miles of standard gauge railroad running to the centre of their limits on St. Joseph's Island. At the end of the railroad are located the yards in which they deck their logs, these yards containing from 5,000 to 10,000 pieces. One of our illustrations shows a section of a yard containing no less than 18,000 maple and birch logs belonging to this company. As the railroad runs right through the timber the company are able to skid a considerable quantity of logs from the stump to the track. The balance are drawn by a short sleigh haul, permitting of some six or seven trips per day to the yards. Alongside of the track the logs are decked on skidways which contain about 400 logs each.

Loading the Logging Cars

The operation of loading the logs upon the cars, for shipment to the mill, is one which involves the use of an engine and jammer. With this equipment they can load about one log per minute. The use of the jammer is shown in one of our illustrations. The jammer has 2⅝-in. guys and a ⅝-in. cable. It is built on a very low truck and two men can move it from one skidway to another in about twenty minutes. Two timbers, 8 x 12 in., are used to move the jammer on and off the railroad track. While in operation the jammer rests upon these timbers. The poles of the jammer are 24 ft. long, being mortised into hardwood timbers 10 x 10 in., which in turn are bolted to the runners. The runners are 10 x 10 in. timber rounded at both ends. The axle of the low truck is bolted to the runners so as to permit of the jammer being moved from place to place in the easiest manner. This jammer will load a hardwood log 19 ft. long, 23 inches in diameter and has frequently done so, though the company does not make a practice of cutting logs so long. The average length of its logs is about 12 feet.

In making up a train load of logs the company load 2,500 feet on each car and four or five cars complete a load. This could be increased to six or seven cars if the company wished to spend sufficient money to reduce two heavy grades on their line. At the mill end of the line the company have their operations worked out in a very successful manner. The outer rail of their logging railroad is raised 6 inches, and when the patent stake holders are free the stakes drop and the car practically unloads itself into the log pond. The logs are then at the foot of the jack ladder and they are sent through the mill before they have time to sink. The manufactured product as it comes from the mill is piled directly on the shipping dock.

The rolling stock operated upon the logging railroad includes two locomotives, one being a standard 50-ton machine with air brakes, etc., and a large tender. The other locomotive is a Baldwin dinkey, 25 ton, carrying 180 lbs. of steam, with cylinders 14 x 20 in. The latter locomotive is the one they are using mostly.

The logging cars were manufactured by the company. They have 33 in. wheels and 5 in. axles. Each car is fitted with a Russell patent stake holder. The company have ten cars and are able to double their present log output when they find it necessary.

Railroad a Paying Proposition

The construction of this railroad was a heavy and expensive task, but when the saving effected by it is taken into consideration, the company feel that it has been a most profitable investment. This method of logging hardwood is designed particularly to reduce the handling of the logs by manual and horse labor and to allow the stumpage to be cut closer than would be possible if logged in the old-fashioned way. Anyone who has had experience in the production of hardwood lumber in Algoma knows that the rough and smaller logs cannot be logged and sawed profitably, as hardwood differs from hemlock and pine because a thousand feet of ordinary hemlock logs will make 1,100 or 1,200 feet of merchantable timber, but a thousand feet of hardwood logs does well if it makes 800 feet of merchantable timber. The latent defect in hardwood always equals the overcut and the number three does not pay for its saw bill, though there are buyers in Ontario who have nerve to offer $6 and $7 per thousand for No. 3 one inch boards.

The illustration of a yard of hardwood logs shows that the company leaves the woods standing around the log yards. This is done for two reasons; first, because it affords protection against drift and storm in winter, and second, because it protects against fire in summer.

The offal from such a cut of hardwood is very large and the Stone Lumber Company would be glad to sell it to a manufacturer who could use it either for toys or other small wooden article, or for chemicals.

The Baldwin Donkey, 25 tons; 180 lbs. of Steam.

A Logging Car and its Engineer, Fireman and Loaders.

Log Jammer at Work, Note the Double Chain.

A Yard of 18,000 Maple and Birch Logs—Stone Lumber Company.

The Duties of a Camp Foreman

On the Job from Late Summer to Early Spring—an Outline of His Various Responsibilities.

By W. J. Beasley*

The foreman of a logging camp occupies one of the most responsible of all the positions in connection with the various operations connected with the production of lumber. Upon his ability, perseverence and loyalty to his employers depends in very large measure the success of the whole operation. Only by the most efficient attention to detail, day in and day out throughout the logging season can a foreman secure his stock of logs at a cost that will enable the owner to make a profit out of them when they are manufactured into lumber and sold. Moreover, a camp foreman has to do with a class of labor that is notoriously more difficult to handle than any other class connected with the lumbering industry. His crew is made up of many kinds of men who are working in the open throughout the bitterest of Canadian weather and unless their wants bodily and mentally are carefully looked after their output will suffer.

A logging camp foreman must first of all be thoroughly acquainted with bush life, that is to say, he must understand the men who live in the bush and he must know from long experience all the important details and peculiarities of this type of life. Next to this knowledge it is most important that he should understand fully the quality of timber upon which his crew is to operate. As a rule the custom is for the company to give their foreman a map of the limits; then he must know the rest.

The first thing the foreman does is to look up a camp site, located where it will be most convenient for the operations, about the centre of his cut. In putting up the camps he must exercise careful judgment in their location so that they may be as sanitary as possible. For this purpose he will make sure that the water supply is on an elevation above the camps, so that no drainage can reach it from the buildings. The size of the camps will be governed by the quantity of timber the company instruct the foreman to take out. An average camp in new Ontario will vary from 100 to 125 men.

The cooking staff in such a camp consists of three men, a cook who generally stays right at his bread tray, a second cook who attends to the cooking of meats and vegetables, and a chore boy who washes dishes and helps wait upon the table. There is also an outside chore boy who brings in wood and water, sweeps the men's camps and scrubs them not less than once a week. The outside chore boy also puts out the lights at nine o'clock at night, lights the fires, etc. Another man takes charge of the stables, whose duty it is to see that the horses are well cared for. A blacksmith and a woodworker are employed to keep the horses and rigging in repair. The clerk and the foreman live in the office, where the clerical work is attended to. The men already referred to make up what may be called the staff at camp.

Among these men, one of the most important from a material point of view is the cook. Great difficulty in connection with most camps is experienced in retaining employees. If a good cook is secured, his services will go a long way towards removing this difficulty, as good food will keep a crew together better than anything else the company can furnish. As a rule, the companies in northern Ontario always supply the best of food stuffs so far as quality is concerned and a remarkably wide variety, so that it is the fault of the cook if the men are not properly fed.

The blacksmith is also a man of much importance to the camp, so that the horses' feet may be kept in good repair, as horse flesh costs a lot of money.

The men in the woods are usually grouped as follows:—

A cutting gang consisting of three men, one called a fitter, who notches the tree, and two sawyers who fall it. The fitter then measures the tree into logs and the sawyers cut it up.

A skidding gang, consisting of team and teamster, two rollers and two trail cutters. Often there are two teams in a gang, three rollers and three trail cutters, varying according to local conditions and requirements.

A road gang, who cut the sleigh roads. There is no particular number to the road gang. When a man is laid off in any of the other gangs, the foreman calls on the road gang for a man to take his place as it is important to keep the gangs full so that they may cut and skid their full number of logs each day.

The duties of the foreman are of a varied nature, consisting to a great extent of overseeing and being responsible for the whole operation of the camp. He inspects his camps every day, to see that the men are properly cared for and to see that everything is going along smoothly in the cookery. He makes his rounds every night to the stables to inspect the horses and assure himself that they are in good repair. Then he goes to the shop to see that the tools belonging to the different gangs are in good shape.

After turning the men out in the morning the foreman goes to the woods and inspects each gang to see that their work is going along properly. Then he occupies his time with looking up roads and marking them out. Then the roads are cut and the skidways built ahead of the cutters. Log makers go along each side of the roads and the teams follow after and skid the timber. When all these operations have been completed the sleigh haul starts, usually about the first of January.

The operation of a camp is dependent more than anything else upon good roads. In making a road a large V ploogh is first drawn along the track as marked out by the foreman. Then a patent plough is run over the road, removing the snow almost down to the ground. Following this comes the large water tank, which holds from forty to sixty barrels of water. This is hauled over the road and automatically sprinkles it so that a solid sheet of ice is formed upon the surface. With such a road it is a comparatively easy matter to draw very large loads of logs. The log hauling is done in the day time and the tank is operated at night. In this way a good road is maintained throughout the hauling season.

In order to keep the roads up during the day time, men are placed all along in sections, every man having to keep his section in repair. Wherever grades are encountered upon the road an extra team is located to assist in pulling the loads up. Wherever there are hills to go down a man is located to burn sand and dust it in the runner track, so as to let the load down as easily as possible.

A loading gang consists of four or five men. The foreman will arrange how many trips the teams must make to the landing each day, depending upon the distance to be travelled. At the landing men are located to unload the teams.

After the writer's operations have been finished, it is the foreman's duty to see that all the dams on the creek where his logs are landed are shut down tight so that they will be full when the ice goes out. When the drive starts, the foreman places men on the dams and at the rapids to keep the logs running through. When they come to a lake the logs are boomed and towed across by alligators or steam winches to the mouth of the river where they are cut loose and allowed to run to the outlet. There they are passed through a gap or sorting jack and each company's logs are placed in its own booms ready to be towed away to the mills. When the logs are delivered in the company's booms at the sorting jack the camp foreman's work is completed.

It is easily seen from even such a brief glance at a camp foreman's duties that his job is no easy thing. He must be alert and constantly on the job to make a success of it. To get the best results from his men he must watch their work closely so as to learn what they are best adapted for. Often he will have to change them from one class of work to another in order to get the best results from them. In short, a foreman must study the dispositions of his men. He must also feed them well and care for them well. To sum up, the foreman's best guide is "do unto others as you would be done by," which is the best motto for him to follow.

The duties of the camp clerk are quite different from those of anyone else at the camp. He keeps a set of books in which the men's accounts are entered, and he looks after his "van" which is well filled with supplies for the use of the men. He keeps a record of the number of logs cut each day, as reported to him when the men return from the woods at night. He sends a weekly report of the logs cut and also a monthly report, to the head office. In addition, he records the logs in a book furnished by the government which is open to the inspection of the government scalers at any time. He looks after camp supplies, orders what is required and keeps a general tab on everything around the camp. When the season's work is finished he submits his books to the head office, where they are inspected.

*Foreman for Graves, Bigwood & Company.

A Camp Foreman's Description of His Work.

By Chas. H. Goodhand*

According to my experience, the first thing for a foreman to do when he goes into the woods in the fall, for a new camp, is to look for a good place in which to locate the camp buildings, and to get them as near as possible to a good spring, as good water is a very important factor in camp life. Then it is wise to build as good a camp as you can. The cookery should be put up so that there is lots of room for seating all the men at once. I always locate the cellar for potatoes and vegetables under the cookery and the meat house to one end, so that it is handy for the cook. In building a sleeping camp I believe in giving lots of room for the men to lounge after their day's work. The best way to get good work out of the men in the camp is to use them well, which involves seeing that the camp is always clean and warm and that the men have good clean bunks and warm blankets.

My company always supplies everything I order for a cook, real-

* Foreman for the John Carew Lumber Company.

izing as fully as I do, that it pays to board the men well. We always give the men beef and pork, potatoes and all kinds of vegetables, a wide variety of pastry, as well as bread and buns. With such a bill-of-fare, the men are always satisfied.

At my camps the lights are always out at nine o'clock. I do not believe in ordering men out in the morning before they can see to work. I call them out of their bunks at such a time that after they have had their breakfast and reached the woods it is light enough for them to see.

When cutting and skidding I always use two pony gangs and cutters ahead of a team skidding and six men in a skidding gang, two trail cutters, two rollers and two teamsters. Quite a lot of our skidding is done single, but when we get big logs and have to double the horses up then one teamster goes ahead and cuts out the next skidway. I find that it pays to use good heavy skids and to deck the logs up "good and high," so that there will not be much tailing or snow shovelling to do when the drawing time arrives. I always use block and line for rolling and loading.

Making the roads is a very important matter. It pays to make good roads. I always try to get my main road cut and graded before the frost comes. I use 10-foot bunks, and I have had about a four mile haul for the last five or six years, making four trips a day. The lead team leaves the stable at five o'clock in the morning. It will be in for one hour at noon and will be back again about a quarter to five at night. I keep three men on that road, keeping it shovelled and levelled down and two men with a team on the water tank and snow plough. I do not think a man can log well without a good plough and tank. It certainly pays to keep a road well iced. I calculate that I can draw twice as many logs on an ice road as on a snow road.

One of the most important places in which to employ good men is at the loading. I use four men in a loading gang, always putting the best hook men I can get to load, for if a man does not get his teams loaded quickly he cannot get them in early at night. I like to see the tail team in before dark.

Logging Operations on J. R. Booth Limits

By W. G. Mackay

The duties of a logging camp foreman are many and varied. If he is a good man, fit for the position, he will see that the men are properly housed in well ventilated camps, that they are well fed, and that good discipline is maintained in and around the camp. Then he will see to it that every man performs the duties alotted to him, in a workmanlike manner. Getting the confidence of the men is a matter of much importance. With this confidence the foreman can get much better results than without it. The men must feel that any work they do will count in their favor, and that the foreman knows his business thoroughly. Nothing will slack a man up more in his work than a feeling that some of it is being done for nothing. It is scarcely necessary to remark that the men must be well fed. Good food is a most important factor in their work.

In connection with our operation we build good camps, either of frame or logs, with the required air space for each man, and we make our camps as sanitary as possible with outside water closets placed at the regulation distance from the sleeping or eating quarters. The camps are furnished with good sweet straw and blankets. Some of our camps are lighted with acetylene gas and some with coal oil lamps.

The work of the camp is divided among different gangs. First there are the log makers who fell the trees and cut them into the desired lengths, then the trail cutters who cut the trails from where the logs are made to a convenient spot where they are drawn and piled in rollways. Then come the team of horses, the teamster and the chainers who haul the logs out on the trail and pile them in rollways. Next are the main road cutters who cut the road for the sleighs, the trail for the road having been blazed by the foreman or by the head road cutter, the latter being directly in charge of the main road cutting gang. The roads are grubbed and levelled off by using picks, grub hoes and dynamite, the latter being used for large rocks and stumps.

When the snow comes and the cold weather, the roads are tracked out with horses and a large water tank is drawn over the roads to water them. Afterwards a large snow plough is put on and the surplus snow and rough ice are scraped off. After each fall of snow the plough is run over the roads, two and three teams of rough horses being used to draw it.

The main road is kept in shape, smooth and well iced, by the use of the water tanks, so that one team of horses can draw a very large load with ease. If there should be a high hill upon the road up which the load has to be drawn, we use steam engines and an endless cable five-eighths of an inch in diameter.

When everything is ready for drawing, the logs are loaded on sleighs with long bunks and are drawn to the dump, where there is a siding, as all our timber is transported to the mill by rail. At the siding the logs are loaded on cars with steam hoists. The cars are then billed out and the train starts over our own line and then travels over the G. T. R. to Ottawa. During the summer months we cut and peel spruce, balsam and hemlock for pulpwood. With the exception of the men who do the peeling, this operation is very much the same as the other.

From Daylight Until Dark

Logging Foreman and Crew Labor as Long as There is Light

By Sam Brownlee*

At this time of year the foremen of logging camps are getting busy on their work for the coming winter or in some cases have already made a start. When the foreman of a logging camp goes into the woods he takes complete charge of everything connected with the camp designated to him by the firm for which he works. He allots the different men in the crew to their various lines of work. Our camps usually open their operations for the season some time between August 15th and September 1st. As a rule I have one hundred men in my camp, made up as follows; 16 men cutting logs, 18 trail cutters, 11 main road cutters, 15 men driving teams, 10 men rolling logs, 5 men loading logs, 4 men unloading logs at the dump, or river, 11 men fixing roads, 2 men in the blacksmith shop, 1 clerk, 1 cook and 3 assistants.

When the men are sent out into the bush for their day's work they are divided up into gangs; a gang consisting of 2 log markers, 1 team with teamster, 1 chainer and 2 or 3 trail cutters. The log markers fall the trees and saw them into lengths of from 12 to 16 feet. The trail cutters follow the log markers and cut the roads to the logs that have been made. Then the teamster comes along with his team and hauls out these logs to skidways. The logs are piled on these skidways by the chainer (the teamster's assistant) along blazed trails which I have already made. Later, I send in a gang of road cutters to cut out a road along this trail. This is called the main road. We do not begin to haul the logs out on this road until there is sufficient snow to make good sleighing. Then the logs are hauled to the river or to some navigable stream and left there until spring, or until the ice is cleared off these streams. Then they are run into the Ottawa River and once they reach the Ottawa they are taken in charge by the Upper Ottawa Improvement Company, who are responsible for their delivery to the mills in Ottawa city.

As a rule we stop making logs about the first of January in each year. After we have caught up with our winter work we let all the men go. Then we bring in men to drive our logs out to the Ottawa River. When this has been finished the season's work is at an end.

The camp clerk has a number of important duties to perform. He keeps the time of the men in camp. He also takes charge of the store attached to the camp. In this store we keep everything needed by the men and we make a point of selling to them at a reasonable price.

In order to keep the men at their work it is important to board them well and furnish them with good comfortable quarters to live in. We use the very best provisions for our men. We also employ first class cooks for the camp, as a poor cook and poor provisions are really very expensive. We also employ a good blacksmith who does the shoeing of the teams and repairs wagons and log sleighs.

During the past year the wages paid to our men were as follows log makers $26 per month, teamsters $26, road and trail cutters from $18 to $26, with board included in each case. We employ an assistant for our blacksmith, whose wages are $40 per month. The blacksmith receives $70 per month, board included in each case. The hours of labor in the winter months are from day-light until dark.

We generally put our supplies in the camps during the previous winter's operations, as it is much cheaper to haul supplies by sleigh than by wagon. Besides, the roads are better for that purpose in the winter than in the summer.

* Foreman for J. R. Booth.

Recruiting for the 242nd Overseas Forestry Battalion

A central office and two branches have been opened in Montreal for recruiting for the 242nd Overseas Forestry Battalion. Posters in English and French are on exhibition, appealing for men, especially for those who have had experience in forestry work. Authority to recruit throughout the Dominion has been granted, and plans will be made with this end in view. The following officers have been appointed: Lt.-Col. J. B. White, Officer Commanding; Capt. C. H. Massiah, Captain; Capt. Alex. Fenton, Quartermaster; Capt. H. M. Suckling, Paymaster; Lieut. F. W. Morse, Asst. Adjutant; and Lieuts. G. M. Strong, A. L. Sanders, E. D. James, N. M. Ferguson, and G. H. Rochester.

Logging Methods on Vancouver Island

Description of Equipment and Organization, Felling, Yarding, Transportation and Scaling Operations in a Typical Camp

Logging operations on Vancouver Island, B. C., resemble in many respects those in other parts of British Columbia. In a typical camp operating under conditions existing just previous to the war, the logging operations were conducted along the following lines:

One man was is charge both of the mill operations and the logging. Next to him came the walking boss or foreman of the logging, with a sub-foreman for railroad construction. The walking boss is also time-keeper, cruiser, and has charge of the van and the railroad. Labor was then easily secured but very unstable, as is common in B. C. camps.

The camp we have under consideration employed about 16 whites ot 30 Asiatics. With one exception all the most important and responsible outside positions, such as engineers, loaders, fellers, etc., are held by whites. The exception is one of the two loading crews, composed of a Jap with a Chinese assistant. The cook and cookee for the whites are Chinamen. The less skilled labor, such as railroad construction, bucking logs, hewing wood and carrying water for the donkeys, is performed by Chinamen. The hours of work are from 7 a.m. to 5 p.m. with one-half hour for lunch. The men are carried to and from work by the company's train.

The company charges the white men $5.25 per week for board and lodging. The Chinamen hire one of their number to act as cook, buy their own provisions and board themselves for about 15c per day.

The wage scale in this camp, previous to the war, was probably a little below the average for British Columbia, at least of the better class of operations. Wages do not include board and were as follows:—

Foreman	per year	$2,000.00
Sub-boss on construction	per day	4.00
Locomotive engineer	per month	120.00
Donkey engineer	"	100.00
Locomotive fireman	"	80.00
Fireman on donkey	per day	2.00
Waterman	"	1.75
Snipers	"	3.50
Swampers	"	2.75
Signalmen	"	1.75
Fellers	"	3.50
Log buckers	"	2.75
Fuel cutters	"	2.00
Chinamen on railway construction	"	1.75
Brakemen	"	2.25
Loaders—White	"	3.50
Loaders—Chinamen	"	2.75
Cook—Chinamen	per month	60.00
Cookee—Chinamen	"	35.00

The camp was placed near a small stream of pure water. The buildings were grouped on each side of the track about three-eighths of a mile from the donkeys.

About one square mile is worked from each location of the camp, then the buildings are loaded on cars and moved to a new site. The whole operation takes about four days, generally.

The construction of such camps is very strong and rigid to stand the rack of moving. The buildings are frame, of 2 x 4 scantling, inch board siding, and roofing of inch boards covered with tar paper.

The sizes are as follows:—

Cook-shack, for whites	20 x 40 ft.
Office and van, foreman	20 x 20 ft.
Bunkhouse for 18 whites	20 x 30 ft.
Repair shop	10 x 20 ft.
Store and tool house	15 x 15 ft.
Chinamen's cook shack	20 x 20 ft.
Chinamen's bunkhouse, 30 men	30 x 35 ft.

The commissary stores are easily replenished by rail from Victoria. The meals were well cooked and fresh meat and vegetables formed a large part of the menu.

The Van or Camp Store is conducted by the foreman. Only the few articles most commonly needed are kept, such as boots, socks, underwear, shirts, pants, oilskin coats, oilskin and felt hats, gloves, tobacco, soap, matches, etc.

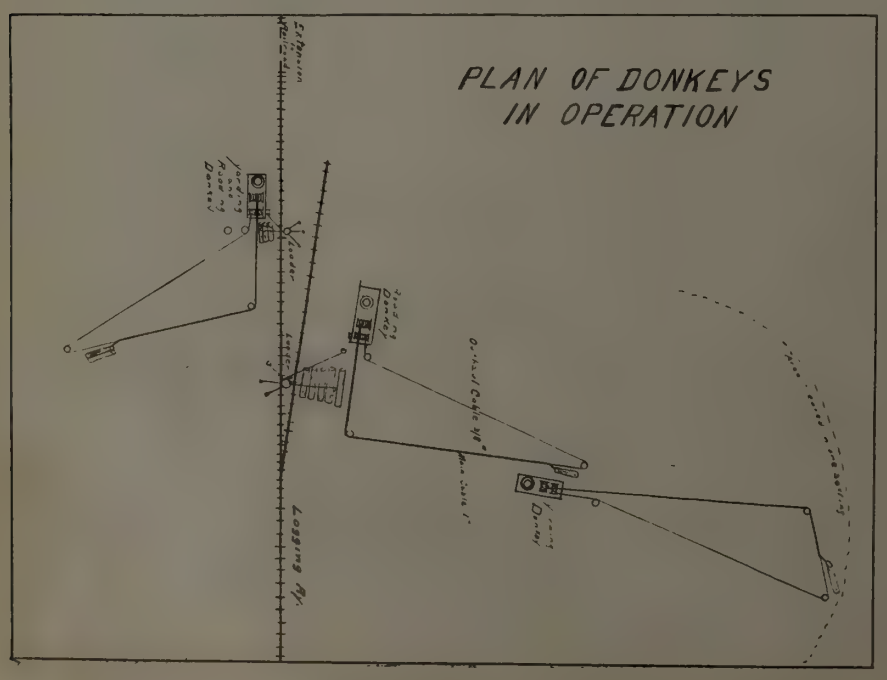
Tools and blacksmith supplies are kept in the repair shop, and include hammers, saws, augers, braces and bits, files, chisels, dies for cutting threads, bols, nuts, spikes, nails, rod iron, etc., for rough carpentry and blacksmith work.

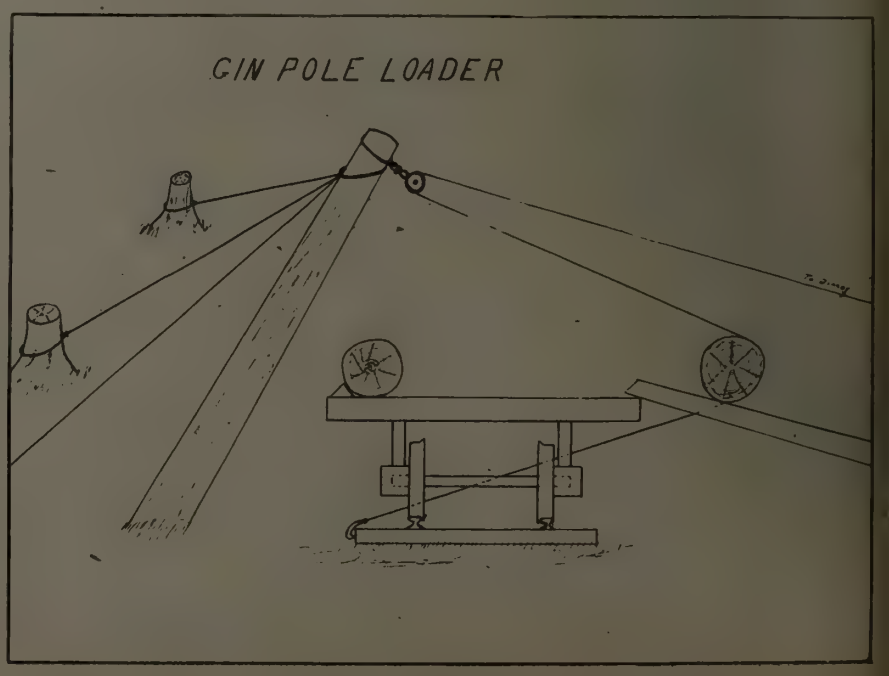
Under a rough shelter beside the repair shop are kept a small portable forge and a filing frame for crosscut saws.

Equipment for Logging

The general logging equipment includes the following:—

Yarding and Loading	Cost
1 Donkey Engine—Washington Iron Works, 10 h.p.	$2,500.00
1 Donkey Engine—Washington Iron Works, 18 h.p.	2,800.00
1 Donkey Engine—Washington Iron Works, 25 h.p.	3,300.00
3500 ft. 1¼ inch steel cable, per ft.	.54
1000 ft. ⅝ inch steel cable, per ft.	.14
3500 ft. ⅜ inch steel cable, per ft.	.07
3500 ft. light wire for signalling	
2 doz. clevices, per doz.	19.00
12 Steel pulleys for loading	
12 Steel pulleys for outhaul	
12 Steel pulleys for main cable.	
Various hooks for chokers, line, etc.	
Hauling	
Railroad, 2½ miles, cost per mile	$3,000.00





1 Climax locomotive, 18 tons, cost	4,500.00
1 Climax locomotive, 25 tons, cost	6,500.00
6 Climax sets logging trucks, cost per set	350.00
1 2,000-gal. steel tank for watering engine	
1 gasoline launch, 35 ft., 18 h.p.	300.00

The railroad operated by the company is a standard gauge and runs from the donkeys in the woods to the dump in the lake. It cost about $3,000 per mile to build. Construction work on the railroad is done by a gang of Chinamen under a sub-boss. This gang is continually employed in extending the line. Stumps and large rocks are removed from the right-of-way by blasting powder. When a spur is abandoned, the rails and such ties as are worth while, are taken up and relaid elsewhere.

There are few cuts or fills and these not large. Grades are mostly 3 to 4 per cent., the maximum being 12 per cent. Curves are all under 10 degrees except one of 35 degrees. Guard rails are laid in all curves. The grading is all finished in earth, no gravel being obtainable.

The ties are of good quality, 30 per cent. standard. Douglas fir and cedar are most used. These are cut along the right-of-way and adjoining by Chinamen. They cost 10c each in string and 12c laid down. The average life of the ties is said to be four to six years. They are laid 14 to the rail. The cost per mile for steel is about $1,500.

Bridges are few in number and small. The larger gullies are spanned by stringers and crib work. The smaller ones are crossed by simply laying two enormous trees across on which the ties and rails are laid. This latter type is, of course, possible only where large timber is available, such as is found in this country.

An elevated stave tank of 2,000 gals. capacity placed by the track a short distance from the lake supplies the engine with water which is piped from a spring on the hillside and fills the tank by gravity.

The dump is a trestlework built out into the water. One side is elevated about four inches above the other so that the logs roll off the trucks by gravity when the chains are loosened. The logs are then boomed and towed to the mill.

The cost per mile of railway is made up as follows:—

Grading, bridges, ties, laying steel	$1,500.00
Steel—rails, plates, spikes, bolts	1,500.00
	$3,000.00

The Logging Operation

The organization of the logging crews is as follows:—

3 Felling crews, 2 men each—whites.
3 Bucking crews, 2 men each—whites.
3 Yarding crews, 3 men each.
1 swamper—Chinese.
1 sniper—Chinese.
1 signalman—White.
2 Loading crews, 3 men each; 1 crew white, 1 Asiatic.
Head loader.
Assistant loader.
Chinaman to 'tend cable.
3 Donkey Engine crews—3 men each.
1 Engineer—White.
1 Fireman—Chinaman.
1 Wood buckler—Chinaman.
1 Water carrier—a Chinaman, served the two donkeys by the railroad. The fireman did this for the small donkey.
1 Railroad crew—6 men.
Engineer—White.
Fireman—White.
2 Brakemen—Chinese.
2 Wood cutters—Chinese.

The felling tools for each crew are:—	Cost
2 axes, 3¼ lb., double-bitted, each	.75c
2 axe handles, each	.25c
1 saw 7½ ft. Simonds, per ft.	.80c
2 saw handles, per pair	.60c
1 sledge	.40c
1 sledge handle	.20c
2 iron wedges, each	.15c
2 spring boards	
1 bottle kerosene oil	

The axes are used for cutting notches for the spring boards and also for undercutting the tree for fellings. The saws are used to make the main cut in the tree. Each crew files its own saw. Wedges and sledge, and kerosene oil are used to keep the saw from binding on account of pressure or pitch. Spring boards, on which the fellers stand when sawing, are necessary as most of the stumps are cut 5 to 6 feet high.

The Bucking crews follow the fellers. Their tools are similar, except that they use no spring board. The bucking saw is heavier and wider in blade than the felling saw. The logs are cut in lengths varying from 30 to 40 feet. In steam logging, long lengths are preferred because they save handling. A donkey can pull a 40 ft. log out as quickly as a 16 ft. one in most of this timber.

The felling and bucking crews each cut up 12 to 13 thousand feet, board measure, per day, at a cost of $1.00 per thousand feet.

The yarding crew proper consists of three men. The swamper

British Columbia logging methods—Logs en route to the mill.

clears the way for the logs and trims off any projecting stubs on the log. The sniper noses the logs and attaches the choker. The signalman, by pulling a wire to the whistle of the donkey, tells the engineer when to go ahead, back up, etc.

The 18 h.p. donkey works independently on one side of the track, yarding and loading the logs from a radius of 900 to 1,000 feet.

The 25 h.p. donkey is located about 200 yards above, and on

A Douglas Fir Forest.

the other side of the track. It roads and loads the logs 1,000 feet. The 10 h.p. donkey is placed about 1,000 feet from the track and serves as a feeder to the 25 h.p.

A donkey engine consists of furnace, boiler, engine, 3 drums and 3 cables. All this is secured to a heavy iron frame and is mounted on a boat. A boat consists of two large logs beveled at the ends like sled runners and held together by cross pieces.

The cables are built of steel wire with a hemp centre which makes them more flexible than solid wire. They are as follows:—

Main cable, 1¼ in. diameter on largest drum.

Outhaul cable, ⅜ in. diameter on second drum.

Loading cable, ⅝ in. diameter on smallest drum.

The main and outhaul cables pass from their drums out into the woods guided by blocks and rollers at the turns and are united at the far ends. When the main cable is wound in the outhaul is pulled out and vice versa.

At the extreme end of the main cable are fastened a number of steel rings to the most convenient one of which the choker is fastened with its load of one or two logs.

The choker is a short piece of cable with a hook at each end. With this a log is snared about 20 inches from the end by one hook, and the other hook attached to the main cable. The signalman pulls the wire as a signal and the engineer winds in the main cable. This tightens the choker so that the log is pulled along. Once tightened it rarely slips except in spring when the bark pulls off more readily. A choker is more convenient for large timber than tongs, because lighter to handle. The life of a main cable is four to eight months, depending upon treatment.

The cost of yarding is approximately $1.00 per thousand feet, board measure.

Loading is done by donkey and gin pole. The latter is a strong log about 30 feet long which is securely guyed upright on the far side of the track from the donkey. It is inclined toward the track so that it leans over the cars when they are placed next it.

The loading cable passes from the small drum or spool of the donkey through a block in the upper end of the gin pole and down to the two loaders proper. It terminates in a steel hook by which the loaders have the logs pulled forward or back until they are in proper position to be rolled up onto the car.

Skids are placed sloping from the car to the ground. The cable is passed around a log, hooked to the far rail and the log rolled up in the bight of the cable.

The third man of the loading crew tends the cable at the drum, which is continuously revolving.

The cost of loading is approximately 20c per thousand.

Hauling and Transportation

A 25-ton engine is used for all the hauling. This engine is shaft driven with all eight wheels drivers. Its hauling power is 1,380 tons on level, and 80 tons on 5 per cent. grade. The fuel is Douglas fir, which is cut and piled beside the track by Chinamen.

The six sets of climax logging trucks are fitted with 10 ft. bunks and have a capacity of two to three thousand feet, board measure, per set. The logs are held on by wedge shaped blocks and binding chains. The train is controlled on the grades by the engine and by hand brakes on the trucks.

The usual train is made up of the locomotive and three sets of trucks or cars. The other three are loaded while the train is away on its turn. About six trips per day is the average.

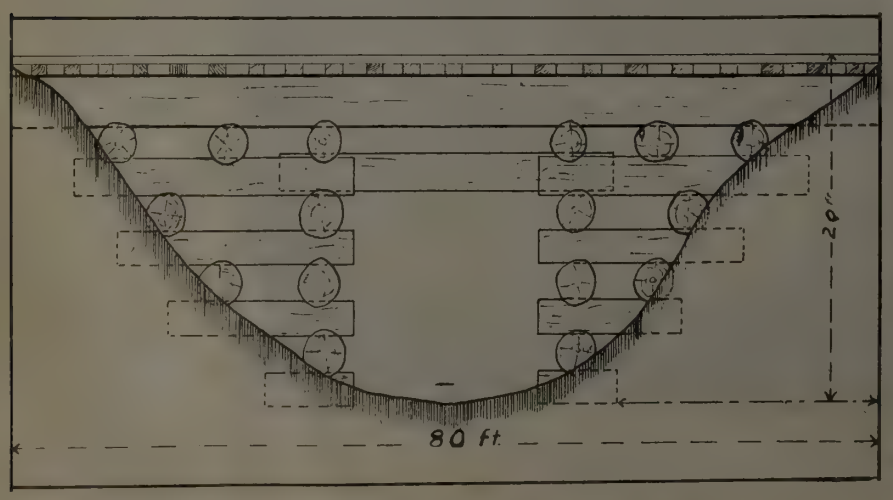
The cost of hauling to the dump is $2.00 per thousand feet, board measure, and the cost of towing to mill 25c per thousand feet, board measure.

The scaling is all done at the mill by the B. C. scale as the logs come up the jack ladder at a cost of about 2 cents per thousand feet, board measure.

The summary of expense per thousand feet, board measure, for whole operation, works out as follows:—

Felling and bucking	approximately	1.00
Yarding	"	1.00
Loading	"	.20
Hauling to lake	"	2.00
Towing	"	.25
Scaling	"	.02
Depreciation and insurance	"	.25
Total	"	$4.72

The information contained in this article is from a report by H. R. Christie, submitted to the Forestry Department of the University of Toronto.



Construction details of a logging railroad bridge.

Unique Railway and Logging Skidder

Logs Dragged by Locomotive on Planks Between Rails—Efficiency Secured by Suspended Skidding

One of the most interesting of the many new logging operations created in the Coast district of British Columbia by the great demand for cedar logs is that of the Mainland Cedar Company. This concern, of which W. R. Brown, of Vancouver, is the principal member, controls some eighty million feet of cedar, hemlock, fir and spruce stumpage at Port Neville, about 150 miles up the coast.

The main values of this holding are in its location, being within

Unique B.C. logging railroad– Logs dragged behind the locomotive.

two miles of salt water, and the high quality of the cedar stumpage. Port Neville lies considerably south of the so-called cedar belt, and this timber has the remarkable soft, clear quality so valuable for lumber cedar, and which the market will always take and pay for. Cedar stumpage of this character formerly existing on Burrard Inlet, Howe Sound and Toba Inlet, is now nearly all cut. No difficulty has been experienced for some time back in obtaining a price of approximately $12.50 per thousand for camp run cedar of this class, the Vancouver mills competing eagerly for it.

The Mainland Cedar Company's camp is on the west shore of Port Neville, two miles or so from the entrance. The camp buildings are substantially built of sawed lumber. The bunkhouses are made long and narrow in order to be partitioned in compartments, each section being fitted up for four men. They are furnished with steel bunks, double deck and of single width, each having springs and mattress. The excellent camp and the fine fare furnished make the operation very attractive to labor. Board is provided at a loss, the charge being only 90c per day per man. Fresh meats, fruit and vegetables are served in abundance.

Heavy Grades Require Unique Railway Methods

From the booming ground in front of the camp the main line railroad extends directly into the timber. As very severe grades were encountered in locating this road, and the haul being short, it was decided not to use cars for handling the logs, but to trail them behind the locomotive. This is now being done successfully. Spiked to the ties between the rails are two fir planks 2 x 6 in., and on either side of these are small hemlock side logs. The huge timbers are presented from leaving the track at turns and "dips" by these side logs.

The entire rolling stock consists of a 45-ton Climax locomotive and a flat car, the latter being used for right-of-way work and the conveying of supplies to the woods. The Climax does all the handling of the logs from the skidder to the log dump. Its schedule is ten trips per day, dragging from 5,000 to 15,000 feet of logs per turn, and as the haul is down a grade of from two to thirteen per cent. the locomotive is seldom overloaded.

An Interesting Skidder

The yarding is done with an Empire Cableway Skidder, manufactured in Vancouver. This is a very interesting machine, and in the opinion of many visiting operators has proved itself much superior to the ground or high-lead yarders. With it the logs are yarded suspended in the air from a skyline stretched from a spar tree at the track to one in the bush, from 1500 to 3000 feet distant. The Empire Skidder is built with the supplementing drum principle, by which the haulback is paid out automatically as fast as the skidding line comes in, thus suspending the log and eliminating the great loss of power met with in systems suspending the load by a brake. The large size of the drums enables the load to travel at a uniform level, thus doing away with the constant manipulation of the levers, as in other systems. All leavers are steam operated, so that the engineer has an easy task.

The speed and large capacity of the machine are remarkable, the load being conveyed at the rate of 900 feet per minute and the carriage returning to the stump at twice this rate. The ability to handle large as well as small logs, to log down hill as well as up, and the great distance it is capable of yarding efficiently, are a few of the special merits possessed by this system, which promises to be widely adopted for British Columbia use.

Logging Operations in Bruce County, Ont.

Methods in use by Cargill Limited, at Cargill, Ont.—Gasoline locomotive, steam skidder and log loader clear the bush clean

The logging operations carried on by Cargill Limited, Cargill, Ont., in Bruce County, are planned and carried out in a thoroughly modern manner. The company operate in a mixed stand of hardwood and softwood in the Greenock swamp, practically all of which is owned by Cargill Limited.

The skidding operations include the use of a Lidgerwood steam skidder which is mounted on a flat car with a 40-foot spar. Cables are run from the spar out into the bush twenty rods on each side of the track and the logs are piled up 15 and 20 feet high along the track. All kinds of logs are skidded together, including poles from 2 inches diameter up to the largest logs. Nothing is left on the land but the brush and stumps.

The loading operations are handled by a steam log loader made by Cargill Limited. This is also mounted on a short flat car. It has a 30-foot boom and will handle about 1,000 feet to the lift in logs, or will load one of the company's cars in three lifts of poles, or smaller logs in a sling. The log loader will also lift the cars off the track and pile them up at a skidway. This operation is shown in one of the accompanying illustrations. The other illustration shows the steam skidder at work, bringing in a load of logs to the track. The ability of the loader to remove cars from the track permits of it being kept on the main track all the time, following up the skidder. The loader also has a device attached to the engine, so designed that when a car is loaded, a line can be stretched out and the loaded car moved ahead very easily without any loss of time. While this operation is going on the boom of the loader is also swinging another car on to the track.

The logging locomotive operated by Cargill Limited, is a standard gauge and is equipped with gasoline motive power, thus removing all danger of fire in the swamp. The track is standard gauge of 35-lb. rails. The locomotive makes two trips a day, drawing 12 cars, which is sufficient to keep the mill running continuously.

After the logs are loaded on the cars in the bush by the loader, they never again touch the ground. They are unloaded in a sorting mill, which has tracks and conveyors running from it in each direction and is so located that each block or log is delivered to its proper place to be worked up into the finished product for which it is intended, the whole process being completed without further handling.

Cargill Limited operations—The Lidgerwood steam skidder bringing logs to the track.

Cargill Limited operations—Log loader placing a car on the track.

Newfoundland's Extensive Timber Areas

Pulp and Paper, Lumber and Pit Props Sources of Great Industrial Activity—Pit Prop Trade Increasing Rapidly

By J. W. McGrath

FIFTY years ago Newfoundland was importing nearly all of the sawn timber used in the country, from the Lower Provinces of Canada—particularly from Nova Scotia; and even as late as the year 1900 large quantities of timber were imported from these countries. Since then, things have changed, so that at present, little or no timber has to be imported, with the exception of some expensive hardwoods—which the country does not produce. It seems strange that Newfoundland should have had to import lumber although she possessed vast forests of different kinds of timber of her own, but this may be readily understood when it is recalled that up to 1876 there were but one steam sawmill (of 25 horse power), and not more than six water-mills in operation throughout the whole country. Much of the timber used by the fishermen and settlers along the sea-coast in those early colonial days was hand sawn, or more commonly known as pit-sawn lumber. The method no doubt is familiar to most lumbermen, and though crude and entailing much hard labor, nevertheless was a great factor in supplying the essential wants, not only of the early settlers, but of the great Dominion likewise.

From 1876 the lumbering industry began to grow and expand, a knowledge of the timber resources became spread abroad, and several lumbermen from Nova Scotia, New Brunswick and Quebec established mills along the river banks in the best selected forest growths of the country, but it was not until Lewis Miller, of Crief, Scotland—a lumberman of world-wide reputation—came to the country about 1899 that lumbering received its first great impetus. Mr. Miller purchased extensive areas of timber lands along the shores of Red Indian Lake, in the very centre of the country, and at the foot of the lake the town of Millertown was built; and here was established by far the greatest lumbering plant and industry known to the country. Two gigantic sawmills of the most modern type were erected, capable of manufacturing two hundred and fifty thousand feet of lumber daily. A branch line of railroad was laid from the main line of railroad to the mills, and the town of Millertown took root. Lewis Miller had been operating mills in Scotland and Sweden for many years previous, and from Sweden he brought to his mills in Newfoundland a colony of Swedish lumbermen with their families, who imparted a new life to lumbering in the colony, and a greater knowledge of the industry amongst the people of Newfoundland. In addition to the mills of Millertown, Mr. Miller acquired and erected large mills at Glenwood, Indian Bay and other places, and from these centres millions of feet of the finest white pine and spruce were shipped to the lumber markets of England, the United States and South America, commanding the best prices in these markets.

The Coming of Capital to the Island

Lewis Miller remained but a few years in the colony when he sold out his vast possessions and extensive plants to the "Newfoundland Timber Estates"—a company composed of such strong financiers as H. M. Whitney, of Boston, the Reid Newfoundland Company, Harry J. Crowe, of Bridgetown, Nova Scotia, and B. F. Pearson, of Halifax, Nova Scotia. This company further enlarged upon the property bought from Mr. Miller by acquiring other timber lands and mills, and by erecting new mills, and enlarging the capacity of others. From the date of the establishing of the Newfoundland Timber Estates (1902), lumbering became permanently established as one of the colony's industries.

From 1876 to 1910 the sawmills in Newfoundland increased in number from 6 to 273, and the output expanded from not more than one million feet of sawn timber to eighty million feet. At present we have 312 sawmills of various capacities, which employ 6,000 men for about nine months of the year. Though we have lately increased the output of sawmills, we have not increased the output of sawn timber. This is accounted for in two ways. Many of the larger mills, particularly those that were erected by Lewis Miller and the Newfoundland Timber Estates, have gone out of the sawing business, the properties owned by these concerns being sold to the Harmsworths, and Albert Reid Company, of London England, who have, within recent years, established large pulp and paper plants, and the enterprise of pulp and paper manufacture has assumed immense proportions—that of the Harmsworth plant being amongst the largest and most modern in the world.

Another cause of the shortage of sawn timber output is the introduction of the pit-prop business. Since the outbreak of the European war, many of the smaller mill owners found it more profitable to engage in this industry, because the war had produced a ready market among the collieries of England. During the year 1914-1915 something like 100,000 cords of this class of wood was shipped to England, and the amount to be shipped during 1915-1916 will not be less than 250,000 cords, if tonnage can be secured for transportation. In addition to the above output of pitprops about 80,000,000 feet of pulpwood is annually used by the pulp and paper mills.

Timber Resources of Great Extent

The forest wealth is varied and extensive. It is conservatively estimated that 15,000 square miles is heavily timbered. The trees include white and red pine, spruce, fir, white and red birch, tamarack, aspen, witch hazel, and white maple.

Newfoundland pine is a very superior wood, and compares favorably with the best Canadian article. The trees run in height from 50 to 70 feet, and from 12 to 40 inches at the trunk. Newfoundland spruce and fir are used largely in house building and all rough work, because of their great durability and strength. Both spruce and fir, of which the country has enormous areas, locally known as "pulpwoods," are also extensively used in the manufacture of pulp and paper.

Newfoundland tamarack, or juniper, and birch are largely used in shipbuilding, and in the manufacture of furniture, and are excellent for such purposes. The largest and best forests of timber are found in the river valleys and around the shores of lakes and streams, and these belts of timber are to be found in the valley of Exploits, Gander, Gambo and Terra Nova Rivers, and around Grand Lake, Deer Lake, the Humber River, and the many rivers that flow into Bay of Islands and St. George's Bay, on the west coast of the Island.

Only a small percentage of the forest lands has been cut over. So, with few exceptions, where forest fires took place, the forests are all virgin growth. Even those pine areas that have been burnt over are not necessarily injured, as decay does not set in for many years. It is well known to lumbermen of this country, that pine lands burnt more than twenty years ago are now producing good lumber which finds a ready market, being dry, easily handled, and not affected by worms.

Newfoundland spruce and fir woods also retain a certain hardness for some time after being burnt, but not for so long as pine timber. Forest fires have destroyed timber in Newfoundland, the value of which would pay off the national debt many times over. One of the greatest assets this country possesses is its forest lands, and until recently little or no effort was made to preserve this wealth.

In a conference held recently in St. John's, the Premier of the Colony, Right Hon. Sir Edward P. Morris, stated that, according to the estimate of the Harmsworth Company, a square mile of timber land in Newfoundland is worth $45,000, which would place the forest wealth at $675,000,000, assuming that the timber areas comprise 15,000 square miles, which is a conservative estimate.

What is true of the timber areas of Newfoundland can also be said of the forest areas of Labrador, where the extent of wooded lands is much larger, and the forest growth more prolific. Newfoundland claims all the eastern section of that territory; and therefore the outlets to the Atlantic of the vast areas drained by the great rivers that flow eastward to the ocean, and feed the waters of Sandwich Bay, Hamilton Inlet, and many other large bays and inlets along that coast.

It is officially known that this area contains many thousand miles of virgin forest, the intrinsic value of which can scarcely be estimated. This extensive wealth of forest will sooner or later become the great supply depot for the pulp and paper mills of the New World. That the possession of such forest will, ere long, give Newfoundland a distinguished place among the great centres of pulp and paper manufacture in the world, there is no question.

Newfoundland's Industrial Advantages

The advantages Newfoundland possesses for lumbering and pulp and paper industries, briefly stated, are as follows:—

(1) Proximity to the United Kingdom and European markets.
(2) Unlimited supplies of timber and pulpwood.
(3) Magnificent water powers.
(4) Plentiful supply of labor at reasonable wage.
(5) Absolute security of titles.

Reviewing these statements it is sufficient to say that Newfound-

land is one thousand miles or more nearer the United Kingdom than Canada, or the United States, while the south and a large portion of the east coast of Newfoundland are free from ice the whole winter when the St. Lawrence is blocked with ice. With numerous bays and fjords indenting the coast, and large rivers extending far inland, all the timber of the country may be said to be at tidal waters, thus eliminating long and expensive railroad hauls—one of the largest items in the cost of the manufacture and marketing of lumber or pulpwood. The item of rail-haul alone is one of the most expensive in the cost of American and Canadian pulpwood or timber.

The black spruce of Newfoundland is declared by experts in the manufacture of pulp and paper to be the finest in the world for their needs. A feature of the Newfoundland forests is the immense area covered by this class of wood.

No country in the world for its size can excel Newfoundland in the number and excellence of its water powers. There is scarcely a river or stream in the island that has not a natural water power or can be made to give sufficient for industrial service.

Labor is plentiful in the Colony at most reasonable wages for all lumbering operations and for pulp and paper manufacture. Strikes are unknown. The adaptability of Newfoundland to these industries has been amply proven.

The tenure of lease to any piece of timber land in Newfoundland is issued direct to the applicant from the Crown for a period of 99 years. If the owner of a timber area lease disposes of it to another party, a new lease will be issued by the Crown to the purchasers. The timber taxes imposed are comparatively light compared with those in Canada and the United States. The only taxes are an annual ground rent of $2 per square mile and 50 cents per thousand feet on sawn timber, but no tax is imposed on standing and round timber. There is no boom tax, and free use is given of slides, dams, piers, booms or other works on streams to facilitate the descent of lumber and sawlogs.

No tax is levied on pulpwood or pulp and paper made from such wood, and the government is desirous to afford any concessions possible in the way of admitting, duty free, all machinery that has to be imported for sawmills and the manufacture of pulp and paper.

With the Canadian Forestry Battalion

An English Impression of their Methods and Skill

"If you would know the lumberman of Canada and how he works, go to the edge of Windsor Great Park, where the cross-road from Virginia Water Station strikes the main road between Egham and Sunningdale. There, on the Clock Case Plantation, you will see over 150 men of the 224th Canadian Forestry Battalion converting trees into railway sleepers and boards at the rate of anything from 15,000 to 20,000 board feet a day.

"The plantation, which forms part of the lands owned by the Crown and administered by the Commissioners of Woods and Forests, included a considerable area covered with spruce, fir, Scots pine, and larch, with an undergrowth of chestnut. Not very long ago a party of experts looked at the trees with the dispassionate measuring eye of the undertaker, and gave it as their opinion that from this wood it was possible to get 3,000,000 board feet of timber. Today whole tracts of it have been swept clear by the axe, and the quaint square tower of the old royal lodge, which stands deep-set in the wood, and which, so the story goes, by its resemblance to the case of a grandfather's clock gave the plantation its curious name, is visible from the roadway for the first time, perhaps, in a hundred years. And still the Canadian woodsmen go on, eating their way through the wood with a thoroughness that knows no mercy.

"The lumber camp is all Canadian—men, machinery, and methods. The men, who are drawn from all parts of the Dominion, have the bronzed, healthy look and the easy confident swing which we have learned to look for in Canadians. The khaki under their blue overalls proclaims them soldiers; they draw military pay and they know the rudiments of military drill; but first and last they are woodsmen, with their craft at their finger-tips. Every man knows his task and does it with an enviable independence of orders or instructions; yet from the first stage to the last the work proceeds smoothly and harmoniously. Let us follow the process, under the guidance of the officer in charge and the sergeant who is "foreman of the bush."

"Facing the main road stands the mill—'home,' the men generally call it—flanked on the one side by piles of logs and on the other by stacks of sawn timber. Walk along the winding track of a light railway, not yet completed, which passes behind the mill, until you come to a clearing, where burning heaps of 'brush' lopped from the tops of the fallen trees are filling the air with the refreshing scent of the pine. Here and there through the blue smoke you catch a glimpse of a lumberman in a picturesque slouch hat. A little further and you are among a gang of 'fallers.' Watch how they fell a tree, 70 ins. or more thick at the base.

"A man with an axe kneels at its foot and with a few dexterous strokes cuts a deep notch in the trunk a few inches from the ground. Two others with a cross-cut saw cut through the stem on the opposite side. In half a minute the tree begins to lean and there is a warning shout. A second or two later, with a loud cracking and rending sound, it topples and crashes to the ground. Without any apparent effort, the 'fallers' have controlled the direction of its fall almost to a foot.

"Next, without any ado, half a dozen 'swampers,' set to work with the axe, clearing the limbs and straightening up the tree. Simultaneously a 'fitter,' with a wooden rod, divides the stem in suitable lengths, marking the cutting points with a notch; while two other men, one carrying a paint pot, measure the tree, enter the size in a book, and mark the stump and the butt of the severed trunk with a blob of red paint to show that their work is done. Sawyers then cut the stem according to the 'fitter's' marking, and the sections are ready to go to the mill. They are dragged there by horses over deeply scored 'trails' and 'sloopways,' and take their turn to come under the saw.

"The mill itself is a stoutly built structure, made of timber cut and prepared on the spot, and saws and engines coming from Canada. It is practically a raised platform covered by an iron roof, but open at the sides. A log to be sawn is rolled into position on a 'carriage,' which moves backwards and forwards to carry it through a circular saw. Two men, standing on the carriage, control its movements and the position of the log by a number of levers. Opposite them stands the most important man of all, the 'sawyer,' whose trained eye sees at a glance what can be made of this or that log. The hum of the engine and the screech of the saw would drown his voice, so he gives his decision by signs. As the carriage brings a log back through the saw with the bark removed, he will hold up one finger or two, and the 'setter' on the carriage, by the movement of a lever, adjusts the log so that the next cut shall be one inch or two inches thick.

"It is all done without a pause. For hours the saw screeches and throws off a spray of sawdust as it slices up the logs that a short while before were splendid living trees, and all the while other saws, trimming the edges of the boards and cutting off the ends, join in the chorus. Is it surprising that the daughter of the keeper of the wood was reduced to tears when she stood by the mill?"—London Times.

Logging by Contract—Why it Works Well

A great proportion of the logging operations carried on in Eastern Canada, particularly in the province of Quebec, are handled by the contract, or jobber system. It seems that local custom and conditions have much to do with the way in which logging operations can be handled most successfully, and in Quebec province these influences have combined for many years past to make the contract, or jobber system of logging a popular one. There are, of course, many exceptions to this, even in Quebec province, but the jobber system has been worked out to its most successful development there.

A large manufacturer of lumber in Quebec province, in compliance with a request from us, gives the following reasons why his company obtain their logs in this manner. "Providing we have a good reliable jobber," he says "we are able to operate with more economy and also with more speed through the service of a jobber than we could with men under the supervision of our foreman. The reason for this is not hard to find. A jobber is a foreman to a business that is 'his own.' As man is, after all, essentially a very selfish being, a jobber will naturally take more interest in his work than a foreman would. He will keep expenses lower by reducing the waste in tools lost, etc., and in every detail of camp administration he will exercise the greatest amount of wise economy.

"Generally speaking, the jobber has a farm of his own and furnishes the logging crew with produce from it. This produce counts at a low cost. He also knows his neighbors well and understands how to buy from them.

"So much for 'economy'; now for 'speed.' Being in charge of smaller gangs than those under a foreman, the jobber can get more work out of the whole lot, because he can watch their work more closely and reduce the amount of loafing. He knows every man and what he can do. The men he employs cannot hope to appeal to higher authority, and, knowing this, they are less liable to be unruly. Of course, such closer sueprvision as the jobber is able to give means more work done. This fact is well understood by construction companies who employ a foreman to every few men they have working for them, and we all know that the construction companies, as a result of close competition and the best of facilities, are better able to put these labor control experiments to the test than anyone else. Therefore the plan adopted by them is a good one for lumbermen to follow.

"There are many other advantages to be derived from operating through jobbers, but the most important thing of all is to find 'the right man.'"

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch. each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Wanted—Quotations on 1¼ in. and 1½ in. Hard Maple lumber. J. H. Connor & Son, Limited, Ottawa, Ont. 15-16-17-18

BASSWOOD AND PINE WANTED.—No. 2 Common and Mill Cull Basswood, 1 in. cull pine, Winter cut preferred. Apply M. Brennen & Sons, Hamilton, Ont. 16-21

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Birch Wanted

WANTED—10 Cars 2½ in. No. 1 Common and Better Birch for Fall delivery. Buffalo Hardwood Lumber Company, Buffalo, N.Y. 14-17

Wanted

Spruce Pulpwood, 2 ft. rossed or 4 ft. rough or peeled Spruce Pulpwood. Advise us what you have. Box 440, Canada Lumberman, Toronto, Ont. 17-17

Wanted

We will purchase several million feet of Spruce, Norway and Jack Pine 1 in., 2 in. and 3 in.; state how the stock is piled as to widths and lengths and quantities now on the sticks in each width and thickness; we are also interested in a limited quantity of 1 in. Mill Run White Pine. Advertiser is a large concern and buys for cash only. Apply Box 441, Canada Lumberman, Toronto, Ont. 17-18

For Sale–Lumber

Spruce Crating

150,000 ft. 1 x 4 and up Sound Spruce Crating, bone dry; prompt shipment. The Elgie & Jarvis Lumber Company, 18 Toronto Street, Toronto, Ont. 17-17

For Sale

One car 3-in. Practically Clear White Oak, all 12 ft.

Two cars 1½, 2, 2½, and 3 in. No. 1 Common and Better Dry Red and White Oak, all Ohio stock.

The Probst Lumber Company,
15-18 Cincinnati, Ohio.

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que.

Doors For Sale

About eight hundred fir doors, also stock of fir and pine finish. All high class; will sell cheap. Box 436, Canada Lumberman, Toronto, Ont. 16-17

Lumber For Sale

We have for immediate shipment:—

BIRCH

11 cars 3 x 6 in. and up, 8 to 14 ft., Log Run, M.C.O. dry.
2 cars 1½ x 5 in. and up, 8 to 14 ft., Log Run, M.C.O. dry.
2 cars 1¼, 2 and 2½ in., 8 to 14 ft., Log Run, M.C.O, dry.
A quantity of 1 in. log run M.C.O. dry.

MAPLE

Several cars 1 in., Log Run, M.C.O., dry.

BEECH

Several cars 1 in., Log Run, M.C.O., dry.

PINE

Several cars 1, 1½ and 2 in., Log Run, M.C.O., dry.

HEMLOCK

1-inch Rough—1-inch P1S—2-inch Rough.

LATH

Several cars ⅜ in. x 1½ in. and 1¼ in. x 4 ft. Mixed Pine, Hemlock and Cedar, extra quality.

SPRUCE

We can take care of any orders in 1, 2 and 3 inch.

BASS AND PINE CULL

In 1 inch, suitable for boxes.

Your enquiries solicited

The Fletcher Pulp & Lumber Company, Ltd,
17-17 Sherbrooke, Que.

For Sale–Machinery

Saw Mill Machinery

Complete equipment for 40,000 capacity mill, including belts, conveyors, etc., with or without boilers and engines. For sale cheap to quick buyer.

St. Maurice Lumber Company,
15-18 Gaspe Harbor, P.Q.

FOR SALE

1—Wicks Gang.
1—Ideal Engine, 13 in. x 12 in.
1—Plain Engine, 16 in. x 24 in.
1—Plain Engine, 5 in. x 7 in.
1—Boiler, 72 in. x 16 in.
1—Boiler, 54 in. x 12 in.
2—Upright boilers.
1—Cookston water heater.
Several steam pumps.

CHAS. PEDWELL,
16-t.f. McVicar, Ont.

For Sale
Woodworking Machinery

1 Jackson-Cochrane 54-in. Resaw; 1 Cowan 42-in. Sander; 1 Jackson-Cochrane 36-in. Sander; 1 Egan 36-in. single Surfacer; 1 McGregor-Gourlay 2-drum 30-in. Boss Sander; 1 Egan 30-in. 2-drum Sander; 1 C. M. C. 8-in. 4-side Sticker; 1 No. 108 Berlin 30-in. double Surfacer; 1 Ballantyne 12-in. Sticker.

P. B. YATES MACHINE CO., LIMITED,
17-19 Hamilton, Ont.

Motor Truck For Sale

A White 3-ton motor truck for sale. $2,500 for cash. Thoroughly overhauled by the makers. Apply Canada Lumber Company, Limited, Weston, Ont. 17-17

Saw Mill Machinery For Sale

Two (2) New Waterous Band Mills.
Two (2) 2½ A. Log Carriages.
Two (2) Gun Shot Steam Feeds.
One (1) Dittbener Band Re-saw.
One (1) New Champion Edger No. 405.
One (1) Standard Two-saw Trimmer.
One (1) Overhead Slat Slasher.
Lath Mill Machinery.
Rolls and Drives.
Transfers.
One Refuse Hog.
Sorting Table.
Filing Room Machinery.
Live Rolls, Boxes, Shafting and Driving Chain.

All of the above is new and was never used

For particulars write to Baylss Pulp & Paper Company, Binghampton, N. Y., U.S.A.

Machinery can be seen at any time at Beaupre, P. Q. 14-15-16-17

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

CIRCULAR SAW FILER wants position in band saw mill, under a first class Band Saw Filer, to learn the filing. Box 431, Canada Lumberman, Toronto, Ont. 16-21

EXPERIENCED LUMBER WOODS CLERK wishes to make a change. With same company several years. Good references. Box 434, Canada Lumberman, Toronto, Ont. 16-18

MARRIED MAN, THIRTY YEARS OLD, ten years' experience in office work as Accountant, speaking both languages, desires to change, best of references. For particulars write to P. O. Box No. 69, Three Rivers, Que. 16-24

WANTED POSITION AS LUMBER SALESMAN—15 years' experience in hard and soft woods. Connection Eastern Ontario and New York State. Married man, 37 years of age. Apply Box 442, Canada Lumberman, Toronto, Ont. 17-18

FIRST CLASS SAWMAKING FILER—Wants piece work contract. Shingle or Long lumber mill filing; will take Kendall gang or lath machines by thousand. Open for any proposition November 1st. Arrange now for next season. Apply Box 439, Canada Lumberman, Toronto, Ont. 17-17

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

WANTED a good Ontario White Pine grader to go to British Columbia as shipper and grader. Climate mild and salary good. Apply Box 443, Canada Lumberman, Toronto, Ont. 17-17

A few good saw mill men wanted, good board and lodging, steady work until snow flies.

JOHN B. SMITH & SONS,
17-19 Callander, Ont.

Business Chances

For Sale

Saw Mill, 2½ miles. Limits, Houses, Barns, Store, Farm, Railway Siding in yard. Box 432, Canada Lumberman, Toronto, Ont. 16-17

Timber Limit For Sale

Thirty-six square mile limit, North Shore, License allows cutting all kinds of timber. Contains Hemlock, Birch, Spruce, Pine, Cedar Ties and Poles, Pulpwood and Hardwood. Railroad runs through part of berth. Cheap operation. Splendid opportunity for small mill. Apply Box 423, Canada Lumberman, Toronto, Ont. 13-t.f.

SAW MILL FOR SALE—Capacity 25 M. ft. per day. Located in Alberta on two trunk line Railroads, with good Spruce timber available and good market for lumber. Would like to sell an interest to practical sawmill man who would operate it. A good money-making proposition. About seven thousand dollars required.

Address, G. M. POOLE,
P. O. Box 1353,
17-18 Edmonton, Alta.

For Sale

The Wm. A. Dunn property, No. 94 to 104 Davenport Road, Toronto, Ont., to be sold en block or in parcels.

1. Stock of lumber, etc.
2. Plant, buildings and machinery, subject to existing lease ending on or about 15th December, 1917.

List of lumber, machinery, chattels and description of property can be seen at office of G. M. Gardner, Solicitor, Manning Chambers, 72 Queen Street West, Toronto. 17-17

For Sale—Modern Saw Mill

and 300 Million feet of standing timber in British Columbia, most advantageously located on beautiful lake and main line of Transcontinental Railroad having advantage of $8 per thousand feet in freight rates to best markets on the Continent. Logging and manufacturing conditions ideal and very economical. A fortune for the right parties. Will sell on easy terms and may accept other desirable property in part payment. Principals only.

A. C. FROST COMPANY,
Corn Exchange Building,
14-17 Chicago, Illinois.

Cuba's Lumber Requirements

In the Weekly Bulletin of the Department of Trade and Commerce a report is published by J. C. Manzer, special representative of the New Brunswick Government in Havana, Cuba, dealing with the market in Cuba for lumber. The report in part is as follows:—

Cuba imports annually about 600,000,000 feet of lumber. This consists, for the most part, of pine, spruce and fir, and is imported in the form of inch boards, running from six inches to twelve inches in width; planks two and three inches thick and of various widths, and deals sawn to various dimensions to conform with orders received. This is

shipped just as it comes from the saw without being planed, and when imported in this form is not subject to duty.

The greater part of this lumber comes from the United States, principally the Gulf of Mexico ports, but Canada supplies a large quantity which might be increased to a great extent.

Spruce and pine from New Brunswick, Nova Scotia and Quebec; also spruce, fir, hemlock and cedar from British Columbia would be suitable for all building purposes in Cuba. Besides this class of lumber, Cuba imports quantities of shingles, thousands of crates for fruit, shooks for packing cases, stave heads and hoops for making barrels, and large quantities of broom handles.

Canadian pine, spruce and fir would be quite suitable for the manufacture of fruit crates and packing cases. These are imported cut in exact lengths ready to be nailed together, and tied in bundles. Birch, maple and ash would be quite suitable for barrel heads, staves and hoops. These arrive tied in bundles, and when put together are used for packing beer. Canadian yellow birch and maple make the best broom-handles.

Canadian lumber will fill nearly all the requirements of the building trade in Cuba; and as Canada is a large seller of lumber while Cuba is a heavy buyer, it would be advisable as soon as the war is over, and conditions become normal again, to make an effort to secure a larger proportion of this Cuban trade.

Black Walnut Prices Favor Production

The present year is regarded by the United States Department of Agriculture as a most favorable time for increased planting of black walnut trees in the United States because of the present heavy crop of nuts. The value of the tree is attributed to the very lasting qualities of its wood and the moderately rapid rate of growth in good locations. The region in which walnut growing is practicable extends from southern New England west to the Central States and south to South Carolina and along the northern portion of the Gulf States to Oklahoma. The finest growth takes place in the rich coves of the lower Appalachians and over the Ohio and central Mississippi basins. The price of black walnut lumber in recent years has been consistently high.

Potash in Wood Ashes and Feldspar

Hardwood ashes contain from 18 to 46 per cent. of potash, while ashes from conifers contain from 14 to 20 per cent. The yield of ashes from wood is about 1.6 per cent. in weight and one cord of wood weighs approximately 2,100 lbs. Assuming that four-fifths of the potash in the ashes is leachable, the amount of potash recoverable from one ton of wood containing 15 per cent. of potash is four pounds.

The present price of potash in trade centres in the United States is nominal. The rate per ton is quoted at from $400 to $500, but none is available. The price for the most common form, the muriate, or chloride, containing 80 per cent. of the pure salt (equivalent to 52.7 per cent. of K_2O) was $38 per long ton in July, 1914.

Canada possesses many deposits of feldspar with potash contents ranging as high as 15 per cent., thus constituting a considerable resource of potash if an economical process of extracting it can be developed.

Several chemists are actively engaged upon this problem in the United States. Chemically it has been solved, but capital is still hesitant about investing heavily in any of the dozen promising methods which have been worked out on a scale little beyond simple laboratory experimentation.

Hemlock Bark at a Premium

Great activity in the bark peeling industry in Pennsylvania, is expected this year, the men already under contract numbering from 1,300 to 1,500. The activity is due to the flourishing condition of the leather industry as a result of the European war. The price of hemlock bark has advanced $2.50 a cord since last year, the price offered now being $13. Twenty years ago hemlock bark sold at $4 a cord, and trees were chopped down for the bark only.

The first boat of the two new lumber ship lines between the Northwestern States and Atlantic ports will leave Seattle on November 1, returning from Philadelphia December 15, travelling the route by way of the Panama Canal, and stopping at San Francisco, Los Angeles and other ports. F. C. Knapp, manager of the Peninsula Lumber Company, of Portland, Oregon, is building his own ships for his line.

General Mercantile Co., Limited

WHOLESALE LUMBER

B.C. FOREST PRODUCTS

922 Metropolitan Building, **Vancouver, B.C.**

PHILIP T. COOLIDGE
FORESTER
Technical training and ten years' experience. Timber Estimating and Mapping. Supervision of Lumbering Contracts. Surveying. Forest Planting.
Stetson Building, 31 Central Street
BANGOR, MAINE

Union Lumber Co.
Limited

1915 CUT—MILNET (Sellwood Jct.)

40,000 feet 2 x 10—10/16 Norway.
500,000 feet 1 x 4 and up 6/16 No. 1 Mill Cull.
1 Car ⅜ x 1½—4 ft.—No. 2 Red Pine Lath.
1 Car ⅜ x 1½—4 ft. —No. 3 Red Pine Lath.
5 Cars ⅜ x 1½—32 in. Mill Run White Pine Lath.
5 Cars ⅜ x 1½—32 in. Mill Run Red Pine Lath.

Red and White Pine Timbers

12 x 12—5/20 - 5/22 - 5/24 - 13/26 - 1/28 - 1/30 - 3/16.
10 x 12—10/26 - 6/24 - 5/28 - 3/20 - 3/16.
10 x 10—2/26.
8 x 10—1/24 - 2/22 - 5/26.

Write, wire or phone for prices.

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

Review of Current Trade Conditions

Ontario

Toronto wholesalers report a little improvement in trade, though really not enough to be spoken of as encouraging. One firm with which we discussed matters tell us that they have received quite a number of enquiries and orders recently. Many of these are coming in by mail, a condition of things that did not even exist three weeks ago. Another firm reports having 51 cars on order ahead. This, however, is not so much a sign of plentiful orders as of unsatisfactory shipping conditions. The mills continue to face a daily struggle in connection with making shipments, being shorter of men than they ever were in the past, and now they are commencing to be handicapped even further by a shortage of cars. However, if the retailers and others requiring stocks will exercise a moderate amount of patience it is believed that the mills will manage to meet most of their requirements with fair despatch. Another wholesaler reports that business is a shade better than it was during July. "Every time we go out we manage to get a fair amount of business," he says. Practically all of this trade is coming from the retailers, indicating that the farming sections are the most active at present. The cities, in fact, are doing very little in the way of consuming lumber, so far as building operations are concerned.

The hardwood situation in Ontario is steady. Stocks in consumers' hands are light and the prospects for increasing them are slim on account of an acute car shortage. Business is still spotty and has been affected to a considerable extent by the hot weather. Prices are expected to advance on account of the difficulty in securing fresh stocks and the broken condition of most stocks on hand.

Eastern Canada

The local market at St. John, N.B., is very quiet, there being practically no building operations in progress. It is rather expected that a slight improvement in this regard will develop during the fall, as the opportunity for investing profitably in the erection of buildings will be exceptionally attractive. Spruce boards are weak, but are not selling at less than $16 on the mill wharves.. Refuse stocks are heavy and about $1 per thousand lower. Stocks of English deals carried over during the winter will not be heavy. From eighteen to twenty million feet will probably cover them all. The price at precent is unchanged, but there is a slight improvement in the demand. A fair number of enquiries are coming from the American market and the base price at Boston has risen to $26. Log driving operations on the St. John have come to an end for the season, the total number of logs rafted being about 50,000,000 feet. There are no logs now left in the St. John River.

The eastern spruce market at Boston shows a better feeling than it has for some weeks past. Large retail buyers are sending in good orders. Random is moving well, the best demand being for 2 x 4 and 2 x 8, which are selling at $21.50 and $24 respectively. The full range of quotations on random is as follows:—2 x 3, $20.50 to $21; 2 x 4, $21 to $21.50; 2 x 5, $20 to $20.50; 2 x 6 and 2 x 7, $20.50 to $21; 2 x 8, $23.50 to $24; 2 x 10, $25.50 to $26.50; 2 x 12, $26.50 to $27.50. Spruce covering boards 5 ins. and up wide, 8 ft. and up long, are a shade easier at $21. For matched boards, 10, 12, 14 and 16 feet, the demand is steady at $24. The trade in hemlock at Boston is a little quieter, the hot weather probably having had something to do with this situation. Shingle prices at Boston are steady. Good brands of white cedar extras are bringing $3.55, and $3.50 is about as low as a really satisfactory extra can be had at. The quotation on white cedar clears is about $3.20, but some makes are bringing 10c more and some 10c less. Good red cedar extras are selling at $3.85 and a few fancy lines are bringing $3.95. An improvement is reported in the demand for lath and quotations are stiffening. A few manufacturers have announced an advance to $4.25 for 1⅝ in., but careful buyers are able to pick them up occasionally at $4.

United States

The outstanding fact of importance in the United States during the past fortnight has been the possibility of a nation-wide railroad strike, the bad effects of which it would be impossible to exaggerate. In spite of this threatening danger there has been no noticeable decrease in trade activity. In fact, most of the reports received indicate that conditions are improving. In the lumber industry, conditions are now considerably brighter than they were a fortnight ago and it looks as though an important turning point has been reached and gradual improvement may be looked for, even to the extent of a return to normal conditions. Continued building activity, renewed heavy buying by the railroads, and an increase in export shipments are the chief factors in this improvement.

The southern yellow pine market has been a leader in the direction of trade betterment. There has been a great improvement in the demand for southern yellow pine and continued improvement is expected. Reports from a number of important producing centres in the south tell of a general advance in prices, particularly in common lumber, which is today bringing $2 a thousand feet more than it was a few weeks ago. In the upper grades the advance shows an average of about $1 per thousand. Some quotations are within $1 of the high basis reached in 1915. The increased volume of trade seems to come chiefly from the retail yard business in central agricultural cities. Retailers have been buying from hand-to-mouth for a long time and their stocks are away below normal. Mills had been curtailing their production extensively. The harvest season was at hand and a car shortage was threatened, all of which factors seem to have persuaded the retailers that it was time to replenish their stocks and they did so almost with a rush.

The trade in northern pine continues steady and prices show little change. Buffalo wholesalers report that the competition of Idaho pine is not now so strong. There is a good demand for the lower grades of northern pine on account of the activity in the box business. Upper grades also are doing fairly well and pattern stock is moving to a moderate extent. A steady trade in northern pine is also reported from Chicago with prices firm, the demand coming chiefly from the yards, corporations and factories. Furniture and crating concerns are expected to declare their needs shortly and some improvement is expected.

The trade in hemlock at Buffalo is about normal. Prices show a slight tendency to advance. Mills are asking 50c more on car lots than they were a few weeks ago. On water shipments prices are unchanged. Hemlock arrivals at Buffalo are plentiful. At Chicago, there is a fair demand for hemlock and prices are a bit stronger, the improvement being the result of the better market for yellow pine. A fairly active trade is reported in hardwoods at Buffalo. There is quite a volume of business on small orders. Thick maple and ash are in the best demand. Prices are firm all round. The hardwood trade at Chicago is steady, but quiet. A fair revival in trade is looked for in the course of the next few weeks. Birch continues the feature in northern hardwoods and there is also a good demand for thick hard maple.

Great Britain

Prices of spruce in Great Britain have recently shown an extensive drop, as a result almost entirely of the great falling off in freights, both for Baltic woods and for goods from America. Many importers are looking for a strong revival in spruce prices before long and criticize present owners for disposing of their stocks at the recent low figures. There has been no marked change in the spot market at London. The free movement of stocks from the docks continues and arrivals have not been quite so numerous. Stocks on hand, however, are sufficient to fill requirements for a good period. Supplies of spruce deals and battens are fairly extensive. The recent drop in prices has been more marked on batten sizes than elsewhere, and arrivals have shown some falling off. Deal sizes are unchanged in price and the demand continues good. Importing firms continue to show much caution in their commitments and are not inclined to accumulate stocks of any kind.

The c.i.f. market for spruce deals at Liverpool is rather unsettled and recent sales are reported to have left the shipper with a loss, especially in connection with liner parcels sent on consignment. Recent cargo shipments are being held by shippers for better values. It is impossible to say anything regarding the outlook for future shipments. Apparently, most of the shippers have disposed of their cuts, and importers are looking for the season to end rather abruptly. The spot market for spruce deals at Liverpool is dull and the outlook is uncertain. Prices today are practically double those of a year ago. The chief sizes showing weakness today are scantling sizes. A demand is expected later on for 9-in. and up.

Manchester importers are looking for steadier prices from now on, especially for spruce. Shipments on the way to Manchester are believed to be very light, and freights have become firmer of late. A recent arrival at Liverpool is said to have paid 375s per standard for freight and it is reported that the Manchester liners cannot accept any pine or spruce for Manchester at present. For these reasons it

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

is believed that the slump in spruce has come to an end for the time being. Enquiries are very scarce.

A moderate improvement is reported in the trade at Glasgow, transactions being more numerous and of greater value. Even yet there is not a large amount of trade to report, but the tendency is more satisfactory. Buyers seem to have recovered from the fright they experienced when freight rates broke. Spruce values have lately been easier to the extent of about 30s to 40s per standard, and there has been a fair amount of trade. Most of the holders, however, are inclined to keep their stocks, in anticipation of better prices.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Markets—Wintered Stocks Likely to be Light

St. John, N.B., August 21st; (Special to the Canada Lumberman): There does not appear to be any likelihood of a great surplus of deals being carried over into 1917 by the mills at St. John. In fact, it looks as though purchasers of the season's cuts will not have much to worry about in the way of stocks which they cannot move, as many of the mills are already idle, and others will be closing down in the near future for want of logs. Of course, all of these mills were not sawing exclusively for the English market, but a number of them were doing so. Moreover, those mills that were manufacturing for the American market were sawing all their stocks plump, so that they could be turned into the English market if occasion required. Undoubtedly, according to the present outlook, only a comparatively small quantity of logs will be carried over at St. John this winter. The total is not likely to be more than 18 or 20 million feet, and most of these will be long American logs. Prices are unchanged and the demand is slow, but if anything there is a slight improvement both in price and demand. A moderate volume of enquiries is developing from the American market which is showing a little more sign of steadiness. The base price at Boston has risen to $26 and there is a firmer tone all around.

There is no improvement to report in connection with the local market, which is stagnant. Very little new building is being undertaken and the factories are simply stocking up with the different lines of material they usually require, so that they may not be obliged to lay off any employees. It is hard to foresee what the winter will bring forth in connection with the local market, but there is still some hope that a moderate amount of building will develop during the fall, and thus help the market. The reason for this hope is that conditions are very favorable today for anyone who is thinking of building. An owner can put up buildings at exceptionally low cost and when the war is over the opportunity for a promising investment of this sort will probably have disappeared.

The spruce board market is still weak, but fortunately the boards at St. John are in comparatively few hands and will be taken care of easily. Not less than $16 is being accepted on the mill wharves. Stocks of refuse lumber are heavy and reductions of $1 per thousand feet are being made.

The St. John River Log Driving Association have almost finished their rafting operations for the season, and statistics of the season's operations will be available in the near future. Upwards of fifty million feet will have been rafted this year, and the St. John River is now clear of logs from its head waters to its mouth.

Shingles are scarce at St. John and the better grades are hard to find, so that prices are somewhat stiffer.

Montreal Market Continues Quiet

Montreal, August 25th; (Special to the Canada Lumberman):—Apart from the demand for shell box lumber, the Montreal market is quiet. Several additional contracts for boxes have been placed by the Imperial Munitions Board, and others have been offered at prices which are unacceptable. Some firms who have completed contracts, have learned by experience that there is no money in the business on the rates quoted by the Board, and have declined further orders on this basis. Such orders are generally the subject of negotiation, with a result that a better price is sometimes obtained. It is reported that the Board will ask next month for bids of a further million boxes. Many firms are behind hand in their deliveries.

Last month there was an improvement in the building permits, the total being $545,870, as compared with $432,490 in the corresponding period last year. The statement for the year to date is, however, $871,000 less than for the corresponding period in 1915.

The shortage of labor is becoming very serious, and reports received here state that in the Ottawa Valley districts several manufacturers have closed down their mills. The scarcity is by no means confined to this section, mills in the province of Quebec finding it difficult to secure the necessary help.

Shipments to the United Kingdom are fair. Spruce and birch constitute the great bulk of the exports, pine showing a distinct falling off. There is no improvement in the British markets, and with freights round 300s per standard there is little inducement to send forward large quantities, even were space more plentiful than it is. The Government are taking considerable room, and prospects are that this condition will continue for some time. Recently a considerable amount of lumber has been shipped from here and from lower Quebec ports by tramps.

The pulp and paper sections are again buoyant. Prices for sulphite pulp have made further advances, and until there is a chance of European supplies going more freely into the United States, the upward movement is likely to be in evidence. The immense gain in the Canadian exports in pulp is shown in official figures for the year ending June 30th last. During that period we shipped 70 per cent. of the imports into the United States, a gain of 130,000,000 pounds over the previous year. Ground wood is also a good market, while the demand for newsprint is again excellent. The exports are increasing rapidly, notwithstanding the rise in values, and it is hinted that a co-operative association for assisting the distribution of our product in foreign countries may be formed.

Serious bush fires in the Lake St. John district are reported, also in the seigniory behind Murray Bay, behind Canard River, between Bergeron and Escoumains, at Anse St. Jean, at Cape Trinity, along the Peribonka River and in the National Park.

Ottawa Trade Affected by Labor Shortage

Ottawa, August 25th; (Special to the Canada Lumberman):—"Very little change in the lumber market in the past few weeks, but quite a change in the labor supply," is the way in which Ottawa lumbermen express themselves about the situation. Labor, according to all the manufacturers here, is the one great trouble at the present time, and the scarcity has become so noticeable that one mill, that of the Hawkesbury Company, has shut down on the night run.

This action has been taken because of the scarcity of labor due to recruiting and other causes, among which is the demand for harvest hands in the western provinces, this alone having taken many hundreds of men from this district. The McLachlin Bros. mill at Arnprior, Ont., has also been closed down quite recently, but all the others report a fair amount of business and little change in the market.

Manufacturers say there is little likelihood of any important change and not any great likelihood of a rise in the selling prices, although the scarcity of labor is increasing the cost of production. It is estimated that in some lines the cost of labor will be increased to 20 per cent. over a year ago, and while this may later have an effect on the selling price of materials, no move toward a rise has yet been made.

The prospects for the building trades are unchanged. Retailers report little change in the amount of goods passing through their hands and the general opinion is that prospects are "fair."

With the return of harvest hands from the west, it is anticipated that the labor market may ease up a little, though scarcity of men will again be felt when the work in the woods opens. The export trade is steady.

News has been received of the death at Minneapolis, Minn., of Mr. John Sims, a wealthy lumberman of that city, formerly of Ottawa, where he started on a small scale many years ago. He moved from here to Saginaw, Michigan, and has many relatives still living in Ottawa.

Schooners Doing Well in Transatlantic Trade

Parrsboro, N.S., August 19th; (Special to the Canada Lumberman):—The shipments of deals and scantling from this port to Great Britain since July 19th, total 5,061,182 feet. This was carried by one steamer and four tern-schooners. The shipments consisted chiefly of spruce, but some cargoes contained a quantity of hemlock lumber, and the cargo of one schooner was composed entirely of birch deals. A Norwegian ship which will carry nearly three million feet, will finish loading in a few days, and several schooners are due to arrive, so there

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Campbellton, New Brunswick

is not likely to be much break in the deal shipments for some time to come.

The lumber shipments to the United States during the last month consisted of 632,378 feet of spruce and hemlock boards and scantlings and 365,000 spruce laths. Several small cargoes of deals have been shipped to St. John, N.B., for transhipment at that port.

The tern schooner Exilda, which made four successful transatlantic trips with deal cargoes last season, has just completed her second voyage this year, and is loading again for the other side. Her last round trip, which was to Preston, England, was made in seventy days, which is considered remarkably good time for a sailing vessel. Another tern schooner, which cleared from Parrsboro on the 17th ult., and was delayed two or three days by fog, arrived at Preston today. Another schooner which sailed a week earlier went across in thirty days. It will be seen, therefore, that the schooners are doing much better than some wiseacres thought they could, and they compare very favorably with the "square riggers."

The four-masted schooner, built this season in Port Greville, on the lines of the one that was torpedoed last year on her first voyage, is now nearly completed, and will be launched, it is expected, on the 28th inst. Shipbuilding in this vicinity has been greatly handicapped by the scarcity of men. This, of course, is largely due to the war, which has taken heavy toll among the sturdy shipwrights. Very few men can be found today, in the shipyards along shore, who are not above military age. But, of course, the war is not wholly responsible for the scarcity, for prominent among the causes is undoubtedly the sharp decline in wooden shipbuilding of a decade or more ago which left few inducements to young men to learn the trade.

The scarcity of shipwrights finds a parallel in the marked scarcity of sailors, and if it were not for the Scandinavian seamen, some of our vessels would find it practically impossible to get across. Even as it is, vessels are sometimes held up two or three days while sailors are brought from other ports to complete their crews. Freights are lower than they were six months ago, and the price of lumber has fallen, but sailors' wages are higher than they ever were before and the tendency is still upward. At present the wages of able seamen are at least fifty per cent. higher than they were a year ago, while even green hands can command big wages.

Good Advice for Loggers—

Safety-First Principles Tabulated by a Large Operating Company

A western lumber company with extensive woods operations has prepared the following set of safety-first rules for loggers and others in their employ:—

Loaders.—Do not load a car unless hand brake is set up tight, and if the car be on any grade, see that the snub line with a clevis is fastened to the car.

When moving cars ahead, as soon as same are spotted, set up all brakes on both loaded and empty cars.

Take no chances in working or walking under or near logs lifted in the air with hooks. Never use hooks to lift a log scaling more than 1,500 feet (it is very dangerous to do so as the hooks are liable to pull out and fly). Logs scaling over 1,500 feet should be rolled onto the cars with straps fastened from the gin-pole, and used as a crotch line.

Do not fasten a hook to any portion of car, except the car bunk or axle.

Do not load logs upon car at the landing until the track is thoroughly cleaned out, and the rail clear of all mud, chips, sticks and other obstructions, and all limbs cut off the logs and stamped on both ends.

Always see that the chock blocks on the bunks stand straight up, and that there is no slack in the chain.

Use no blocks or rigging that are not perfectly sound and safe in every way.

Fallers.—Never stand close to trees when falling.

Always give plenty of warning to all employees and persons near before a tree is felled.

Always fall every snag that is in anywise liable to blow over or fall on you while at work.

Always keep a lookout for loose limbs and sailors, and avoid the same.

Immediately turn in all tools not in proper shape or repair, notify foreman and procure others.

Buckers.—Be careful to cut all logs where measured.

Block up logs so that they will not split while bucking.

Always work on the upper side of a log on the sidehill, so as to avoid the danger of its rolling down on you.

Do not work near or under trees having loose limbs, or sailors, but first have same cut down.

At all times be extremely careful to keep away from lines, and from falling timber. In long timber the limbs frequently fly a long distance when felled.

Train Men and Construction Men.—Haul no logs until you are certain that the load is well balanced, secure and safe.

Never stand beside or near a train or load of logs that is in motion.

Do not get on or off the cars or engines while in motion, and do not walk over log cars while in motion.

Never stand between cars while coupling. (Logs often extend over the ends of cars).

Never get under a pile while it is being raised.

If you know or suspect any physical disability or inexperience in yourself or fellow-workman, immediately report same to your superior.

Foremen.—Always thoroughly instruct each man as to his work and the dangers thereof, and secure his consent before placing him upon any job involving danger.

Immediately discharge any habitual drunkard or man who comes to the camp in a drunken condition.

Immediately discharge any man who brings liquor to camp.

To All Foremen and Employes.

It is the intention and desire of this company that its employes at all times be very careful and keep out of unnecessary danger in every manner and form while employed at their work.

No man is to start at any kind of work unless he is thoroughly familiar with the dangers thereof, and fully capable of properly performing the work.

The following table shows the percentage of accidents occurring during the year 1915 in the operations of this company:

Logging, 27 per cent.; lumber (yards), 18 per cent.; miscellaneous, 16 per cent.; sash and door factory, 15 per cent.; mills, 15 per cent.; box factory, 7 per cent.; veneer, 2 per cent.

During the year 1915 there were 92 accidents of various kinds in the various departments of the company, as against 109 accidents for the year 1914. The above figures show percentage of accidents in the departments as noted.

Logging shows 27 per cent. of all acridents occurring, these being due to various causes. The majority of accidents in this department being injuries sustained by woodmen and others cutting feet, limbs, etc., with axes and other sharp tools. This cause and accidents on railroads provide the greater percentage of accidents in Logging Department. Accidents in Logging Department show an increase for 1915 over previous year, there being 23 accidents in 1914, as against 26 in 1915.

The Lumber Department (yards, kilns, etc.) follows, with a percentage of 18 per cent. The majority of these accidents being caused by employes falling off piles, falling lumber, etc. This department also shows an increase of accidents for 1915, there being 11 accidents in 1914, as against 16 in 1915.

Miscellaneous departments (ranches, store, teaming, etc.) shows a percentage of 16 per cent.

Sash and door factory and mills follow, with a percentage of 15 per cent. each, sash and door factory showing a reduction of 14 accidents over previous year. The mills show a reduction of 1 accident over last year's record.

The box factory takes the banner in the matter of reduction of accidents, there having been only 7 accidents in this department during 1915, as against 24 for 1914. Box factory showing a percentage of about 7 per cent.

The veneer plant shows the small percentage of 2 per cent., or 2 accidents for 1915, as against 5 in 1914. This department, however, employs only a small number of men in proportion to the other departments noted.

One fatal accident occurred during the year, this being in the Logging Department. However, this occurred during non-employment.

On the whole, the reduction in accidents over the previous year is gratifying to the management. Where the greatest reductions are shown over previous year, this is without doubt due to safeguards that have been installed and the efforts of the foremen and superintendents of the various departments.

In the departments showing increases in accidents, while it is possible to install guards in few places, the matter of safety practice is the main safeguard. This applies also to departments that have shown reductions, as fully 30 per cent. of all accidents occurring in 1915 were due to carelessness of the employe or his fellow-workman.

Every employe of the company should take upon himself individually the task of assisting foremen and superintendents to reduce still further accidents to themselves and their fellow-employes. They should acquire the safety habit. It is the only habit that will never injure you.

Cheaper Handling of Logs, Lumber, Refuse, Etc., Has Been Forced by the Increasing Cost of Labor and Materials

Jeffrey Lumber Refuse Conveyors are an absolute necessity to Mills of largecapacity, and are becoming more and more an indispensable accessory to Mills of smaller capacity.

Jeffrey Storage Battery Locomotives will haul Lumber Quicker and at Less Cost than any other method. They minimize fire risks; there are no cinders, smoke or fumes to contend with; no complicated system of trolley wires or expensive overhead construction required; no skilled labor required.

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The Jeffrey Standard Line of Elevating, Conveying and Power Transmission Machinery

Can be adapted to meet requirements and conditions in your Saw Mill or Woodworking Plant, and

Our large stocks of Chains, Sprockets, Gears, Buckets, Cable Conveyors, Collars, Couplings, Take-ups, Hangers, Bearings, Pulleys, etc., insure prompt delivery.

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Log Haul up Conveyor transferring Logs from Pond to Mill. Jeffrey Chains, Spurs and Driving Machinery are applicable to Saw Mills and Log Haulage.

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The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

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Progressive Ottawa Firm of Camp Equipment Manufacturers

Five years ago this fall, Messrs. Grant, Holden, Graham Limited, Ottawa, started business as manufacturers of tents, tarpaulins, lumbermen's and contractors' clothing. All the members of the firm had wide and practical experience along these lines, and an up-to-date factory of four storeys was opened on Albert Street. Within two years it was found necessary to double the capacity and during the

New factory of Grant, Holden, Graham, Limited, Ottawa.

next four years their business expanded until their connection extended from Vancouver to Sydney, and with war contracts on hand in addition to their regular business, they were working night and day with 400 employees to catch up with orders. In February of this year, however, fire destroyed their modern factory building. Nothing daunted, within 48 hours the indefatigable general manager, Mr. S. S. Holden, had the whole force working in temporary premises ready to take care of all orders, and plans under way for a larger and even more modern factory building.

The accompanying illustration shows the building practically completed and ready for occupancy. It is a modern seven-storey, absolutely fireproof building of steel and reinforced concrete, equipped with sprinkler system and latest lavatory equipment and modern dressing room for their employees. The first two floors will be devoted to general offices and warehouse space, with the remaining floors given over to manufacturing. All the latest and most modern machinery has been installed.

Grant, Holden, Graham, Limited, manufacture a full and complete line of lumbermen's and contractors' clothing furnishings, van goods and camp equipment, tents, tarpaulins, wagon covers and horse clothing. There is nothing in the lumbermen's needs in these lines they cannot supply. Four travellers cover the country from Winnipeg to Halifax in the interests of the firm, and Messrs. Finnie and Murray, of Winnipeg, handle all their lines for western Canada. The firm claim to have the largest exclusive tent factory in America and specialize in a full line of all kinds of canvas goods. About 600 men and women will be employed in the new factory. The personnel of the company consists of S. S. Holden, general manager; B. W. Graham, sales manager; and A. J. Hendry, warehouse manager.

The Calculating Machine for the Lumber Office

The accompanying illustration of the Dalton multiplying, dividing, and subtracting machine shows an appliance particularly adapted and almost indispensable to every lumber office.

The fact that there are only ten keys (one for each numeral) makes the operation of the Dalton exceedingly easy. Any one, from the office boy up, can operate it after a few minutes' instruction—can add long columns, find board feet of any number of any variety of different lengths of lumber, can extend totals, check up lumber and log reports and tally sheets, prove trial balances, make up pay rolls, etc.

Lumbermen who use the Dalton find that it fills the need in the lumber business for which all earlier styles of adding machines have proved inadequate.

The United Typewriter Company, Limited, of Toronto, are the

The Dalton multiplying, dividing and subtracting machine.

Canadian distributors of this machine, and they will be glad to send on request illustrated literature describing the Dalton and showing in what way it is so peculiarly adapted to the lumber business.

The Pacific Logging Congress and the "Forest Industry Conference," under the auspices of the Western Forestry and Conservation Association will be held at Portland, Oregon, from October 24th to 27th. The first day will be devoted to a discussion of forest fire prevention, the second day to current matters of vital importance to the lumber industry, and the third and fourth days to logging. Among the important subjects to be discussed under the head of logging will be, stumpage futures, salvage in cut-over land, timber insurance, legislation, and fire prevention methods. A large attendance is expected from Montana, Idaho, Washington, Oregon, California and British Columbia, also from Federal, State and Railroad representatives.

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J. M. T. Steam goods have been designed to meet present-day needs. They are made of high-grade materials only and the workmanship is finished and thoroughly dependable.

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Don't miss this opportunity to increase your profits. Make Wood Pulp. Install a small Soda Pulp Plant to take care of the Slats, Tops, Bottoms, and waste wood around the mill. You can have a long term contract to dispose of all you make, if you desire. We have imported ninety per cent. of all the Canadian Wood Pulp supplied to Europe since 1899. This is a pure profit to you. The cost of the plant is small and the material would otherwise be destroyed.

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Lidgerwood Portable High Spar Skidder

Canadian Allis-Chalmers Company have just issued a new bulletin, No. 55, describing Lidgerwood Portable High Spar Skidders, the result of the continual development of the tree rig method of overhead skidding as first installed by the Lidgerwood Manufacturing Company, twenty-five years ago. This machine has the most modern devices of the kind for skidding logs, the deflection obtained in the main cable by the use of the high spar making long spans practicable. The Lidgerwood Manufacturing Company state that their skidders are the only skidders provided with interlocking drums, and with a mechanical slackpuller. These two devices result in high speed outhaul, skidding with the load in suspension, a reduction of the strain on engines and cables, and a saving of time picking up each load. This new bulletin will be sent to those interested, on application.

Gasoline Log Haulers Doing Good Work

Gasoline log haulers are coming into use in several parts of Canada, and according to the service they have already given, the prospects are that they will become a fairly general factor in logging operations wherever conditions are suitable. One of these tractors, manufactured by the Lombard Traction Co., Waterville, Me., is being operated by F. E. Sayre & Co., Ltd., St. John, N.B., who advise us that the total cost in Canada is about $5,500. This would include three sets of three sleds each. They leave one set of sleds in the yard, one set at the brow and keep one in transit. In this way the tractor is working steadily all day long. The tractor is doing the work of about eight pairs of horses. Theoretically, they say that it should do much better, but like all mechanical apparatus it is liable at times to give out. In operating the gasoline log hauler, F. E. Sayre & Company say it is best to get a thoroughly competent man to run it, and also that it is wise to build a proper shed to keep it in and to have the shed heated.

In operations where the logs are not hauled more than four miles, they believe they can, in practice, be hauled cheaper with horses, if the operator is so situated that he does not have to own his horses, but can hire them per pair with driver at from $50 to $60 per month. On hauls of from four to six miles, they find that the tractor is superior to horses. It can be operated for a day of about nine hours on a consumption of 25 gallons of gasoline and two gallons of lubricating oil, and it will work satisfactorily at a temperature of 30 below zero. Fifteen per cent. of the total cost of the tractor would cover the up-keep and depreciation.

An operator who may be thinking of purchasing a tractor can figure out his requirements from the following suggestion. On a six-mile haul, with two and one-half months hauling time he would need to figure on one log hauler for every million feet of logs.

The gasoline tractor will operate on a first class horse road and will make its turning almost any place where it will be sufficient for a pair of horses to turn in.

Other operators in eastern Canada have also told us of success which they have had with this class of machine.

Contract Logging Preferred by Eastern Operators

The York & Sunbury Milling Company, Gibson, N.B., who have all their logging done by contract in preference to establishing their own camps advise us that they find this way of doing business much preferable. There are many reasons why they favor it. Chief among these is the fact that their operations are scattered over considerable territory, necessitating several camps many miles apart, for operations from one-half to two millions each. They have not the necessary camp equipments for so many operations, nor are they able to find competent woods foremen to take charge of each operation. Of course, they employ a competent woodsman who has a general supervision of the work and their contracts require that the work must be done to his satisfaction.

Most of the logging operators in that part of the country have their own camp equipment and are accustomed to doing work under contract. The manufacturers claim that the work can be done better and with less expense when the operator has a money interest in the work of his crew, and the manufacturer is relieved of so many details.

In connection with their manufacturing operations at Pokiok, N.B., the York & Sunbury Milling Company have installed a log chute from their mill pond to the St. John River, a distance of about 500 feet, through which they sluice two to three million feet of logs each year. These they raft and tow to their Gibson mill, about forty miles below, using motor boats for this purpose.

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TORONTO March 14, 1916.

The Toronto Blower Co.,
City.

Dear Sirs:-

I have pleasure in writing this letter in regard to the Blower Systems you installed in my factory last year. Both the shaving and the separate sawdust systems are working very satisfactorily and I know we have as good a job of piping as it is possible to put up. This work was done under the direction of your Mr. Daniels, whom I consider a very good mechanic.

Yours truly,
T. H. Hancock

Let us show you how to Save Money on your Exhaust System.

To reduce costs and save money your Exhaust System should be 100 per cent. efficient. You should get full value for every dollar spent for power. Our system gives service and reduces cost because it is properly installed and because

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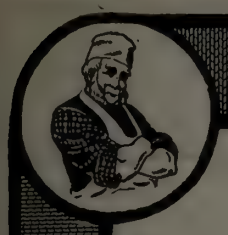
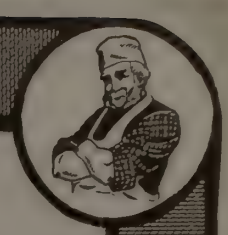

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Your horses need special camp feed, too. Our Crushed Oats, Mixed Crushed Feed and Chop are the very finest grades of feed for camp use. You'll notice the difference in good work done by your horses in a short while after using these products.

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EDGINGS

Ontario

The Lincoln Paper Mills, Merritton, Ont., are contemplating the addition of a sulphite mill to their plant at a cost of $200,000.

Stevens' sawmill and stock of lumber near New Liskeard, Ont., were destroyed by fire in the forest fires occurring in that district on August 22nd.

A report from Arnprior, Ont., states that McLachlin Bros.' sawmills at that point have closed down after a run of only three months, this being one of the shortest seasons they have ever experienced. The firm, like all others, had a great deal of trouble during the summer with the labor question, and finally concluded that it was advisable to close down. Many of the employees have since found situations at Braeside, Pembroke and other points.

The two associated firms of Cockburn, Whaley Company, and Knight, Cockburn and Whaley, wholesale hardwood lumber merchants, Guelph, Ont., are being dissolved and are reorganizing. Mr. H. G. Cockburn, the founder of the business, who has been an active member of both companies is taking in with him his own son, Mr. H. R. Cockburn, and will continue to conduct a wholesale business under the firm name of H. G. Cockburn and Son. They will occupy the same offices, in the telephone building. It is understood that Mr. Knight and Mr. Whaley will conduct a business under the name of the Knight Whaley Company.

Eastern Canada

The Ha Ha Baie Sulphite Company, Chicoutimi, P.Q., are contemplating the erection of a paper mill in conjunction with their pulp mill now in progress of construction at Bagotville, P.Q.

The Albert Lumber Company, Hillsboro, N.B., finished their season's cut on August 11th, having turned out 3,000,000 feet. The mill was shut down for repairs less than half a day during the season.

A report from North Sydney, C. B., states that an area of 200 square miles of timberlands at Bonne Bay, Newfoundland, has been sold by Messrs. Vibert, Sydney, and Jos. Salters, to an English syndicate.

The sawmill belonging to Alex. Gagnon, of Chicoutimi, P.Q., was recently destroyed by fire. The origin of the fire is unknown. The loss is estimated at about $40,000. The insurance carried amounted to $15,000.

Work has been started on a paper factory and power house at a cost of $84,000 by the Thompson Norris Company, 355 Notre Dame East, Montreal. The building is to be four storeys, 102 x 190, reinforced concrete and brick construction.

A contract has been awarded by the Canada Paper Company, Limited, Windsor Mills, P.Q., to F. Byers, & Company, Limited, 340 University Street, Montreal, for the erection of paper mills to cost $30,000. The building will be two storeys, 128 x 57, and will be of reinforced concrete and brick construction.

With the proceeds of the half million dollar 6 per cent. collateral trust notes now being issued by Price Bros., Limited, the company will make a further addition to its paper making plant and also construct a storage dam. It is officially stated that the company's annual output, with additions under construction, will be one hundred million feet board measure of merchantable lumber, 72,000 tons of newsprint, 58,000 tons of ground wood pulp, and 25,000 tons of sulphite pulp. The company has sold its pulp and paper output for the next six months, and also its lumber output for the current year. The net earnings for the fifteen months ending February 29 last totalled $550,209, after allowing for all interest charges.

Western Canada

The Saskatchewan Door Company, Weyburn, Sask., recently lost their door factory by fire. The amount of the loss is not yet known.

The Empire Pulp and Paper Mills, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $2,500,000, to carry on business as manufacturers and dealers in pulp, paper, timber, lumber, etc.

D. R. Rolston, Limited, has been incorporated with head office at Golden, B.C., and capital stock of $10,000, to carry on business, among other things as sawmill men, lumbermen, timber merchants and manufacturers and dealers in lumber, cordwood, etc.

Brooks Bidlake Cedar Company, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $50,000, to carry on business as timber merchants, lumber merchants, sawmill, shingle mill and pulp mill owners, loggers, etc.

The Pacific Logging Company, Limited, has been incorporated with head

office at New Westminster, B.C., and capital stock of $40,000, to carry on business as foresters, loggers, timber and lumber merchants, sawmill and planing mill proprietors, etc.

Sealed tenders are being received by the Minister of Lands for B. C., until the 11th day of October, 1916, for the purchase of License X645, to cut 9,396,000 feet of Douglas fir, cedar, hemlock, balsam, spruce and white pine on an area adjoining Lot 654, Topaze Harbour, Range 1, Coast District. Two years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for B. C., until the 13th day of September, 1916, for the purchase of License X248, to cut 7,773,896 feet of Douglas fir and cedar, 20,115 lineal feet of poles, and 6,900 lineal feet of fir piling, on an area adjoining S. T. L. 37502, Lake Bay, Read Island, Sayward District. Three years will be allowed for the removal of the timber.

The Ladder Lake Lumber Company, Prince Albert, Sask., report that they have had a very successful drive this season, having floated all of their season's cut to the mill and also 30,000,000 feet which had been lying at Crooked and Otter Creeks for five years, which it was thought could not possibly be brought down. These logs had been taken out by the Big River Lumber Company.

Sealed tenders are being received by the Minister of Lands for B. C., until the 11th day of October, 1916, for the purchase of License X703, to cut 1,066,000 feet of Douglas fir, cedar, larch, yellow pine, white pine, cottonwood and dead and down timber; also 14,000 cedar poles and 86,000 railway ties, covering that portion of Lot 274, Kootenay District, situated south of the Goat River. Two years will be allowed for the removal of the timber.

Russia Negotiates for Box Cars

According to a despatch from Chicago, demands for an enormous quantity of lumber to be used in connection with the construction of freight cars for the Russian Government may soon appear on the general lumber market in consequence of arrangements said to have been made by New York bankers, on a trip to that country. It is believed that contracts are being negotiated for between 40,000 and 50,000 freight cars for that government, and as New York bankers are interested in the making of a loan to the government it is likely that orders for a large number of these cars will be placed. Orders for the number mentioned would necessitate the consumption of between 140,000,000 and 175,000,000 feet of lumber. The first move in the campaign of extending the freight equipment of the Russian Government is seen in the recent awarding of contracts by the Imperial Munitions Board at Ottawa, Ont., for 7,000 box cars for the Russian railroads.

U. S. Imports of Canadian Wood Pulp Greatly Increased

According to a Washington, D.C., despatch, over two-thirds of the more than a billion pounds of wood pulp imported into the United States during the fiscal year ending June 30, 1916, and used in the manufacture of paper, came from Canada. The pulp importations for 1915-16 have been 180,000,000 pounds less than for the previous twelve months, yet the amount shipped to United States from Canada during the past year was 130,000,000 pounds in excess of her 1914-15 shipments. During the year just closed nearly 70 per cent. of 1,135,000,000 pounds of pulp imported came from Canada, while most of the remaining 30 per cent. came from Norway and Sweden.

In the case of Price Bros. Limited, vs. the Shives Lumber Company, judgment has been handed down by the Superior Court at Rimouski, in favor of the Shives Lumber Company. The action was taken by Price Bros., who claimed $3,616 for timber which they alleged was cut by the Shives Lumber Company on their property on the upper waters of the River Rimouski, the amount claimed being on a basis of $1 per tree.

Hart & McDonagh, wholesale lumber dealers, Continental Life Building, Toronto, report that they have purchased a block of birch and spruce lumber from the Rideau Lumber Company of Ottawa. The block includes over 6,000,000 feet. This new firm of wholesalers report that they have met with escouraging success during their first season's business.

J. B. Wall, of the Buffalo Hardwood Lumber Company, Buffalo, N.Y., who with his brothers, M. M. Wall and T. H. Wall are owners of extensive timber resources in British Columbia, is on a tour of inspection of this property with a view, perhaps, of the Wall interests starting lumber operations there in the near future if conditions warrant.

The lumber dealers, contractors and carpenters of Hamilton, Ont., held their annual picnic to Niagara Falls on August 19th and as usual enjoyed themselves to the limit. The attendance amounted to nearly one thousand.

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Everything in Lumber

We can offer at very attractive prices, if interested, the following:

50 M 1" No. 1 Common & Better Birch
140 " 1" Good Pine Sidings
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Have also considerable dry stock for shell box making in 1" x 9" and 10" Pine and Spruce.

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They Saved 25% in Fuel and 50% in Repairs

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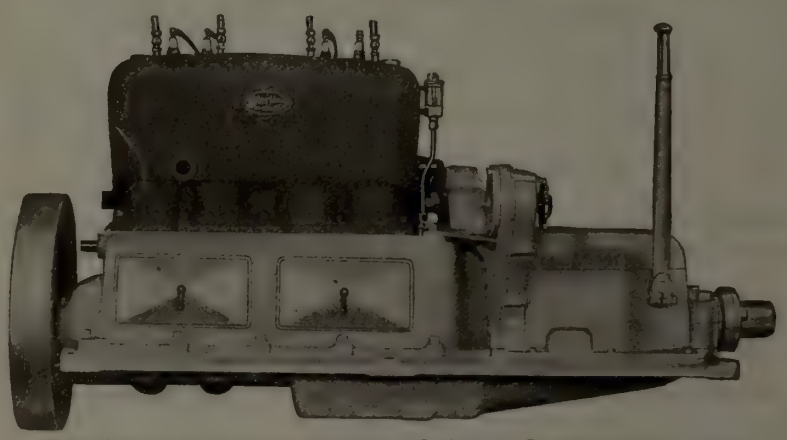

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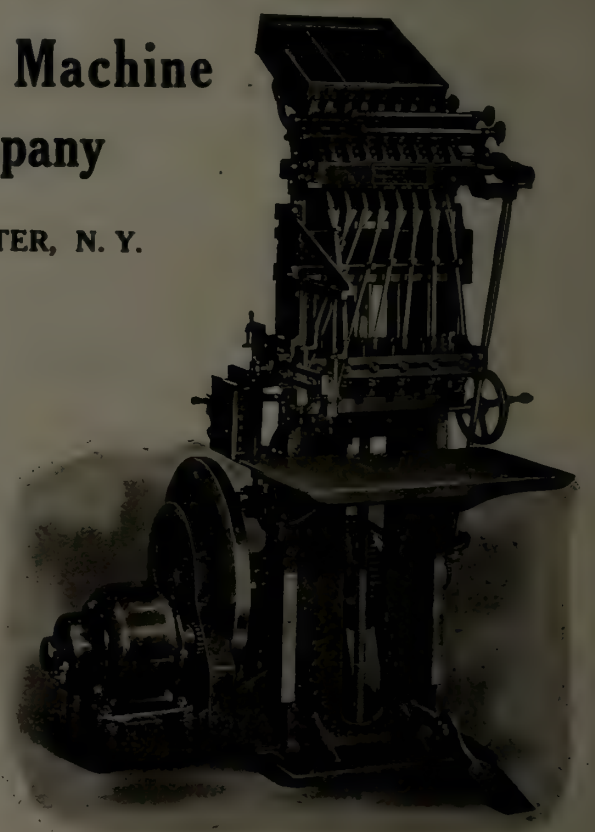

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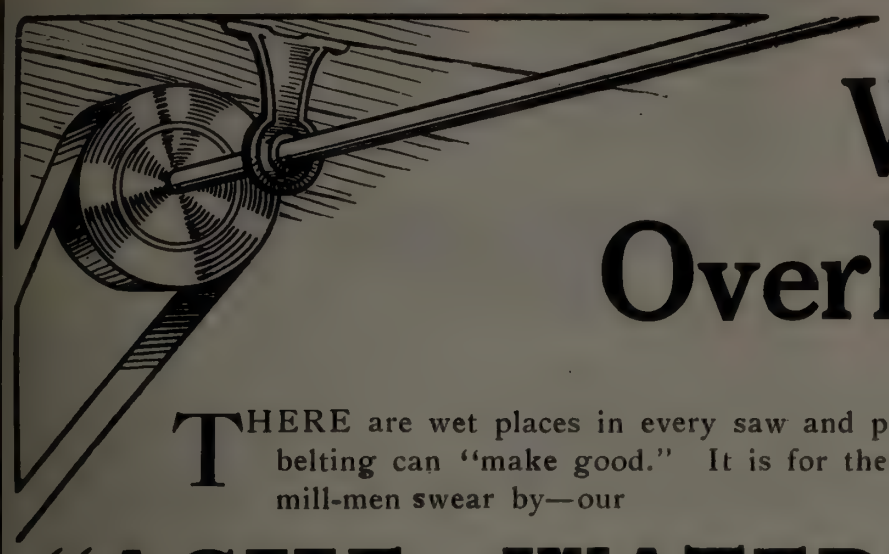

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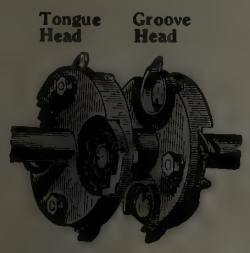

Fig. 62

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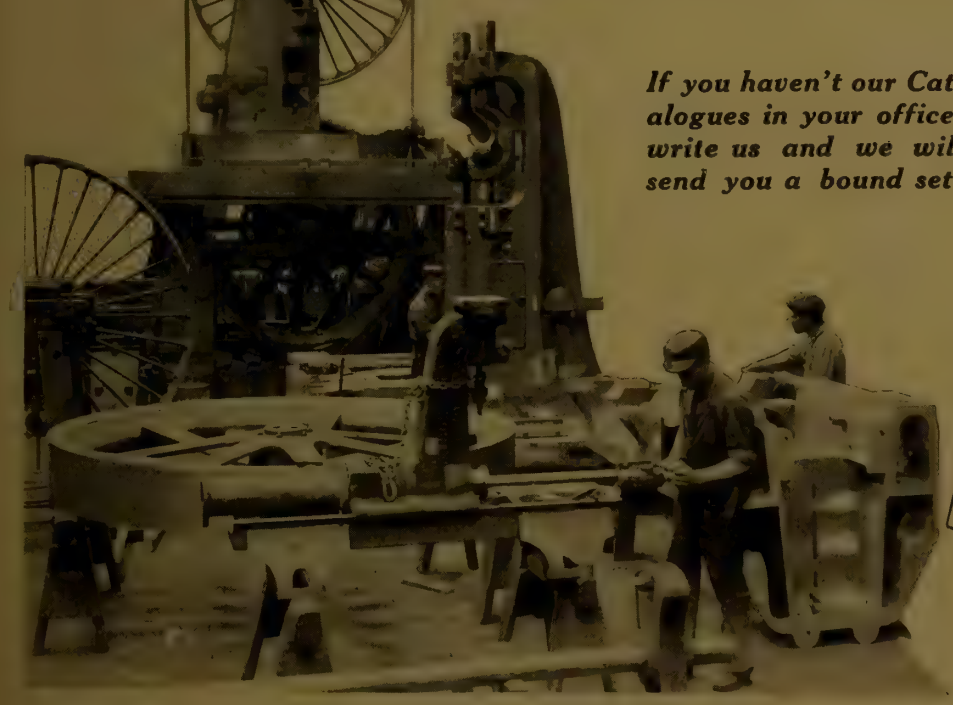

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1—Dom. Mahogany & Veneer Co	Montreal, Que.
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1—Geo. Thompson Lumber Co.	Bigwood, Ont.
1—W. S. Loggie Co.	Inkerman, N.B.
1—C. Beck Manufacturing Co.	Penetang, Ont.
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1—McGibbon Lumber Co.	Australia
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1—Blue River Lumber Co.	Blue River, Que.
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The spring-cushioned, all knife edged tension device is the most sensitive in use.

Upper and lower guides swing about the exact centre of the saw blade.

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One Company makes a fifty-mile round trip per day and finds that the cost of operation and road repairs is saved several times by a

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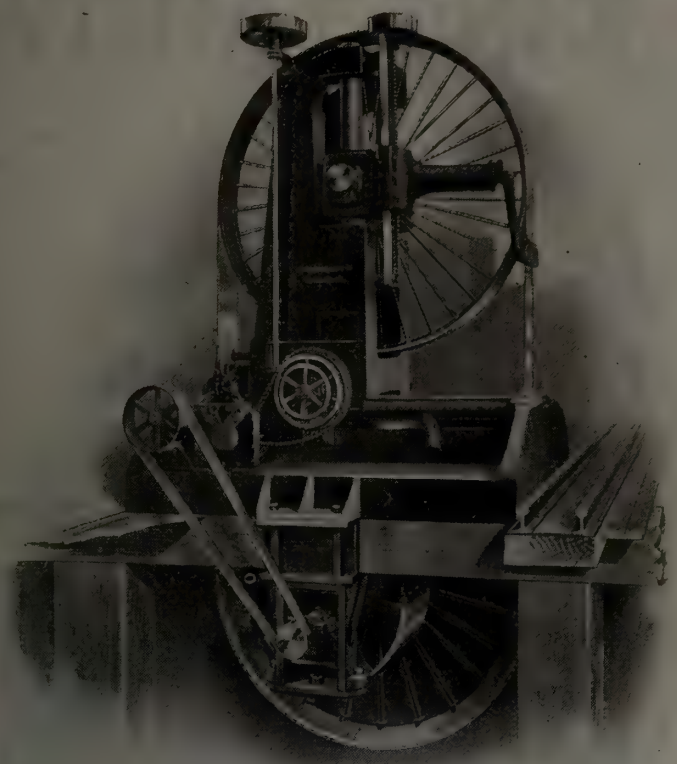

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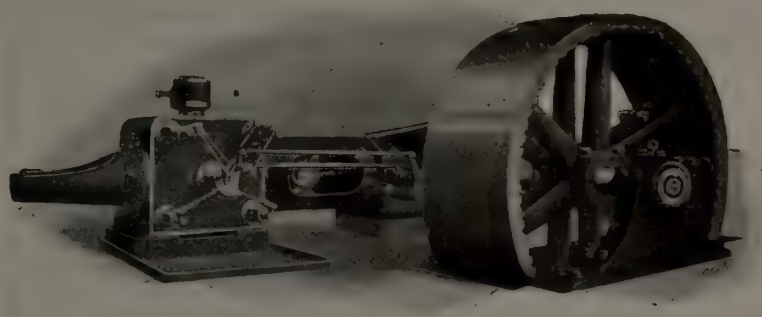

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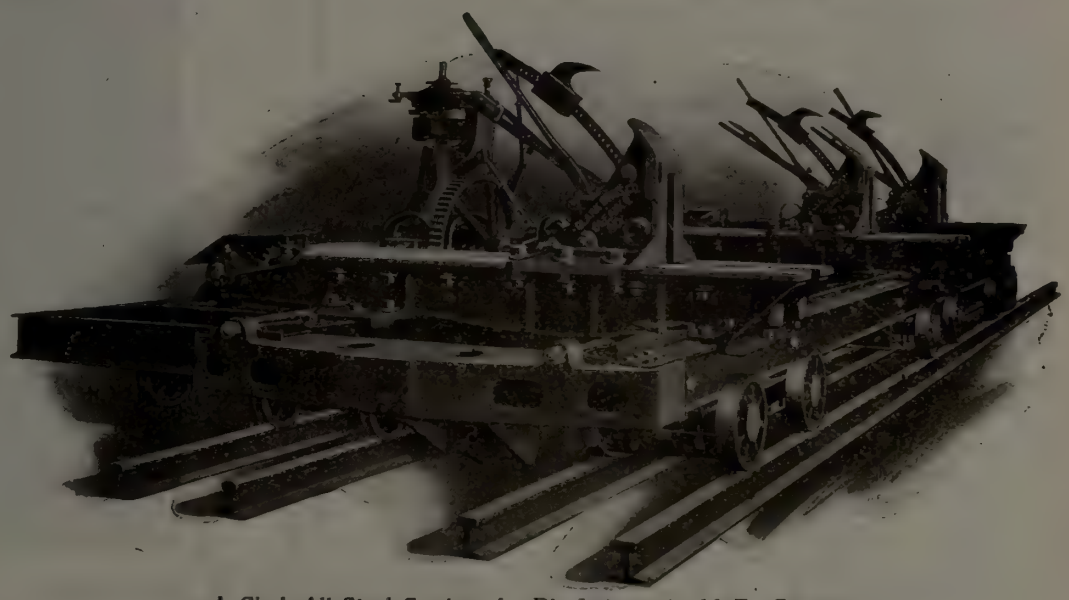

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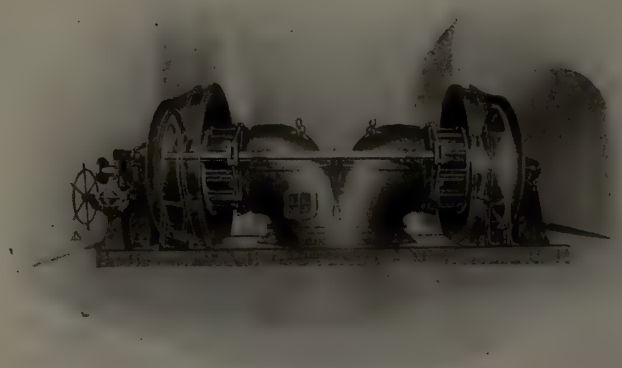

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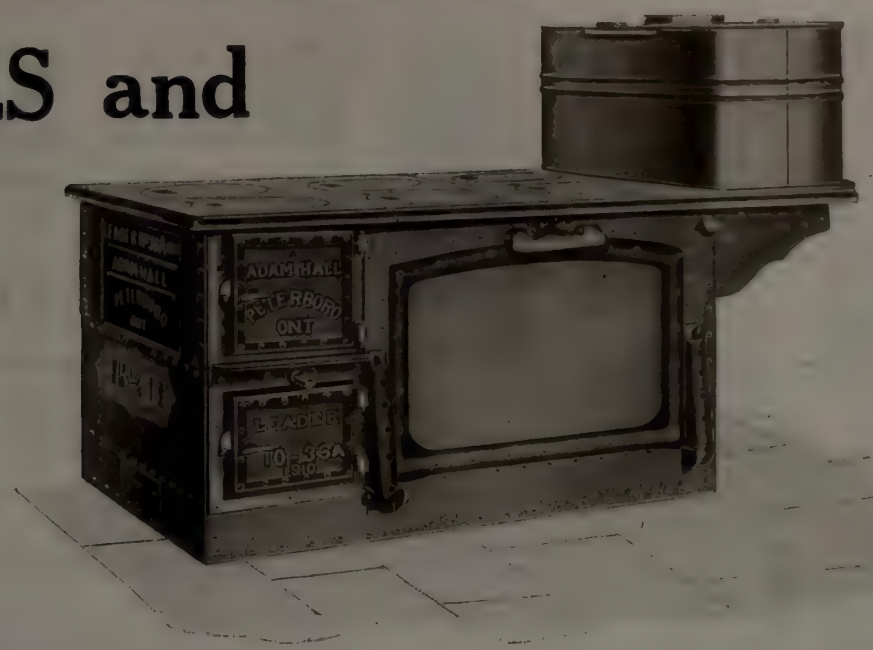

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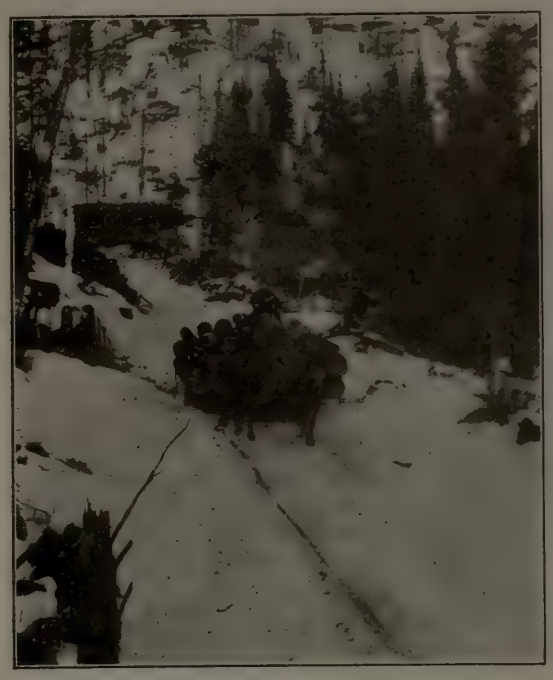

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Clearance under Beam 7 in.

Steel shoes, cross chain coupling; 2 ft. 10 in. or, 3 ft. track.

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Steel shoes, short reach or cross chain coupling; 3 ft. 4 in., 4 ft. 4 in., or 4 ft. 8 in track.

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Steel shoes. swing bunks or bolsters; cross chain coupling 2 ft. 10 in., or 3 ft. track.

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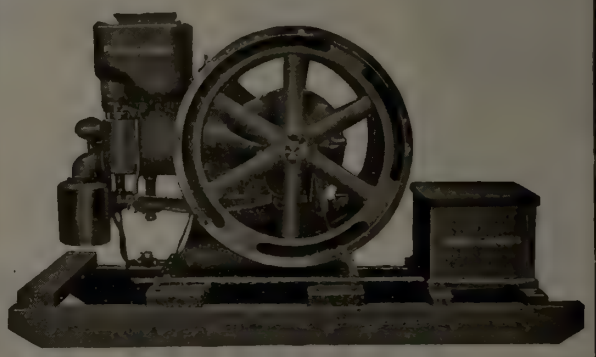

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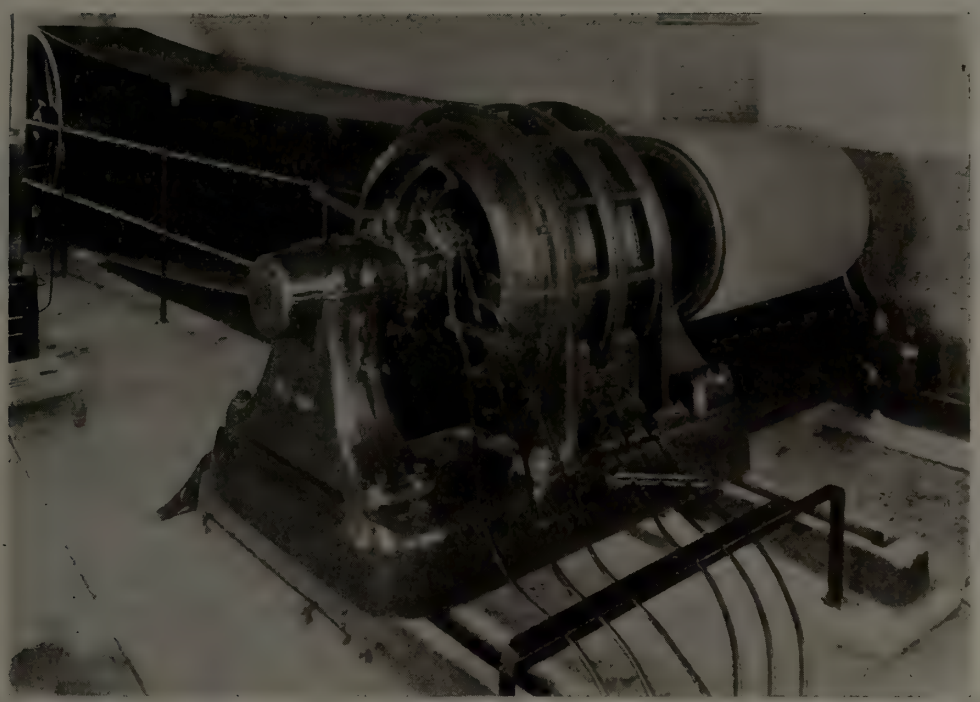

The above photograph is 75' x 48" x 10-ply Leviathan Belt

The motor is a Canadian General Electric 500 H., 3 Phase, 60 cycle, 2300 volts, 600 R.P.M. The belt has never been taken up or relaced since it was installed, August, 1914, over two years' service.

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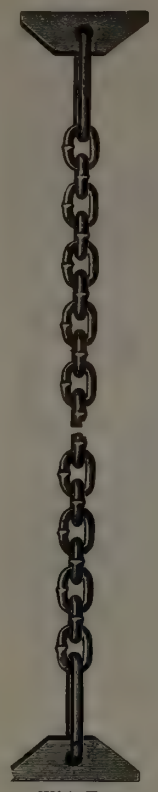

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Design Patented

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—Guarantee—

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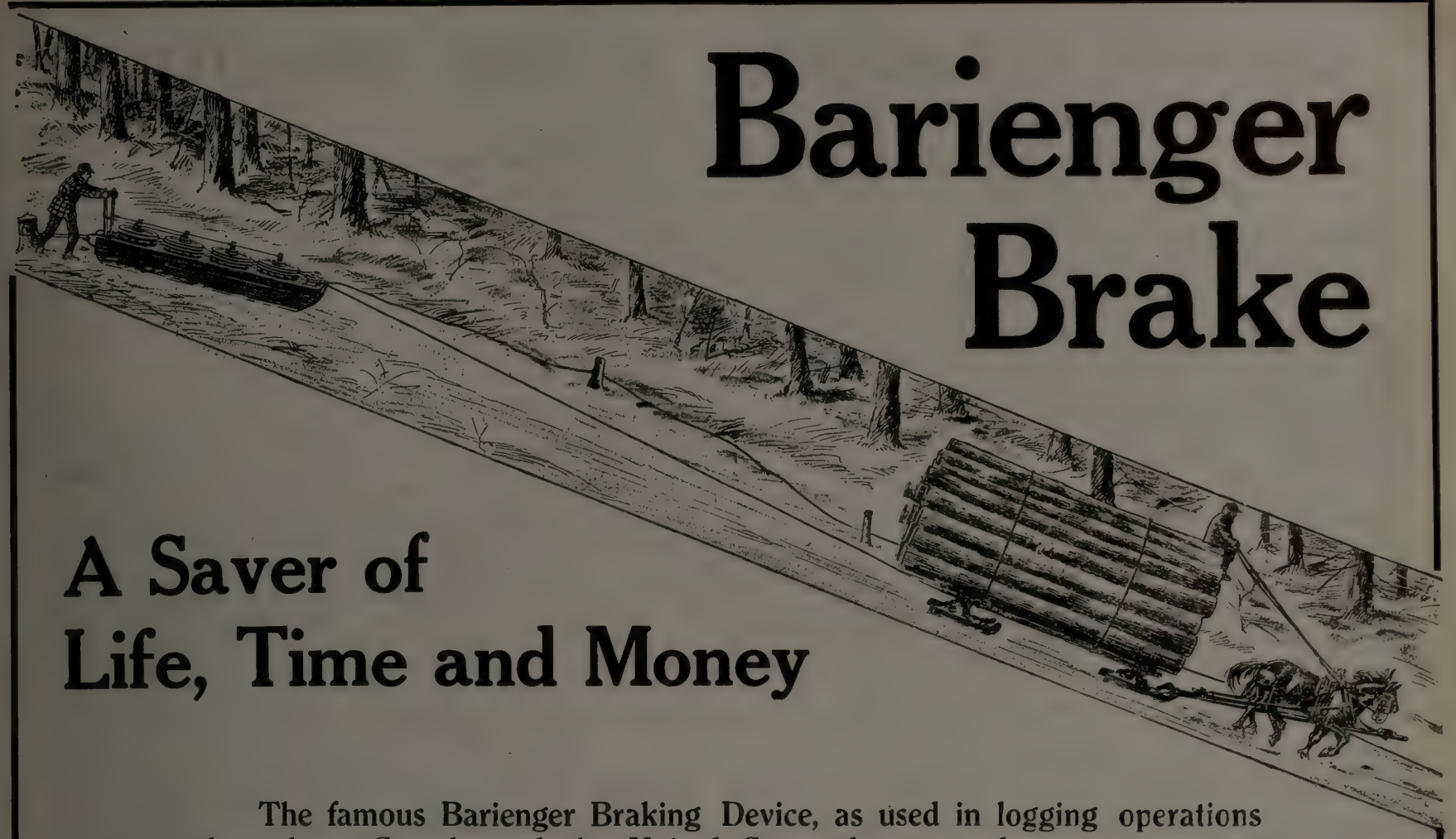

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Packard Motor Car Company

NORTHERN PINE

Anderson Lumber Company, C. G.
Auger & Son
Austin & Nicholson
Bathurst Lumber Company
Beck Manufacturing Company, C.
Blair & Rolland
Bourgouin, H.
Chew, Manley
Cleveland-Sarnia Sawmills Company
Donogh & Company, John
Eagle Lumber Company
Fesserton Timber Company
Forest Mills of B. C., Limited
Fraser-Bryson Lumber Company
Fraser Limited
Gordon & Company, George
Gillies Bros. Limited.
Graves, Bigwood Company
Harris Tie & Timber Company
Hart & McDonagh
Harquail Company, J. & D. A.
Hayden Westcott Lumber Company
Hettler Lumber Co.. Herman H.
Long Lumber Company
Mason, Gordon & Company
McFadden & Malloy
McLennan Lumber Company
Montreal Lumber Company
Moores, Jr., E. J.
Muir, Kirkpatrick & Sharpe
Oliver Lumber Co.
Parry Sound Lumber Co.
Partington Pulp & Paper Co., Ed.
Spencer, C. A.
Summers, James R.
Terry & Gordon
Watson & Todd, Limited

OVENS

Warren Manufacturing Company

OATS

National Elevator Company

PACKING

Dunlop Tire & Rubber Co.
Garlock Packing Company
Gutta Percha & Rubber Company
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PAPER

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PAPER MILL MACHINERY

Bowater & Sons, W. V.

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Harold C. Shipman & Company

PIPE UNIONS

Dart Union Company

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Sturtevant Company, B. F.

PLANING MILL MACHINERY

Canadian Blower & Forge Company
Sheldons Limited
Yates Machine Co., P. B.

POSTS AND POLES

Harris Tie & Timber Company
Long Lumber Company
Muir, Kirkpatrick & Sharpe
Terry & Gordon.

PRESSES

Perrin & Company, W. R.

PULLEYS & SHAFTING

Hamilton Company, William
Waterous Engine Works Company

PULP MILL MACHINERY

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Hamilton Company, William
Jeffrey Manufacturing Company

PUMPS

Darling Bros.
Hamilton Company, William
Smart-Turner Machine Company
Waterous Engine Works Company

RAILS

Gartshore, John J.

RIDGE CAP METAL

Metallic Roofing Co.

ROOFING

Metallic Roofing Co.
Turner Bros. Canada, Limited

ROPE

Plymouth Cordage Company
Waterous Engine Works Company

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Haeberle Lumber Company

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Disston & Sons, Henry
Hoe & Company, R.
Shurly-Dietrich Company
Simonds Canada Saw Company
Smith Company, R. H.

SAW SHARPENERS

Waterous Engine Works Company

SAW MILL MACHINERY

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Huther Bros., Saw Mfg. Company
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Payette & Company, P.
Waterous Engine Works Company
Yates Machine Co., P. B.

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Canadian Western Lumber Company
Christy-Moir Company
Fesserton Timber Company
Fraser Limited
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Terry & Gordon.
Timms, Phillips & Company
Vancouver Lumber Company

(Continued on page 118)

The Babbitt Metal that's at the Front in Efficiency and Economy

HARRIS HEAVY PRESSURE

"The Babbitt Metal Without a Fault," is guaranteed to give EXCELLENT SERVICE. It will not crack or squeeze out. It will run cool at any speed. It is copper coated and copper hardened. It is best for all general machinery bearings. Order a box from our nearest factory.

It is Made in Canada. What We Make We Guarantee.

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THE CANADA METAL COMPANY, Limited

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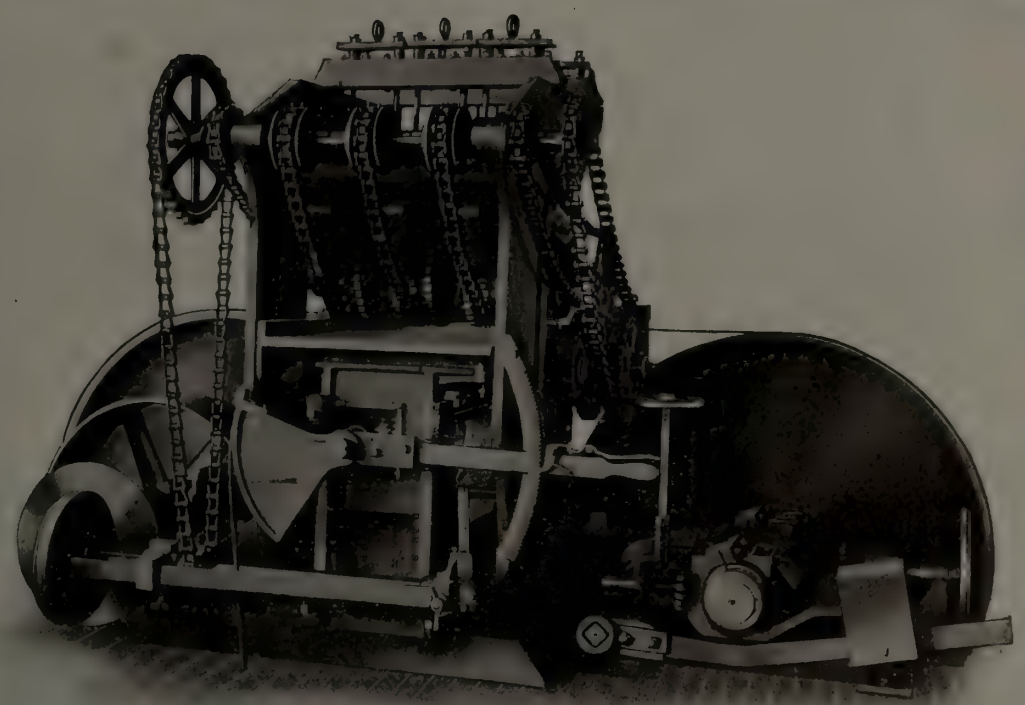
Branch Factories :—HAMILTON, MONTREAL, WINNIPEG, VANCOUVER

Box Factory and Saw Mill Machinery



Automatic Hopper Feed Machines
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Equalizers
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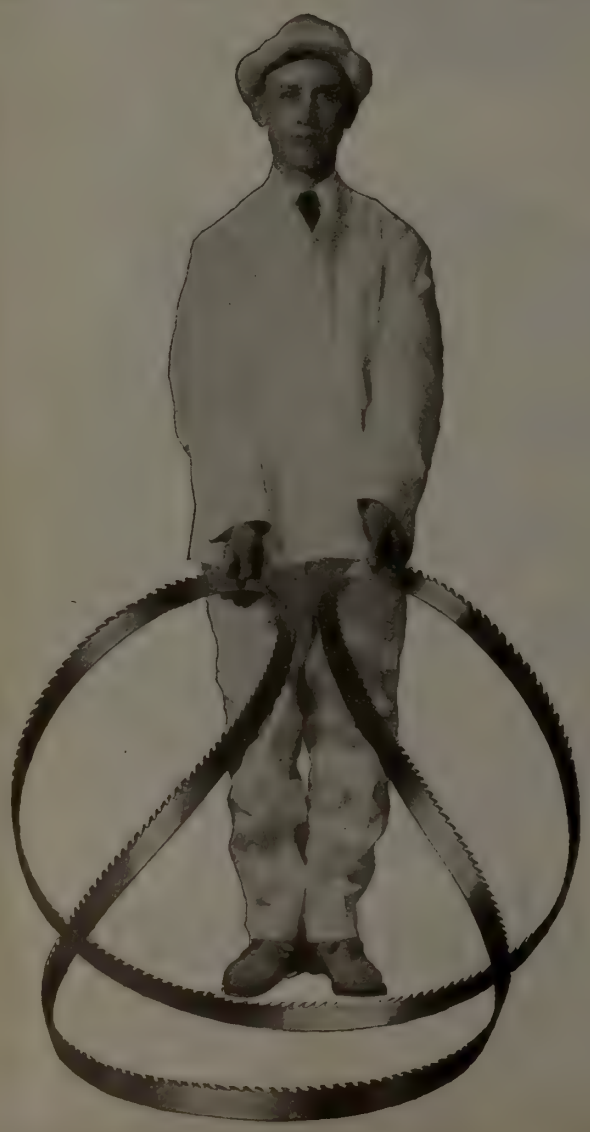

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BAND and RE-SAWS

We have achieved an enviable reputation for supplying SAWS which stand up to their work longer, with less re-fitting than any other SAWS in the world. If there is any doubt in your mind, we stand ready to prove it to you.

A Perfect Saw for Every Purpose

Send for our 248 page book on Saws. The most valuable and interesting Saw book ever published. Tells you just what you want to know about SAWS, MACHINE KNIVES and SAW FITTING TOOLS.

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E. C. ATKINS & COMPANY INC.

Makers of Sterling Saws

Factory—HAMILTON, ONT.

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For Logging Operations, Bush Work, Camp Lighting and Saw Mill Use

The Carbic Light

Carbic Light gives a clear, white light of from 500 to 5000 candle power. One filling of Carbic Cakes will keep the lamp burning steadily twelve hours.

This system of furnishing light in isolated places is especially adaptable for use in lumber camps and also for actual bush operations. The ***Carbic Light*** is the newest and certainly the most simple and efficient method of producing a steady volume of brilliant white light, the volume of which can be regulated by our patented burner.

100 Candle Power

BRIGHT as DAYLIGHT

By comprising Raw Carbide into solid cakes we produce ***"Carbic."*** In combination with our simple burners and generators you can secure a hand portable or stationary light of almost any desired candle power. The Carbic Cakes are simply dropped into the machine as required and each of these cakes will produce approximately 15 cubic feet of pure acetylene. When lights are turned out generation of gas stops, and is resumed when lamp is again lighted. ***There is no waste.*** The cost of maintenance is small. For instance, the operating expense of the Carbic Hand Lamp No. 7 (as illustrated on the left) is 1 cent per hour. It will burn ten hours on one Carbic Cake, giving approximately a 100 candle power light.

We have an interesting catalog describing the Carbic Light.

It is Free. :-: Send today.

See Our Exhibit in Machinery Hall, Canadian National Exhibition.

2000 Candle Power

W. L. FOSTER

Canadian Agent - 8 Lombard St.

TORONTO

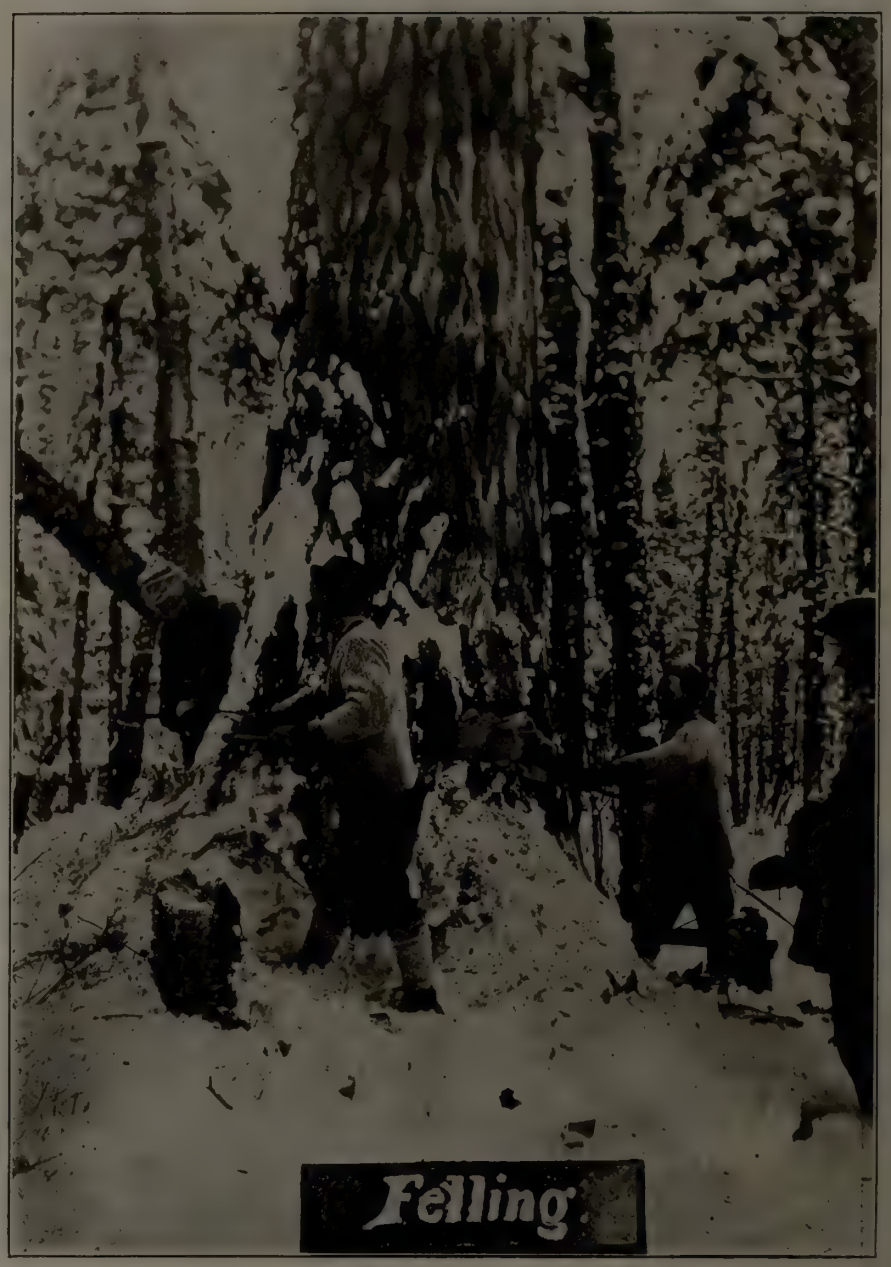
ONTARIO
Canada's Banner Province

Ontario's timber resources are unrivalled.

No other country possesses such a variety of hard and soft woods.

Ontario forests are adjacent to the greatest waterways of the world—the mighty rivers and lakes provide unusual facilities for the lumberman.

Three Transcontinental Railways across the Province eliminate transportation difficulties.



Ontario's wood working industries, using 34 different kinds of wood, provide a ready market for the lumberman. Eighty-two per cent. of wood used in the Ontario industries purchased within the Province.

Ontario leads in production of hardwoods, cutting twice as much as Quebec, second on the list.

Ontario has unlimited quantities of Spruce and other soft woods suitable for the pulp and paper industry.

Tremendous pulp areas are yet untouched.

Ontario's pine producing areas outclass those of any other country in the world, both in extent and quality of the timber.

Exporters to the European markets should investigate the opportunities Ontario offers for the supply of Dimension Timber, Pit Props, Poles, Shook Boxes, Etc.

For maps of the Province and timber regulations apply to

Honorable G. H. Ferguson,
Minister of Lands, Forests and Mines,
Parliament Buildings, TORONTO, CANADA

HOE *Chisel Tooth* SAWS

Hoe saws run true and keep their edge longer, because of inbuilt quality and expert workmanship. Nearly 90 years of saw making experience stand back of our product. The first saw made in America was stamped with the name "HOE." Now-a-days when lumbermen want Hoe products they simply ask for "The Best."

For Hard Steady Work—*Hoe Has No Equal*

Over 100,000 Hoe Saws now in use. Let us send you catalogue and price list of the different sizes.

R. Hoe & Co.

504-520 Grand St.
NEW YORK CITY

Three boilers fitted with Jones Underfeed Stokers at Dells Paper & Pulp Mills, Eau Claire, Wis.

Jones Stokers Cut Your Coal Bill 99%

A saving of 99% in the coal bill of a pulp mill is the result of an installation of Jones Underfeed Stokers. They are used in conjunction with Dutch ovens for utilizing as fuel the mill's refuse. This is not a theoretical result but an actual reality which is taking place daily in the plant of the Minnesota and Ontario Power Company's mills.

Substantial savings can be made in your saw, planing or pulp mill.

Write us about your conditions and let us tell you of the economy that can be brought about by the installation of Jones Stokers.

Literature and full particulars gladly furnished upon request.

Jones Underfeed Stoker Company, Limited

National Trust Building, TORONTO

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing ...	27 00	29 00
1 x 8 common and dressing ...	27 00	29 00
1 x 10 common and dressing ..	31 00	32 00
1 x 12 common and dressing ..	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ...		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft. ...		16 00
2 x 4 to 12, 10 and 16 ft. ..		20 00
2 x 4 to 12-in., 12 and 14 ft. ...		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain..		31 50
Fir flooring, 1 x 4, edge grain..		35 00
Fir flooring, 1 x 4, flat grain ..		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 25
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00	
Ash, white, No. 1 common	45 00	
Ash, brown, 1sts and 2nds, 4/4	50 00	
Ash, brown, common and better	40 00	
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00	
Birch, 1st and 2nds, 4/4	44 00	
Birch, No. 1 com, and bet., 4/4	35 00	
Birch, 1st and 2nds, 6/4 and 8/4	46 00	
Birch, 1st and 2nds, 10/4 and 12/4..	60 00	
Birch, 1st and 2nds, 16/4	62 00	
Basswood, 1sts and 2nds, 4/4	42 00	
Basswood, No. 1 com. and bet., 4/4..	35 00	
Basswood, No. 2 and 3, common	18 50	
Basswood, 6/4 and 8/4, 1sts and 2nds.	45 00	
Basswood, 6/4 and 8/4, com. and bet.	38 00	
Basswood, 4/4, No. 2 com. and bet...	30 00	
Soft elm, 1sts and 2nds, 4/4	40 00	
Soft Elm, No. 1 com. and bet., 4/4	33 00	
Soft elm, No. 2 and 3 common	17 50	
Soft elm, 6/4 and 8/4, 1 and 2	42 00	
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00	
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00	
Soft maple, 1sts and 2nds, 4/4	33 00	
Soft maple, com. and bet., 4/4	25 00	
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00	
Hard maple, 1st and 2nds, 4/4	40 00	
Hard Maple, common and better, 4/4	33 00	
Hard maple, 12/4 & 16/4, 1sts and 2nds	50 00	
Red oak, plain 1st and 2nds, 4/4 ...	60 00	
Red oak, plain, No. 1 com., 4/4	42 00	
Red oak, plain No. 2 com. 4/4.....	32 00	
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00	
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00	
White oak, plain 1sts and 2nds, 4/4	60 00	
White oak, plain, No. 1 com., 4/4...	42 00	
White oak, plain, No. 2 com., 4/4....	32 00	
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	66 00	
Red and White oak, plain, No. 1 com. 5/4 and 6/4	45 00	
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00	
Red and White oak, plain, 1sts and 2nds, 8/4	72 00	
Red and White oak, plain, No. 1 com. 8/4	50 00	
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00	
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00	
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00	
White oak, ¼ cut No. 1 common	57 00	
Hickory, 1sts and 2nds, 4/4	70 00	
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00	

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up $52 00		54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ...	29 00	30 00
Pine, No. 1 dressing shorts ...	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ...	23 00	24 00
Pine, 1-in. x 5-in. s.c. strips ...	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips ...	24 00	25 00
Pine, 1-in. x 7-in. s.c. strips ...	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	26 00	27 00
Pine, 1-in. x 10-in. M.R.	28 00	29 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x 10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11' ...	17 50	18 00
1"x 3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12 ..	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16' ...	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Pine Shingles:		
xxxx, 18-in.	3 00	3 50
Clear butt 18-in.	2 50	3 25
xx		1 75
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet.....	80	85
According to average and quality, 30 to 35 feet	50	60

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00

Birch Planks

1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00

Cuts and Better

4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00

No. 1 Cuts

1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00

No. 2 Cuts

1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in.. 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in.	25 00
1-in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00

No. 1 Barn

1 inch	31 00	45 00
1¼, 1½ and 2-in.	36 00	45 00
2½ and 3-in.		45 00
4 inch		50 00

No. 2 Barn

1 inch	28 00	36 00
1¼, 1½ and 2-in.	30 00	36 00
2½ and 3-in.		38 00

No. 3 Barn

1 inch	21 00	28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00	25 00

Box

No. 1, 1, 1¼, 1½, 2-in.	22 00	25 00
No. 2, 1¼, 1½, 2-in.	19 00	23 00

Mill Culls

Mill run culls, 1-in.		19 00
1, 1¼, 1½ and 2-in.		20 00
No. 2	17 00	18 00

Lath

No. 1, 32-in. pine	1 80
No. 2, 48-in. pine	4 35
No. 1, 48-in. pine	4 85
No. 3, 48-in. pine	3 85
Hemlock Lath 48 in.	3 80

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1. E.			
	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8..	14 00	17 00	20 50	21 50
2 x 10	18 00	18 50	21 50	22 50
2 x 12	18 00	19 00	23 50	23 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	21 50
2 x 4, 10, 18, 20	23 50
2 x 6, 8 to 16	21 50
2 x 8, 8 to 16	21 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	29 50
2 x 10 and 2 x 12; 8-16 ft.	26 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	28 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	30 50

No. 1 Common Boards

4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50

Flooring

4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00

Shiplap—Finished

6 inch	22 50
8, 10 and 12 inch	23 50

Siding

6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00

Lath

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	27 10
3 x 8 in.; 8 to 16 ft.	24 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.....	27 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	29 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	20 50
2 x 4 in.; 12 and 14 ft.	21 50
2 x 4 in.; 10 and 16 ft.	22 50
2 x 4 in.; 18 and 24 ft.	23 50
2 x 4 in.; 22 and 24 ft.	24 50
2 x 4 in.; 26 to 32 ft.	20 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.....	23 00
2 x 10 and 2 x 12 in.; 18 and 20 ft. ..	25 00
2 x 10 and 2 x 12 in.; 22 and 24 ft. ..	26 00
2 x 10 and 2 x 12 in.; 26 to 32 ft. ...	28 00
2 x 14 in.; 10 to 16 ft.	28 00
2 x 14 in.; 18 and 20 ft.	30 00
2 x 14 in.; 22 and 24 ft.	31 00
2 x 14 in.; 26 to 32 ft.	33 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	24 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	25 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	26 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	27 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft. ...	27 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	27 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	28 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	28 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ..	23 00
No. 2 Shiplap, 6 in.	22 00
No. 2 Shiplap, 8, 10 and 12 in.	23 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 85

LATH

Fir lath, ¾ x 1½ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ¾ x 1½ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00

(Continued on page 124)

128,350 Laths in Ten Hours

Our Lath-Mill and Bolter have made a test cut in ten hours of 128,350 four foot Laths, 1½ in. by ⅜ in., counted, tied and piled, as will be seen in the following letter:—

Five-Saw Lath Mill

Messrs. P. Payette & Co.,
Penetanguishene, Ont., Can.

Dear Sirs,—I thought I would drop you a line and let you know of the record Lath-Cut we made on your machines on June 29th, 1910.

We made 128,350 four-foot laths, 1½ in. x ⅜ in., counted, tied and piled, in ten hours steady cutting from mill-run, and from slabs and edgings we had saved out, in order to keep the machines cutting their full capacity.

We used your No. 1 Four-Saw Bolter, and your No. 2 Five-Saw Lath-Mill, and had two Lath-Shovers and two Lath-Tiers, in order to keep up this speed.

This shows extremely well for your Lath Machines, not only for the tremendous cut, but they ran the full ten hours without a bearing getting hot or any stoppage whatsoever, and making first-class laths.

I therefore take great pleasure in recommending P. PAYETTE'S LATH - MACHINERY to any person requiring up-to-date machinery.

I remain,
Yours sincerely,

D. J. MacMILLAN,
Lath-Maker for C Beck Mfg. Co.,
Penetanguishene, Ont.

A Few of the "400" who use Payette's Lath-Machinery

Graves, Bigwood Co., Byng Inlet, Ont.
Victoria Harbor Lumber Co., Victoria Harbor, Ont.
Georgian Bay Lumber Co., Waubaushene, Ont.
Colonial Lumber Co., Pembroke, Ont.
Theo. A. Burrows, Grand View, Man.
Wm. Milne & Sons, North Bay, Ont.
C. Beck Mfg. Co., Penetanguishene, Ont.
Manley Chew, Esq., Midland, Ont.
Chew Bros., Midland, Ont.
James Playfair Co., Midland, Ont.
McFadden & Malloy, Spragge, Ont.
Pembroke Lumber Co., Pembroke, Ont.
Petawawa Lumber Co., Ltd., Pembroke, Ont.
Firstbrook Box Co., Pentang, Ont.
Gres Falls Lumber Co., Three Rivers, Que.
Foley Bros. & Northern Coast Co., Scot, Ont.
Spanish Mills Lumber Co., Ltd., Cutler, Ont.
Spanish Mills Lumber Co., Spanish Station, Ont.

Four-Saw Bolter

P. Payette & Co.

Engineers and Machinists

Penetanguishene, Ont., Canada

CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	62 00
No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	37 - 39	24 - 26	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in.		98 00
Selects, 1 to 2 in.		88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	72 00	74 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	38 00	40 00
No. 2, 1 x 10		35 00
No. 2, 1 x 8		34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 50	30 00
No. 3, 1 x 8		29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		25 00
Spruce 8 in. and under dimen.		27 00
10 and 12 in. random lengths, 10 ft. and up	26 00	27 50
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	22 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	22 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50	23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled		22 00
1½-in. spruce laths	4 10	4 15
1½-in. spruce laths		3 75

New Brunswick Cedar Shingles

Extras	3 50	3 00
Clears	3 10	3 15
Second clears	2 30	2 40
Clear whites	2 10	2 20
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.		3 75
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear		3 65

Conveyed More than 700 ft. by Sturtevant Fans

TRADE MARK

Photograph shows part of a dust collecting and conveying system at the B. & M. R. R. Shops at North Billerica, Mass. At the right is the carpenter shop with cillector on roof, and at left is the power house where storage bins and furnace feeders are installed. This system serves a large number of machines in the wood-working shops and a large number of Sturtevant Planing Mill Fans of different sizes handle the material.

The two great features of Sturtevant Planing Mill Fans are—(1) low power consumption, (2) dependability. In fact we have planing mill fans which have been running for thirty and thirty-five years, and the fans we make to-day are built with the same merit and with the same care as characterized our early product.

Send for catalogues and details

B. F. Sturtevant Company

of Canada, Limited

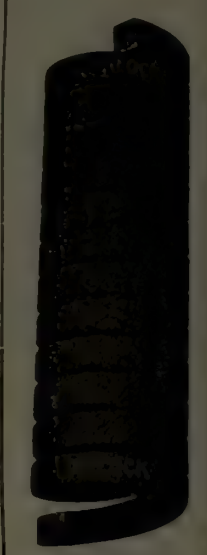
GALT, ONT.

Montreal Toronto Winnipeg Vancouver

Garlock Packings

Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

Style No. 777



Style No. 150

The Garlock Packing Co.

Hamilton, Ontario

Branches: Calgary Montreal

Branches: Toronto Winnipeg

YOU WANT THE BEST? —— THEN BUY

"SALADA" TEA

Always Sold in Sealed Packets only. Not only does Bulk Tea collect dust and dirt, but the strength and flavor disappear extraordinarily rapidly when exposed to the air. The Sealed Salada Packets (½lb. and 1 lb.) retain the original flavor of the tea, are handy, portable and clean. Write us for prices and samples.

SALADA TEA CO. — TORONTO — MONTREAL (Address Nearest Office)

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa,
December 20th, 1912.

Deputy Minister.

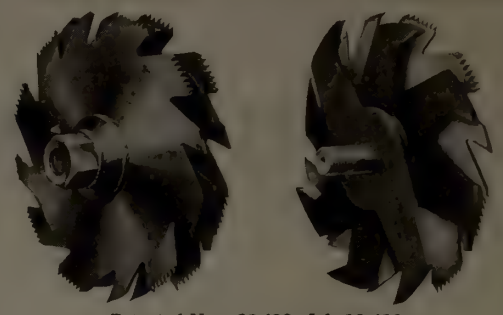
J. J. TURNER & SONS

PETERBOROUGH, ONT.

Government Contractors and the largest Manufacturers and Dealers in Canada of

Lumbermen's Tents, Bed Ticks, Grey Blankets, Nose Bags, Waterproof Goods, Steel Ranges and General Camp Outfits.

Write for Catalogue. **Prompt shipments.**



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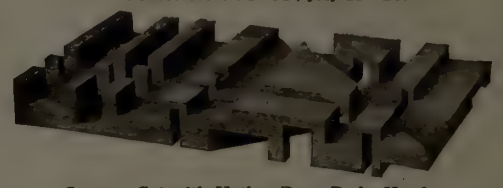


Grooves Cut with Huther Bros. Dado Heads

Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

Write for New Illustrated Catalog.

HUTHER BROS. SAW MFG. COMPANY, Inc.

1103 University Ave.
ROCHESTER, N. Y.

HARD SERVICE LOCOMOTIVES

Because of the severe conditions under which small locomotives must frequently operate, they must be built with the greatest care. Operation at a distance from shops or other repair facilities is not unusual

This class of equipment must be simple in design to be easily accessible for repairs.

They must be properly proportioned, must have necessary strength in each part, and must be ready for service at all times.

Our standard light locomotives embody the most modern construction, are built for the hardest service and to do the most work for the least cost. They are simple in design and easy to repair.

We can make immediate shipment of locomotives of various sizes.

Get in touch with us.

MONTREAL LOCOMOTIVE WORKS, LIMITED,

DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

The Peter Hay Knife Co., Limited

GALT, ONTARIO

MANUFACTURING WOODWORKING

Machine Knives, Circular Cutters and Mortise Chisel

Cut filing costs in half

Filing is like drilling. The moment the file wears smooth, it takes twice, or three times, the energy to accomplish the desired result. Engineers have got it down to a scientific basis in drilling. The moment a drill reaches the "inefficient point" it is discarded, and this "efficient point" is determined by the amount of power used to drill a certain dimension.

Workmen are not machinery; consequently you have to depend upon the personal element and educate your men up to the point where they will know at once when their files have reached the "inefficient point." If you educate your men to this, you will get double the results at the bench, compared by results when men have been working with files that are "inefficient."

The Famous Five are:

Kearney & Foote ***Great Western***
American ***Arcade*** ***Globe***

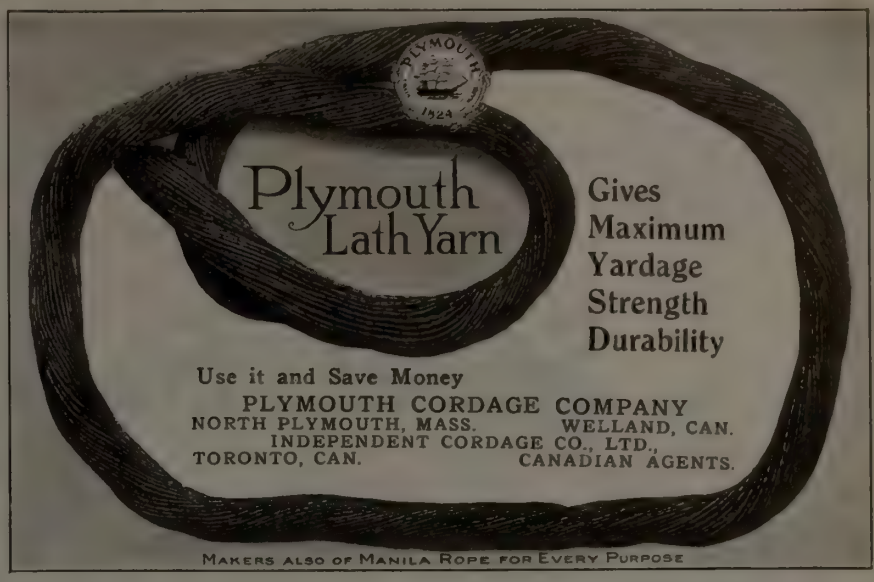
(Made in Canada)

Write for our booklet "File Filosophy." It is well worth reading by any manuafcturer, shop superintendent, shop foreman or workman who is concerned with the use of files.

Nicholson File Co.

Port Hope — Ontario

Dealers Everywhere



Don't Blame the

FIRE BRICK

if it fails to give satisfaction. More likely than not you have been using the wrong kind for your particular purpose. A firebrick intended for use in a small hand-fired boiler may not give the same result if used under high pressure boiler with mechanical stoker.

So when sending us your enquiries be sure to specify for what purpose these brick are to be used.

You are sure then of a high quality brick, that is absolutely the best for your purpose.

We Manufacture the Following Well Known Brands

"Elkco," "Elk Steel," "St Marys," "Keystone" and "Rotex"

Catalogue is yours for the asking.

Elk Fire Brick Co. of Canada, Limited

HIGH GRADE FIRE BRICK and CLAY

Sun Life Bldg., Hamilton, Canada

Books For Sale

SPECIAL PRICES

The Preservation of Structural Timber, by Howard F. Weiss. Published in 1915 by McGraw-Hill Book Company. 312 pages, illustrated. Price $3.00.

Scribner's Lumber & Log Book, 1915 Edition, Price 35c.

Baughman's Buyer & Seller, 75c.

Utilization of Wood-Waste (Second Revised Edition), by Ernst Hubbard. Published in 1915 by Scott, Greenwood & Sons. 192 pages, illustrated. Price $1.50.

Canada Lumberman

347 Adelaide Street West
TORONTO

Steel Saw Carriage

The illustration shows our 3-block standard steel saw-mill carriage, the knees of which recede 44″ from saw line. This carriage can be furnished in any number of head blocks or axles, also equipped with steam set works attached to either our No. 3 or No. 4 set.

The carriage is carefully designed throughout and is giving excellent service in mills all over Canada.

When you overhaul your mill

don't waste money on extensive repairs to machines whose days are done. You will save money both in your operating costs and in the improved quality of your lumber if you install new "Long" saw mill machinery.

Let us talk to you before you start to overhaul

The E. Long Manufacturing Company, Limited

Orillia - Ontario

THE HARRIS ABATTOIR COMPANY, LIMITED

TORONTO, ONTARIO

Mr. LUMBERMAN :

We know that we can give you satisfaction as regards "quality of goods", "service", and "prices".

"Quality" is the first word in our business and all our products are guaranteed.

"Service" is the second word in our business. We make weekly deliveries by refrigerator cars to practically every point in Ontario, Quebec and the Maritime Provinces.

Our prices are the lowest possible consistent with the quality of goods and service given. We ask you to give us an opportunity to figure on your next requirements on the following goods:—

Long Clear Bacon,
Barrelled Pork,
Barrelled Beef,
Butter,
Cheese,
Mincemeat,
FRESH MEATS,
Domestic Shortening,
Pure Lard,
Cured Meats,
Eggs,
Sausages,
Vegetables,
LIVE STOCK.

Agencies at:—

Sudbury,	Ont.	Montreal,	Que.	Halifax,	N.S.
Soo,	Ont.	Quebec,	Que.	Stellarton,	N.S.
Haileybury,	Ont.	Campbellton,	N.B.	Sydney,	N.S.
London,	Ont.	St. John,	N.B.	Glace Bay,	N.S.
Ottawa,	Ont.				

THE HARRIS ABATTOIR COMPANY, LIMITED

LOST!

Lost yesterday,
Between sunrise and sunset,
Two golden hours,
Each set with sixty diamond minutes,
No reward is offered,
For they are gone forever.

An International Time Recorder will prevent the loss of such precious gifts.

Meter Your Time

Stop the Loss, Your Competitors Have Stopped It

THEY USE OUR TIME RECORDERS

You weigh your fuel, insure your lumber, and count your cases. Why not meter your time? It is more costly than fuel, lumber or cases, and yet more easily checked. An International will do it for you, automatically, accurately, always.

It plays no favorites, makes no mistakes, allows no disputes, and is as certain as sunrise.

There is an International Time Recorder made to record the time of every man in your plant. Ask us for particulars of our Time Recording and Pay Roll System.

Our product controls the three greatest factors in commercial life—Men, Minutes and Money.

The International Time Recording Company of Canada, Limited

TORONTO
28 Anderson Street
Toronto Phone—Col. 622

F. E. MUTTON
General Manager

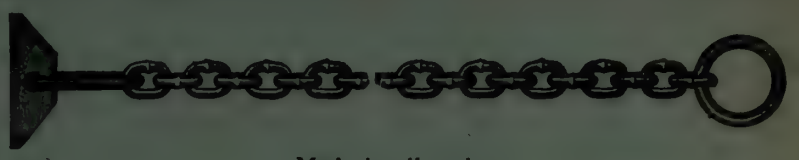
MONTREAL
W. A. Wood, Jr., Sales Agent
Cartier Bldg., Cor. McGill and Notre Dame Sts.
Phone—Main 7025

Canada Lumberman & Wood Worker

Death and Taxes

Are no more sure than the connections made with Dart Union pipe couplings.

Dart Union Company, Limited
Toronto



Made in all styles

Electric-Welded Boom Chain

We also specialize

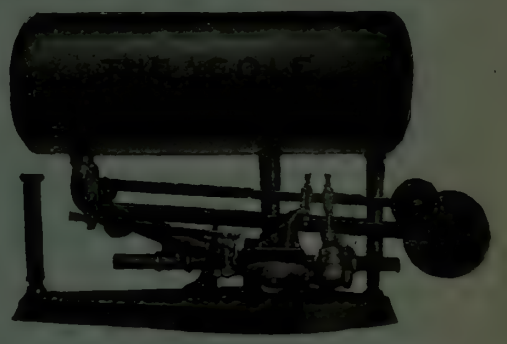
Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

A HOTTER KILN WITH LESS COAL

Creates circulation in dry kiln by removing air and water. Helps out defective heating system. Saves oil, water and worry. Made in Canada.



Geo. W. Cole Co., 838 Dundas St., Toronto

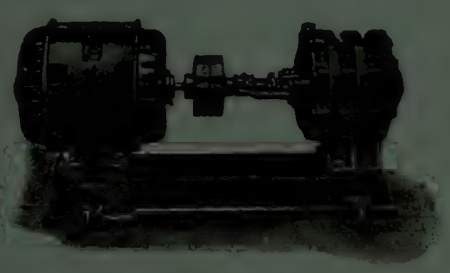
A "Cole" for Coal Economy

ASBESTOS

We manufacture practically every article that can be made of Asbestos—including

Asbestos { Packings, Boiler Gaskets, Pipe and Boiler Coverings

Turner Bros. Canada Limited
Montreal



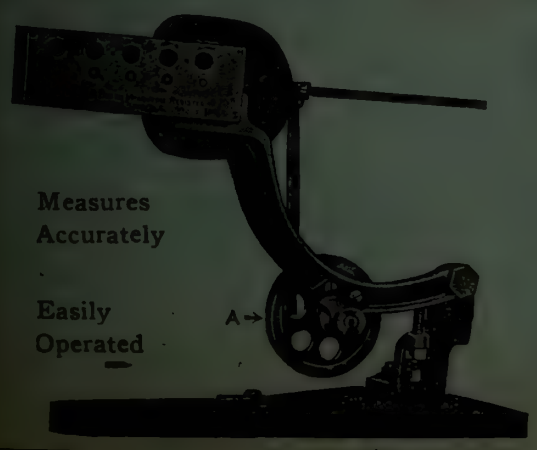
We are building a complete line of

Pumping Machinery

and know that we can supply your particular requirements.

Let us show you.

The Smart-Turner Machine Co., Ltd.
HAMILTON CANADA



Keep Tab On Your Stock

The Morrison Lumber Measuring Register can be used in the saw mill, planing mill, woodworking plant and retail lumber yard. It can be quickly attached to any machine and is guaranteed to accurately measure every stick as it is fed under the wheel of the register. It saves you money, time and labor.

Write for detailed information.

The James Morrison Brass Mfg. Co. Limited
93-97 Adelaide St. W., Toronto

J. M. T.
Steam Specialties

We make a high-grade line including Reducing Pressure Valves, Pop Safety Valves, Injectors, Ejectors, etc., etc.

Alphabetical Index of Advertisers, Page 62 Classified Directory to Advertisements, Page 64

"AMPHIBIA"

Planer Belting

Amphibia Planer is one of the very few brands of Leather Belting that will give really satisfactory service in the Lumber Industry.

The results of exposure, oil, grease and greenwood on ordinary leather, renders a very special waterproof tannage absolutely necessary when preparing the leather for transmission purposes.

"Leather like gold has no substitute."

A mere description of this process as used in Amphibia Planer would not convince you. What you want is results. You want continuous wear and perfect power transmission on every shaft and pulley.

Hundreds of large firms are securing this service right now with Amphibia. We believe you are just as progressive as the best in the country and we want you to try a sample run of this better leather belting.

IT'S WATERPROOF

Write us today. Say under what conditions you want the belt to run. We will recommend an Amphibia Leather Belt for your purpose that will break all your previous records for economy in full power generated and transmitted and in low up-keep.

Sadler & Haworth

Tanners and Manufacturers *Established 1876*

FOR 40 YEARS TANNERS AND MANUFACTURERS OF THE BEST LEATHER BELTS

MONTREAL, 511 William Street

TORONTO 38 Wellington St. East

ST. JOHN 149 Prince William St.

WINNIPEG Galt Building

VANCOUVER 107-111 Water St.

Bartram Brothers

Limited

Ottawa, Canada

STOCK ON HAND UNSOLD AUGUST 31, 1916

White Pine, Good

1 x 4 and up x 6/9	2,469
6/4 x 4 and up x 6/9	296
1 x 4 and up x 10/16	4,291
1 x 7 and up x 10/16	5,825
2 x 4 and up x 10/16	687
3 x 4 and up x 10/16	2,790

White Pine Mill Run

1 x 4 x 10/16	45,871
1 x 5 x 10/16	35,934
1 x 4/5 x 10/16	97,724
1 x 6 x 10/16	81,067
1 x 8 x 10/16	127,593
1 x 9 x 10/16	1,879
1 x 10 x 10/16	3,211
1 x 12 x 10/16	11,163
1 x 7 and up x 10/16	140,334
5/4 x 4 x 10/16	4,651
5/4 x 5 x 10/16	2,165
5/4 x 6 x 10/16	3,371
5/4 x 7 x 10/16	7,771
6/4 x 4 and up x 10/16	40,122
2 x 4 and up x 10/16	210,268
2 x 6 and up x 10/16	3,150
2 x 8 and up x 10/16	10,879
3 x 4 and up x 10/16	118,859

White Pine Mill Culls

1 x 4 and up x 6/16	135,691
6/4 x 4 and up x 6/16	4,917
2 x 4 and up x 6/16	85,084
3 x 4 and up x 6/16	69,497

White Pine Dead Culls

1 x 4 and up x 6/16	252,103
3 x 4 and up x 6/16	9,920

Jack Pine C. & C. F.

1 x 4 and up 10/16	3,450
2 x 4 and up 10/16	1,440

Jack Pine Mill Run

1 x 4 x 10/16	35,721
1 x 5 x 10/16	36,290
1 x 4/5 x 10/16	904,679

Jack Pine Mill Run

1 x 6 x 10/16	76,357
1 x 7 x 10/16	24,286
1 x 8 x10/16	19,612
1 x 12 x 10/16	854
2 x 4 x 10/16	62,813
2 x 6 x 10/16	79,263
2 x 8 x 10/16	76,762
2 x 10 x 10/16	8,096
2 x 4 and up x 10/16	3,900
2 x 5/7 x 10/16	9,900
3 x 4/6 x 10/16	19,484
3 x 7 and up x 10/16	96,967

Jack Pine Mill Culls

1 x 4 and up x 6/16	83,541
5/4 x 4 and up x 6/16	230,035
2 x 4 and up x 6/16	73,669

Jack Pine Dead Culls

1 x 4 and up x 6/16	24,406
5/4 x 4 and up x 6/16	45,315

Spruce Mill Run

1 x 3 x 10/16	85,000
1 x 4 x 10/16	268,995
1 x 5 x 10/16	281,043
1 x 6 x 10/16	405,534
1 x 7 x 10/16	9,459
1 x 8 x 10/16	2,737
2 x 4 x 10/16	291,013
2 x 5 x 10/16	401,879
2 x 6 x 10/16	359,324
2 x 7 x 10/16	204,100
2 x 8 x 10/16	65,817
2 x 9 x 10/16	42,626
3 x 9 x 10/16	15,000

Spruce Culls

3 in. 5th Quality	80,000
3 in. 6th Quality	200,000

Lath Mill Run

1½ x 3/8 x 32 in. White Pine	433,350
1½ x 3/8 x 32 in. Jack Pine	784,750

H. J. TERRY A. E. GORDON

Terry & Gordon

Solicit your enquiries
for

British Columbia Douglas Fir

We are the Ontario Representatives of the
B. C. Mills Timber & Trading Co., of Vancouver, B. C.

Fir Timbers up to 90' **Fir Flooring** **Fir Ceiling and Trim**

T. & G. Quality Brand B. C. Red Cedar Shingles

Vancouver Branch:
852 CAMBIE ST.
F. W. Gordon, Mgr.

Montreal Branch:
23 LA PATRIE BUILDING
Leon Gagne, Jr., Mgr.

HEAD OFFICE:
704 Confederation Life Building, TORONTO

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

The Long Lumber Company

HAMILTON, ONT.

Hardwood

45,000	4/4 Mill Run Maple	1915 Cut
14,000	4/4 Com. & Bet. Elm	" "
14,000	44/ No. 2 & 3 Com. Ash	" "

No. 2 Hemlock

1915 Cut Must Move

200,000	8/4 x 6 and up,	No. 2 Hemlock
250,000	8/4 x 4	No. 2 "

4 Cars 3 x BC Shingles in Transit

Get our prices on above and also on pine, spruce, etc.

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 8-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 80 h.p. Generator, 250 volt.

1 80 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited,

26 Ernest Ave. Toronto, Can.

HIGH GRADE

MUIR, KIRKPATRICK & SHARPE

HEAD OFFICE
1325-6-7-8 Traders Bank Bldg., Toronto

WESTERN OFFICE
1007 Dominion Bldg., Vancouver, B. C.

We Have a Very Large and Complete Stock of

WHITE PINE, RED PINE, JACK PINE, SPRUCE and LATH

on which we are quoting very interesting prices.

LET US HAVE YOUR ENQUIRIES

We have several million nice dry Spruce and Pine Laths on which we can give very prompt shipment.

SHINGLES

WE ARE OFFERING SPECIAL:

300 M 1 x 4 and wider Cull Spruce, Bone Dry.
200 M 1¾ x 4 and wider Cull Spruce, Bone Dry.
200 M 2 x 4 and wider Cull Spruce, Bone Dry.
400 M 1 x 4 to 1 x 10 Mill Run Spruce, Bone Dry.
100 M 1 x 4 and 5 Mill Run Spruce Flooring Dressed to ⅞ in.
100 M 1 x 4 and wider Mill Run Spruce Dressed one side to 15/16 in.
600 M pcs. 1½ x ⅜ x 4-0 No. 3 Spruce Lath.
300 M pcs. 1⅜ x ⅜ x 4-0 No. 3 Norway Lath.

LET US QUOTE YOU

FIR and CEDAR

LUMBER

Murray & Gregory, Limited

Head Office: St. John, N. B. Quebec Office: St. Camille, B. Co., Que.

WE will now book orders for our new cut of SPRUCE and PINE from our Quebec mills. If you want some very nice stock for early fall delivery it will pay you to communicate with us promptly.

Our

Spruce and Pine Lumber, Laths and Pulpwood

cannot be beaten for Quality and Manufacture

Large Mills, Woodworking Factories and Glass Works at ST. JOHN, N. B.
Also Mills at St. Camille and Lac Frontier, Que.

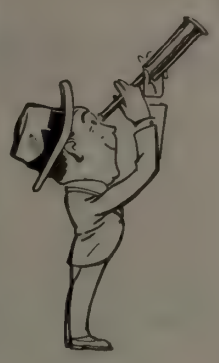
Address all enquiries to our Head Office, ST. JOHN, N. B.

THINGS ARE LOOKING UP ARE YOU PREPARED?

HORSESHOE LOGS

Cut To Your Specifications Will Enable You To Win

White and Norway Pine



Horseshoe logs are from the very best timber that ever grew in a forest. We also make Boxes, Box Shooks, Wooden Pails and Tubs, Pine Lath, and Cedar Posts. Our Planing Mill facilities are unsurpassed.

SEND US YOUR ENQUIRIES

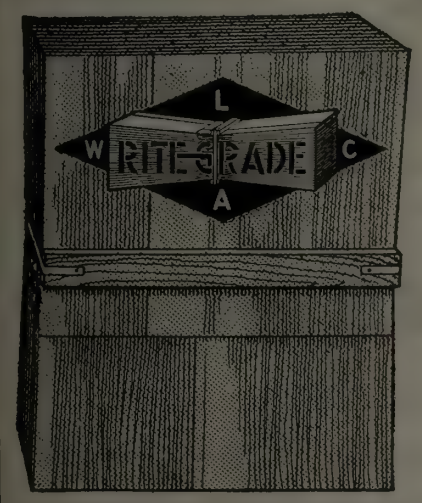
C. Beck Manufacturing Co., Limited

Penetanguishene, Ont.

" We aim to serve you with the Best "

Vancouver Lumber Co.

VANCOUVER, B. C. LIMITED



RITE-GRADE

THE "PERFECT" SHINGLE

Inspected and Standardized
Absolutely Clear and Vertical Grain
No Sap
SIZES: 6 butts = 2″ 16″ long
5 butts = 2″ 16″ long

Manufacturers

BRITISH COLUMBIA FIR AND CEDAR PRODUCTS

Fir Timbers, Flooring, Ceiling, Finish and Mouldings, Cedar Bevel Siding, Barn Boards, Silo Stock, Boat Lumber, etc.

Address all Enquiries to

701 Excelsior Life Bldg., TORONTO, ONT.

Representative:
CHAS. PLANT

***Fir Mills*—False Creek, Vancouver, B. C.**

***Cedar Mills*—Roche Point, Burrard Inlet, B. C.**

Watson & Todd Limited
OTTAWA

DRY NORWAY

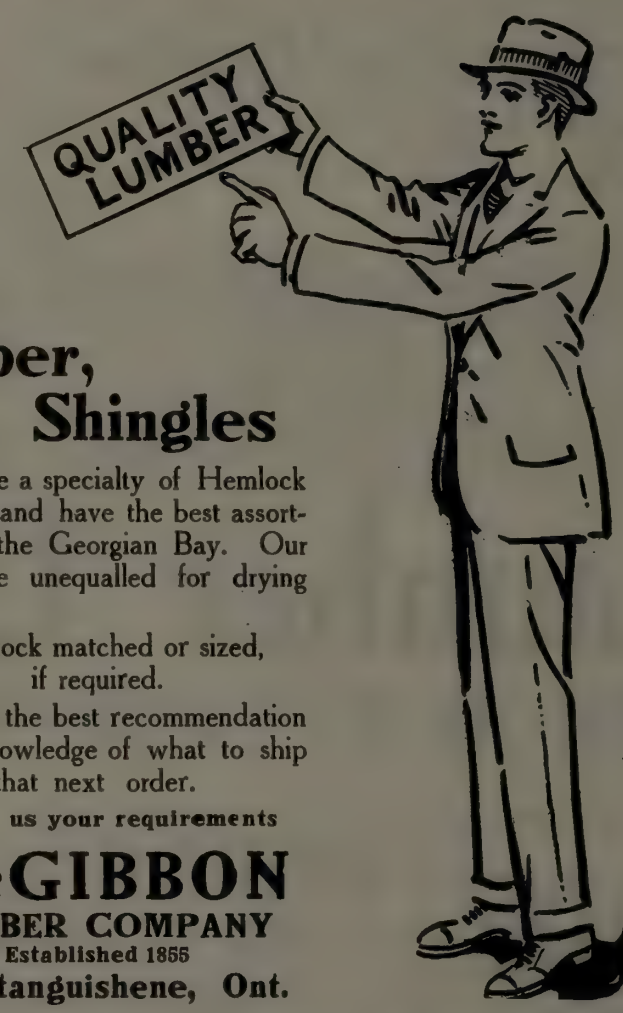
2 x 4 — 10/16 feet		2 x 8 — 10/16 feet	
2 x 5 —	" "	2 x 9 —	" "
2 x 6 —	" "	4 x 6 —	" "
2 x 7 —	" "	4 x 7 —	" "

Send us your enquiries

The
Harris Tie & Timber Co.
Ottawa - Canada

Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

WE SELL YOU



Lumber, Lath, Shingles

We make a specialty of Hemlock Billstuff, and have the best assortment on the Georgian Bay. Our yards are unequalled for drying lumber.

All stock matched or sized, if required.

Trade is the best recommendation of our knowledge of what to ship you on that next order.

Phone us your requirements

McGIBBON
LUMBER COMPANY
Established 1855
Penetanguishene, Ont.

Fraser Bryson Lumber Co., Ltd.

Office, Castle Building 53 Queen St. Ottawa, Can.

Wholesale Lumber Dealers and Selling Agents for

Fraser & Co.

Mills at
DESCHENES - - - QUEBEC

White Pine
Red Pine
Spruce
Lumber and Lath

River Ouelle Pulp & Lumber Co.

Manufacturers of

SPRUCE

Lumber Lath Pulpwood

Head Office and Mills at:
St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of Quebec City

Also Mills at:
Crown Lake, Powerville Riv. Manie
On Nat. Transcontinental Ry.

Mill Yard.

Spruce, Tamarac, Whitewood and Poplar Lumber

SPRUCE AND WHITEWOOD LATH

Planing Mill in connection with Saw Mill

ROSSED SPRUCE PULPWOOD

Full supply of Seasoned Lumber always on hand.

RICH CLAY LOAM LANDS FOR SALE—Townships of Haggart and Kendry. District of Temiskaming. Excellent opportunities for the settler. Write for particulars.

New Ontario Colonization Company, Limited

Sales Office, BUFFALO, N.Y.

Mills:—Jacksonboro, Ont. Located on Transcontinental R.R., 32 miles west of Cochrane.

COMPLETE STOCKS

The fact that our stocks are complete and well assorted assures you of **Satisfactory Service, Good Grades** and **Right Prices.** We want your inquiries and orders when in the market for

Railway Ties and Pulpwood
Rough and Dressed Lumber and Lath

We specialize on cutting to order all sizes of

Dimension Timber

Also in Dressing in car or mixed lots 1″, 2″ and 3″ to customers' specifications.

Complete stocks always ready for prompt shipment.

We are the Largest Producers of Railway Ties in the Dominion

Austin & Nicholson

Chapleau, Ontario

Chicago Lumber & Coal Co.

Manufacturers

General Offices: EAST ST. LOUIS, ILLS.

—"If Quality and Service are paramount considerations in purchasing your (**Lumber**) requirements it is wise to confine yourself to old established manufacturers of ample resources." Benj. Franklin.

Established 1866 **Capital $6,500,000**

Southern Yellow Pine
Louisiana Red Gulf Cypress

California White Pine
California Sugar Pine
and Arizona Soft Pine

Best Stock for Factory and Pattern Lumber

Ask LOUIS WUICHET

Room 716 Railway Exchange, CHICAGO, ILLINOIS

We offer for Immediate Shipment

BASSWOOD

1″ and 1½″ Dry Basswood

DRY BIRCH STOCK

We offer in Birch End Stock—1 x 8½″ 1 x 9″ and wider
1 x 6 and 7″ 1½″ to 4″

Spruce, Basswood, Ash, Hemlock and Pine

HART & McDONAGH, 513 Continental Life Bldg., Phone Main 2262 **TORONTO**

QUALITY HARDWOOD

Birch
Beech
Maple

If you are interested in Hardwoods, you will be interested in us.

We are manufacturing high quality Hardwood Lumber, sawing and grading according to National Hardwood Association Rules.

The Logs are cut from our own soil-right Lands, and particular attention given to quality.

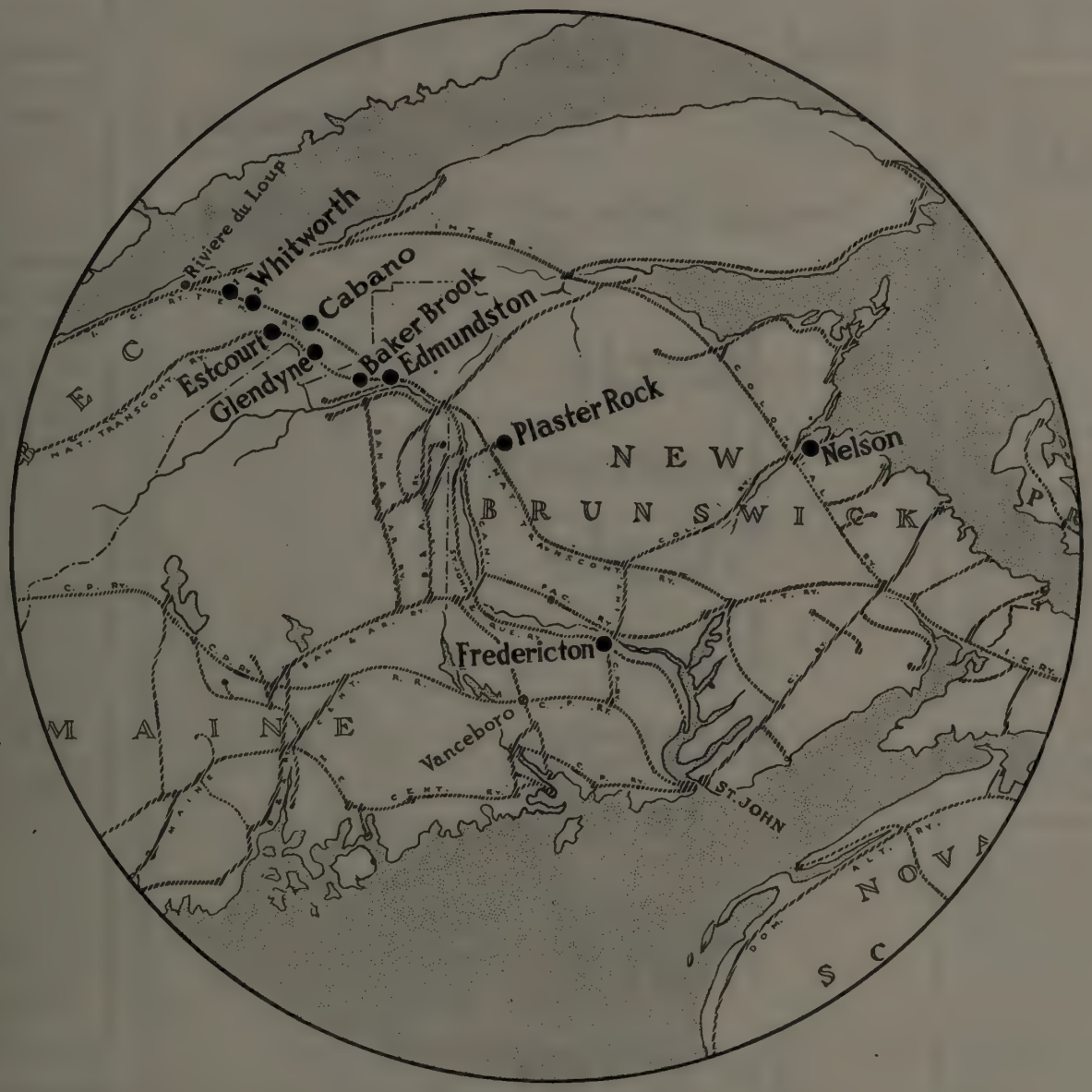
Our Mills are located on Canada Eastern Branch and Transcontinental Branch of the Canadian Government Railway, and in the heart of the best forests in New Brunswick.

Our Head Office in St. John will answer all enquiries.

Edward Partington Pulp & Paper Co.

ST. JOHN **Limited** **N. B.**

Ten Band Mills to Serve You



Mills and Railway Connections

Fredericton, N.B.	Railway connection	C. P. R.
Plaster Rock, N.B.	" "	C. P. R.
Nelson, N.B.	" "	I. C. R.
Edmundston, N.B.	" "	C. P. R. or Temiscouata Ry.
Baker Brook, N.B.	" "	Temiscouata Ry. and N.T.R.
Glendyne, Que.	" "	N. T. R.
Escourt, Que.	" "	N. T. R.
Cabano, Que.	" "	Temiscouata Ry.
Whitworth, Que. (No. 1, No. 2)	" "	Temiscouata Ry.

Fraser Limited, Fredericton, N. B.

ROUGH AND DRESSED SPRUCE, WHITE CEDAR SHINGLES, SPRUCE LATH, PIANO SOUNDING BOARD STOCK.

JOHN MCKERGOW, President — W. K. GRAFFTEY, Managing-Director

The Montreal Lumber Co. Limited

Wholesale Lumber

Ottawa Office: 46 Elgin St. — Montreal Office: 759 Notre Dame St., W

James P. Grant — John K. Campbell

Grant & Campbell

Manufacturers of

SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

New Glasgow, N. S.

PRESSES

Hydraulic and Screw for VENEER VENEER DRYERS PULP

Special machinery made to order

WILLIAM R. PERRIN

TORONTO, CANADA Limited

PATENTS SECURED OR OUR FEES RETURNED

Being next door to the Patent Office, we have personal interviews with Examiners, thus earlier allowance of your Patents. We have access to all Records and solicit the business of Manufacturers, Engineers, and others who realize the advisability of having their Patent business transacted by Experts. Send for our Booklet, etc.

HAROLD C. SHIPMAN & CO.

Reg. Patent Attorneys — Ottawa, Canada

LATH TWINE

Tie your lath with Laidlaw wire. It saves you money. It means satisfaction to the dealer and contractor.

Write for Quotations.

LAIDLAW BALE-TIE CO., Ltd.

HAMILTON, ONT.

CANADIAN OFFICE & SCHOOL FURNITURE
CO. LIMITED
PRESTON ONT.
FINE BANK, OFFICE, COURT HOUSE & DRUG STORE FITTINGS
OFFICE, SCHOOL, CHURCH & LODGE FURNITURE
SEND FOR CATALOGUE

Spark Arresters

Wire Cloth for Refuse Burners

Our spark arrester is substantially built and will last for years. Don't wait until a fire has visited your property, equip your mill at once.

Prices on application

Canada Wire & Iron Goods Co. Limited

HAMILTON, ONT.

Lumber

Good Grades — Right Prices — Prompt Shipments

Canadian Hardwood. National Grading Rules

Birch
Basswood
Maple
Elm
Beech

All Thicknesses

Also full lire in

White, Red

and

Jack Pine

All grades and sizes.

Get in touch with us for prices

C. G. Anderson Lumber Company, Limited

Manufacturers and Strictly Wholesale Dealers in Lumber

705 Excelsior Life Building

Toronto

WE Buy, Sell and deal in all kinds of Lumber and Timber in Canada and United States: Spruce, White Pine, White and Basswood, Ash, Cedar, Douglas Fir, Beech, Birch, Walnut, Cherry, Chestnut, Cottonwood, Hemlock, Maple, Norway Pine, Short and Long Leaf Yellow Pine, Oak, Redwood, Birch, Maple and Oak Floorings, Pulpwood Ties, and Cedar Poles.

AUGER & SON

QUEBEC

HAEBERLE LUMBER CO.

LUMBER AND TIMBER

White Pine, Norway, Yellow Pine, Hemlock Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties.

Yellow Pine Timber a Specialty.

Interior Trim Mill Work

NIAGARA FALLS, N.Y.

WHOLESALE DEALERS

Eastern and Southern Lumber

We are at all times in the market for dry WHITE PINE, DIMENSION SPRUCE, SPRUCE BOARDS, HEMLOCK BOARDS, LATH and CLAPBOARDS.

Advise us of your Market Prices and Stocks

A. H. Richardson Lumber Co.

176 Federal Street, BOSTON, MASS

SPRUCE BIRCH HEMLOCK

Merchantable	100,000'	1" Spruce
"	100,000'	2 x 4 Spruce
"	300,000'	2 x 5 and up to 8" Spruce
100,000'		1" Birch
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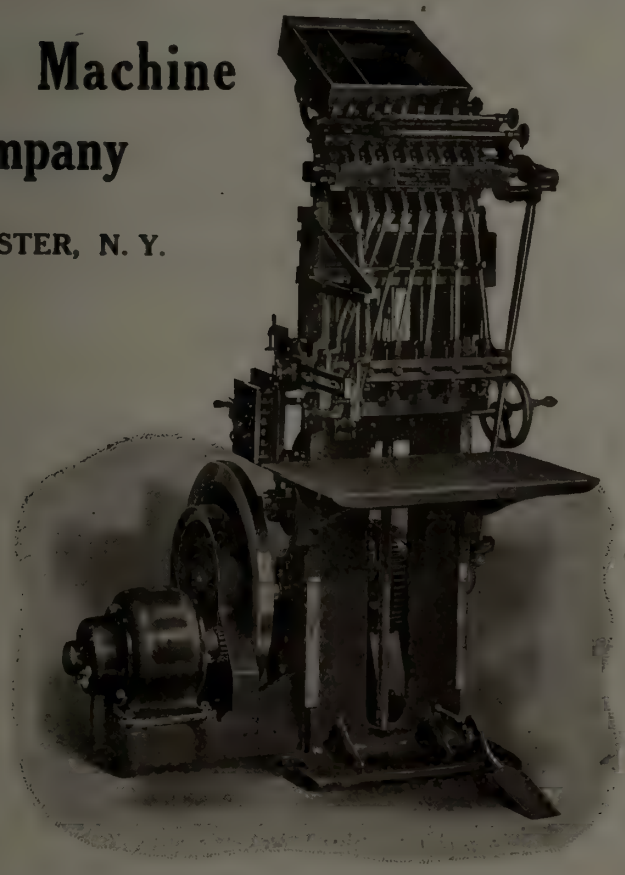

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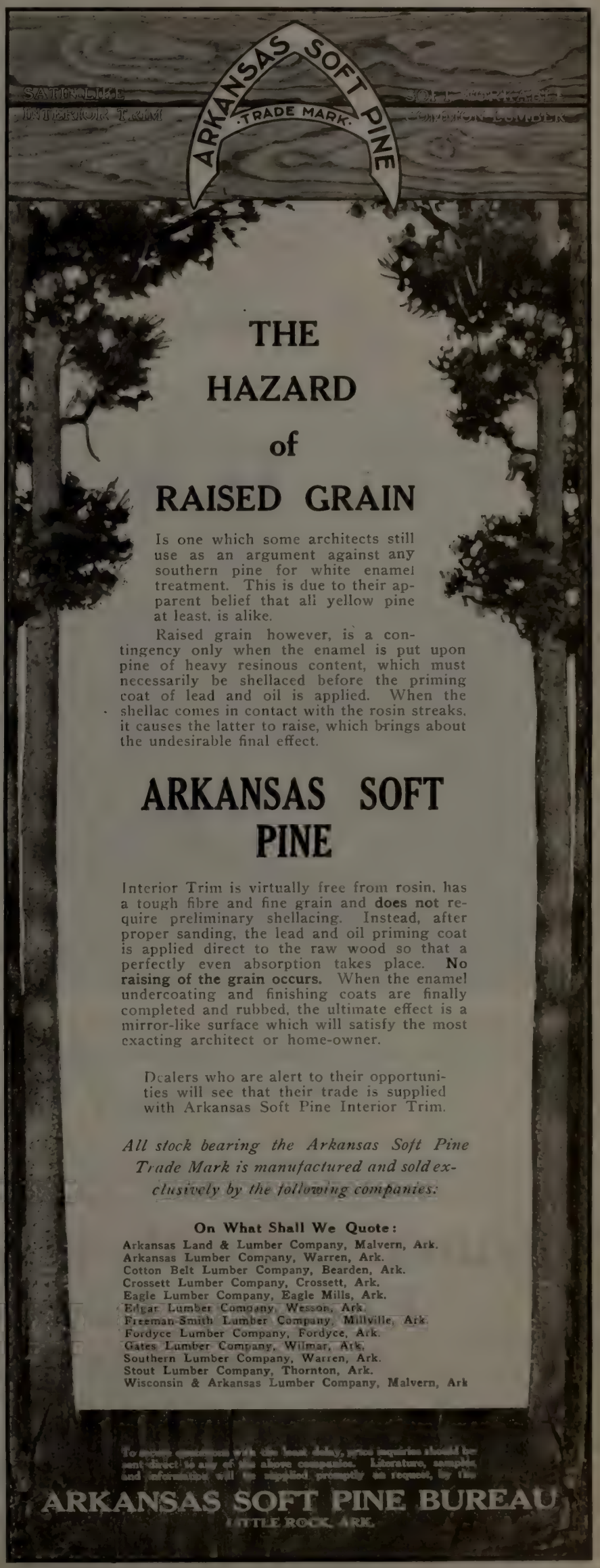

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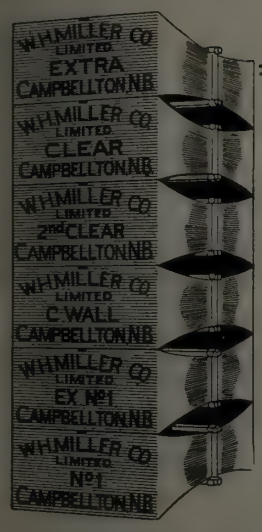
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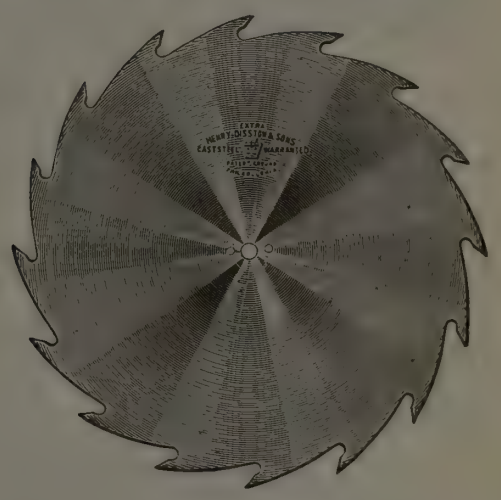

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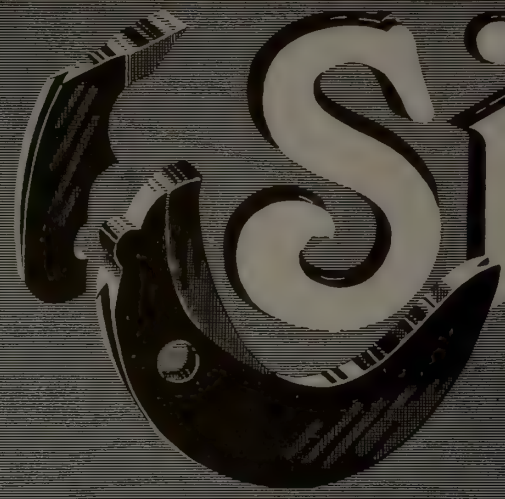

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Canada Lumberman & Wood Worker

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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster General for Canada, for transmission as second class matter.
Entered as second class matter July 18th, 1914, at the Postoffice at Buffalo, N. Y., under the Act of Congress of March 3, 1879.

Vol. 36 Toronto, September 15, 1916 No. 18

Next Year's Lumber Price Problem

The thought that is uppermost in the minds of lumber manufacturers in Canada to-day is about the outlook for next winter's operations and the effect that the present labor situation is likely to have upon prices and available stocks of lumber next year. In our issue of September 1st we published the views of a number of manufacturers upon this subject, and one cannot avoid feeling, after reading these letters, that the coming winter will be a critical one for the manufacturers. In normal times the lumber manufacturer has his full share of perplexing problems to solve. This year it looks as if every detail of his operations will be a problem of considerable size. The only items of expense, for instance, that can be counted upon to remain at all stationary are such as ground rents, stumpage dues, royalties, etc., which are fixed for a period of years by government regulations. Everything else is going up, and there seems to be no means of establishing what the limit of advance will be.

What effect is all this likely to have upon the lumber market next year? The only way to get at a practical conception of the effect is by an analysis of costs and prices. After discussing these features with a number of extensive manufacturers, we have summed them up as concisely as we can and present the following as an outline of the way in which matters appear at present. First of all, as to operating costs, and confining ourselves to the situation in Ontario, an average basis of labor costs for cutting, skidding, and hauling during the past few years would be from $7 to $9 per thousand feet, which represents the labor cost in connection with delivering logs at the mill. To saw, pile, and load the lumber the labor cost during the past few years practically worked out at from $3 to $4 per thousand feet. This gives an average labor cost of about $12 for the lumber on the cars at the mill. In this cost there is nothing included for ground rent, stumpage dues, interest charges, etc. We are dealing simply with the labor cost, which has been advancing so rapidly of late.

In the past the labor cost has probably averaged about 60 per cent. of the cost of production. We can get at a fair idea of its increase of late months by comparing the present wages with those of last year. Generally speaking, the wages in the bush last year were from $26 to $30 per month and board. This year operators are paying wages running from $40 to $50 per month and board, and the quality of the labor has deteriorated. We believe we are safe in concluding, on the basis of many reports received, that there is an increase of 50 per cent. in wages. The labor cost in general may be assumed to have made a similar advance. An advance of 50 per cent. in the labor cost may reasonably be estimated as an advance of 30 per cent. in the cost of production, and this increase will not take into consideration any other element of increased cost, such as interest upon the greater capital outlay required, reduced efficiency of labor, etc.

The conclusion that we are forced to reach, therefore, is that there must be higher prices for lumber next year. Working out the increased price upon the same basis as the increased labor cost, it will appear to be necessary to add about 30 per cent. to the prices offered this year. Lumber, for instance, that has been selling at $20 at the mill will have to bring $26 if the manufacturer is to come out even as well as he has during the past year.

This is how the situation appears to those who are planning to go into the woods this winter. Unless they can count upon such an increase in price for their product they will be operating at a loss. We do not care to go into the prophesying business, or to express with any confidence an opinion as to whether prices will go up next year or not; but these facts are so well appreciated by manufacturers to-day that we do expect a considerable falling off in the quantity of logs taken out of the woods during the coming winter. Whether this decrease will be sufficient to jack up the price of lumber next year is not within our power to say, as there are so many other influences at work that may upset the most careful calculations. So far as anyone can analyze the situation, however, we are expecting a reduced cut and higher prices.

The Canada Lumberman represents all branches of the lumber industry and trade, manufacturers, wholesalers, retailers, and, so far as possible, even the consumers. The facts as we have outlined them are well understood by many manufacturers. To the retailer they are of special significance. They put it up to him to do the best he can in the way of estimating in advance the extent of his requirements and considering to what extent the outlook for next year's trade will warrant him in buying stocks in advance. It will at least be important for the retailer to keep his ear close to the ground and to consider the price situation very critically.

Handling the Salesman

One of the most delicate matters to handle that come up with the wholesale lumber business is the treatment of the salesman who represents the firm upon the road. If all salesmen were alike and all had the same tastes and ambitions, it would be an easy matter to systematize the work so as to get the best results out of everyone, but salesmen differ the same as all other men, and each salesman is an individual problem to his employer. If he has ambition and skill as a salesman the only problem for his employer will be how to keep a man from selling his services to some competitor. That is really a happy situation, which is easily solved, for such a man's value to an employer is great enough to make it easy for him to pay the salesman sufficient to remain with him. Where the difficulty comes in is in handling a salesman who, though naturally well equipped for his work, has not the energy and the inclination to keep at it day in and day out as much for the satisfaction of getting results as for the advancement of his employer's and his own personal interests. There is many a man who has all the elements of a good salesman with the single exception of the dynamic force that is necessary to keep him forever on the trail so long as there is game to be bagged. When such a man gets really into action he is often as clever at separating a customer from an order as a man of greater ambition, but the latter is the man who hunts up the next customer and goes after him without loss of time and just as keenly as though he had not been successful with the former customer. There are salesmen of the former class who can make splendid records

for a time and who then have their off periods, when they seem to lose all their ginger. Results come slowly, ambition droops, and confidence commences to flag. How is the employer going to handle such a man so as to get the most out of him and so as to keep him up to the mark, thereby doing the salesman a service as well as himself? It is a big question. Every case has to be handled in its particular way, depending upon the temperaments of the salesman and the employer.

We all take it for granted that essentially salesmen and employers are all cast in a fairly similar mould. That is to say, that they all want to get results that involve profit. It is all a question of degree that makes the difference between some men and others. Take an instance: One salesman whom we know made himself so indispensable to his employer that before long the latter found that the only way in which to retain the salesman's services was to give him an interest in the business. He would have started a business on his own account if he had not been given an interest in the one he was working for. He was a good man, always making new friends, converting prospects into customers, and working up a continually increasing trade. He was full of ambition as well as a natural born salesman. There was no problem for the employer in this case. His course was really dictated to him by his salesman. Another man, a good salesman, with the natural disposition and gifts for getting orders, happened to be less generously endowed with ambition than the other one. He had a good manner, which commended him to his employers, but he drifted from one position to another, until he fell in with a firm of progressive lumbermen who knew the selling business as well as the manufacturing business, pretty nearly from A to Z. What they wanted was results, and if they got results they were ready to pay for them handsomely. But the salesman would make fine records for a time and then poor ones, until at last the crisis came. His employers then had a difficult problem to face. They did not want to lose a man whom they believed was a good salesman if handled in a proper manner, so they had a heart-to-heart talk with him. Then the salesman realized that he was facing a crisis, and he rose to the occasion. The result was that he went out upon trial for a stated period. His record was closely watched, and he knew it was being watched. The territory he covered was well understood both by him and his employers. A certain volume of business could reasonably be expected. The salesman "went to it" with a vim, and in came the orders, far beyond what he or his employers had expected. He astonished himself. His employers were really not astonished, as they had summed up the situation and thought they knew what to expect. Their judgment was well vindicated.

The point we are coming to is not that this salesman nearly came to grief by showing a tendency to take the line of least resistance—that is an old story, not worth emphasizing. The thing we want to point out is that these employers knew a good salesman when they saw him and understood how to handle him. They kept on with this salesman in the same manner, cheering him up whenever possible, checking up his results continually, and keeping everlastingly before him that he must show results. They have done themselves a great service by developing a good salesman, and they have carried the salesman safely through a period when, with another kind of employer, he might have gone to the bad.

Salesmanship is one problem. The management of employees is quite another problem. The man who understands both lines is a rare bird, but an employee who finds himself in the service of such a man is lucky, if he knows it, even though he may sometimes think that he is driven like a machine. In his saner moments he will appreciate the service that his employers are rendering to him, and one of these days continued experience will turn such a man into the best possible kind of a business man, namely, one who has found out his own weaknesses and has learned how to handle them himself.

Several large working gangs have commenced operations in connection with the construction of the Canadian Northern Railway line from Kamloops to the Okanagan Valley, British Columbia. This line will be of much benefit to the district, and will enable holders of timber to manufacture and realize upon their resources, and, finally, to open land for settlers.

Paper Shortage Worrying Dailies

Newspaper Publishers Considering Higher Subscription Rates and Asking Prohibition of Pulpwood Export

President E. W. Backus, of the Fort Frances Pulp and Paper Company, recently invited western Canadian publishers to attend a conference at International Falls, Minn., to discuss with them the shortage of newsprint and its rise in price. Among those in attendance were E. H. Macklin and W. McCurdy, of the Manitoba Free Press; R. L. Richardson, of the Winnipeg Tribune; Chas. A. Roland, of the Winnipeg Telegram; W. F. Herman, of the Saskatoon Star, and B. Hooke, of the Regina Leader. The discussion continued for two days and covered many suggestions for relieving the present severe tension under which publishers are working. Mr. Backus reported that mill labor was scarce and wages were high; materials for the production of newsprint had gone up several hundred percent and the advertising patronage of the large American dailies had been growing fast, resulting in increased consumption of newsprint. The paper mills were finding it impossible to gather a reserve supply. Moreover, each year they were being forced farther from their mills for their wood. For these reasons Mr. Backus gave it as his opinion that the price of paper would never again recede to anything like the levels prevailing in 1915 and before that time. Moreover, he could not see any prospect for relief from the present high prices in the near future. All Canadian publishers, and Americans as well, were asking for more paper than their contracts called for, and the mills were not able to supply the extra tonnage, even though they operated twenty-four hours a day for six days in the week. He urged the newspapers to practice greater economy in the use of newsprint, Western papers, he said, were altogether too large, giving far too much reading matter for the amount of advertising carried. He thought that publishers would soon find themselves forced to change their tactics. Several American dailies were paying over 300 percent more for their newsprint supply today than they were a year ago, and they were now facing a deficit. The only alternative, he believed, was strict economy in the use of newsprint.

The publishers in attendance at the conference expressed the opinion unanimously that some radical steps must be taken immediately to afford relief, drawing attention particularly to the fact that subscription rates were lower than they should be and that too heavy a burden was being carried by the advertisers.

In connection with the increasing cost of paper in Canada it is interesting to report that at a recent session of the Alberta and Eastern B. C. Press Association a resolution was carried in the following words:—"That, in the opinion of this convention of the newspaper publishers of Alberta and Eastern British Columbia, the time has come, in the interests of Canada and Candian industry, for the Dominion Government to take steps to restrict or prohibit the exportation of pulpwood from Canada, and thus to give such encouragement to the manufacturers of papers in Canada as will result in the benefit and advantage to the Dominion, and in the interests of the printing and publishing industries of Canada, and that copies of this resolution be forwarded to the Prime Minister of Canada, and to each of the western Canada members of the Dominion Government, and also to the secretary of the Canadian Press Association, with the request that that organization be asked for its support."

Franklin E. Parker Murdered in Bay City

News of the death of Mr. Franklin E. Parker, of Bay City, Mich., will come as a great shock to his wide circle of friends among the lumbermen of Canada. Mr. Parker was shot, in cold blood, by a couple of highwaymen at 6.30 in the evening of September 3, while taking a walk in the residential district of Bay City. Two men came up behind him near a street corner and ordered him to throw up his hands. He turned round and as he did so two bullets were fired into his breast. He died at 8 o'clock on Monday evening, and the funeral was held from his home in Bay City on Thursday, September 7. The late Mr. Parker was chiefly known in Canada through his business association with the lumber interests of the Eddy, Sheldon Company and subsequently the Mershon, Eddy, Parker Company, of Saginaw, Mich. The late Mr. Parker was president of the latter company. About a year ago he also became vice-president of the firm of W. C. Edwards & Co., Ltd., Ottawa.

The late Mr. Parker gave much of his time to the promotion of the general welfare of the lumber industry. To Canadians he was particularly well known during the past year on account of the formation of the Canadian Timber Products Association, the object of which is to promote the use of Canadian timber and timber products in connection with the rebuilding of the war-devastated areas of Europe. When this body was formed Mr. Parker was the logical man for the position of chairman, and was unanimously elected.

No clue has yet been found to the identity of the murderers.

Foreign Opportunities for Douglas Fir

An Outline of the Conditions Prevailing—Prejudices to be Overcome—Possibility of Expansion Depends Upon Co-operation

A synopsis of the information secured regarding foreign markets for Douglas fir, by Mr. H. R. MacMillan, during his recent world tour as Canadian Special Trade Commissioner, was given in a recent address by the commissioner, delivered before the British Columbia Lumber and Shingle Manufacturers' Association at Vancouver. The following is an outline of Mr. MacMillan's remarks:

The average annual imports of Dougas fir to the markets I have visited have been:

	Feet.
United Kingdom and Continent	25,000,000
South Africa	12,000,000
India	15,000,000
Australia	180,000,000 to 250,000,000

The possible demand for Douglas fir for construction work in the war zone, immediately upon the fixing of peace, receives occasional newspaper attention. Up-to-date information in this particular trade opening may be expected from the Canadian Trade Commission now touring Europe. My opinion is that the after-war demands for common lumber from the Pacific Coast are overrated. The European nations will, wherever possible, use their natural resources of clay, slate, cement, and stone, and rebuild according to their habits, thus reducing imports and utilizing the labor of their released populations at one and the same time. The common lumber demands will be met chiefly by European and Atlantic supplies. We may expect a year or so of business, similar to what we have already received, in furnishing timbers such as Europe does not readily afford, for railroad, public work, and heavy temporary construction.

Douglas fir entered foreign markets long after the trade had become fixed in the use of other woods. It has increased its use only by the displacement of other woods, and in that displacement it still has far to go. Almost everywhere it has been bought first because of the large sizes in which it can be secured, and in the second place because of its cheapness for rough uses. It is now regarded everywhere as a satisfactory rough timber, but before the war, only in a few places—Australia and the South Sea Islands particularly—was it regarded as a satisfactory wood for using in any dressed form for finish or joinery.

The war has given Douglas fir a great lift, and caused it to be used generally for finish for structural purposes in competition with Swedish timber and pitch-pine (Southern yellow pine) by persons who would otherwise have continued for years the use of their other woods, even in the face of enhanced prices.

The shortage of Swedish and pitch-pine in many markets has familiarized architects, engineers, builders, dealers, and consumers with Douglas fir, to a degree which could not have been accomplished by a million dollar advertising campaign. This is as true of the markets distant from the war as of the markets within twenty-four hours of the firing line. It may be safely said that there is not a woodworking shop in the United Kingdom which has not within the past eighteen months used Douglass fir for every purpose for which Swedish and pitch-pine would in normal times be demanded.

Henceforth it will be a matter of price only. Heretofore Douglas fir would only have entered such shops if sold considerably cheaper.

Prejudices Against Canadian Wood.

The prejudices affecting the use of any new wood are known to you. Fir is a comparatively new wood on the conservative foreign markets, and a few of the prejudices affecting its use even yet may be judged from the following instances:

In the Admiralty shipyards for a considerable number of years they have used Baltic planks 2 x 11 and 3 x 11 for staging while working on the outside of large vessels. Baltic in this size is very hard to get, and when they were getting out their specifications last year they specified Douglas fir, and then their workmen were afraid to stand on it. The workmen right straight through have a prejudice against new timber, which we must overcome. The man who orders the timber generally does not know anything about timber; the workmen have worked on Baltic all their lives, and the office man thinks if there is any accident he will be responsible if he authorizes a change. It does not make any difference to him if it costs more; he does not own the works, consequently he specifies Baltic.

I was in Paris when France was calling for tenders for ordinary railway cars. They were going to specify Southern pine. The Canadian Car and Foundry Company's man was there at the time getting quotations on lumber. The French Government finally agreed to get quotations on Douglas fir, which was cheaper, and finally accepted it. I hope they will find it satisfactory, but the feeling was that Douglas fir was not suitable for freight car use in France. We know it is suitable for freight cars in Canada, and it is subject to much worse weather conditions and harder usage than in Europe.

Many gold mines on the reef in South Africa still use pitch-pine timbers, in spite of the fact that Douglas fir has had twenty years' satisfactory service in neighboring mines, and is much cheaper.

The South African railways have always refused Douglas fir for trestles or railway truck construction; they use pitch-pine, even when it is almost twice as expensive. West Australia, under similar climatic conditions, used Douglas fir for freight cars, as does South Australia.

When Douglas fir was substituted in the Rand for Swedish deals in staging, the workmen refused to work unless the thickness of Douglas fir was doubled. They feared it was not as strong as Swedish.

Planing mills throughout Africa use Swedish for all dressed work. Only a few use fir to any extent.

The effect of trade habits in the use of various timbers is seen cearly in Australia. Nearly all joinery, mouldings, architraves, etc., used in Adelaide are Swedish; in Sydney but little Swedish is used; Douglas fir has become a staple.

That the use of this wood should vary so throughout many countries, being chosen for a particular purpose in one country and refused for this same purpose in another country, is a strong reflection on our marketing methods. It does not lead to increased respect for these methods to find that the same variation of opinions regarding the use of fir exists between different towns in the same country, and between different builders, engineers, and architects in the same town. There is a great lack of standardized knowledge regarding the technical qualities and wise uses of the wood. The market has drifted.

If the most extensive uses discovered in every city were made a standard, and the whole of the importing countries were brought up to this standard of use of Douglas fir, the market would at least be doubled over night. This would be accomplished by education alone and not by change in price.

It may be taken for granted that there is no lack of opportunity for increasing the use of Douglas fir in foreign markets.

The first obstacle to be overcome is the unprofitable nature of the export business. An overwhelming proportion of the cargo business returns little or no profit to the manufacturer, because of the low price accepted and the high grades shipped.

The volume of trade would not be adversely affected if prices were increased to a profitable level. Such an increase of $3 or $4 would barely reach the consumer, who in Africa, India, and Australasia pays $45 to $75 per thousand for rough fir lumber. The first essential step is that exporters in Canada and the United States combine to reach a profitable export price.

Grading Situation of Great Importance.

Another serious question is the grade now shipped to foreign ports. The exporters are competing against one another in raising the quality of the grade shipped. The foreign buyer when he buys merchantable, expects something much better, and by playing one shipper against another he gets it. The result is that although most of the fir going into Australia is re-sawn for studding, joists, rafters, and rough building material, a very much higher grade is demanded than would do for such purposes in Vancouver. The exporting mill is left with 70 per cent. or more of the log on hand, in the shape of low grades. The Sydney builder puts select in his fence, roof, or studding. The Durban merchant re-saws flooring and stepping from a merchantable cargo. He considers himself unfairly treated if he receives a merchantable cargo which will not produce a good proportion of uppers.

The buying ability exercised by the foreign buyer is superior to the selling ability exhibited by the domestic manufacturer. Co-operation is needed to increase the amount of common shipped for uses where common is sufficient. A temporary fence built around a construction job in Sydney contained 66 edge-grained clears out of a total of 122 inch by 6 inches by 6-foot boards.

A beginning towards controlling the self-robbery now practised by the exporting mills would be made if each inspection certificate sent out showed a statement of the grade of all pieces in the shipment. The buyer and seller would then know definitely just how much better than merchantable each cargo graded.

The reasons for Canada's small share of the trade are not difficult to locate. Canadian mills, speaking generally, are only interested in export when the rail trade is particularly bad. They do not, therefore, build up permanent connections, nor consider it worth while to develop in Canadian ports facilities for loading as expeditiously and economically as in United States ports. The importers in foreign countries find it necessary to establish their Pacific Coast buying connections with the persons who, year in and year out, take care of the export

trade, and who, be the enquiry large or small, the specifications pleasing or difficult, will fill the order. There have always been a large number of mills in the United States who have given particular attention to this business, who have co-operated to give rapid despatch on all classes of business, who have developed special facilities for handling export orders, and upon whom both exporting houses and foreign importers rely. The number of such mills in Canada is extremely limited.

Foreign importers, even though in some cases sentimentally inclined to favor Canadian mills, do not consider that even the best of our mills are in a position to handle all classes of business on a competitive c.i.f. basis, when all the various elements of price, rate of loading, time lost in coaling, and charter prices are taken into consideration.

Deservedly or undeservedly, Canadian mills have earned a reputation with foreign importers for failing to quote on enquiries, failing to make deliveries in the time limit set, and for having an indisposition to work together so as to be able to undertake extensive shipments, and Canadian prices are considered to be, as a rule, higher than those in the United States.

No complaint is made against Canadian quality, except that Canadian timber is no longer acceptable for Port Pirie mining timbers, because of its fancied greater weight. This trade, amounting to about 20,000,000 per year, can be regained when it is shown that Canadian timber weighs no more for rail shipment than does American.

The export timber trade is conducted in a perfectly open, unprotected market. Competition forces the foreign importers to form their Pacific Coast buying connections in those centres where the most favorable conditions exist for filling any character or any volume of export business.

The most important foreign importers are British. They would prefer to place their buying connections in British Columbia. Practically all, when considering the matter, have decided that not sufficient mills are equipped for export business in British Columbia to justify important buyers in restricting themselves to this market.

If we desire a larger share of the growing export trade we can secure it on competitive terms. Mills must meet United States prices. They must quote months ahead for export sales.

A Canadian Trading Company Required.

An exporting or trading company is also a necessary part of the machinery if a large trade is to be built up. This company will perform the very necessary service of forming desirable foreign connections, without which it is difficult to develop business or operate freights competitively; will finance shipments, distribute business to mills best adapted to handle it at the moment, and, in short, will look after the merchandising of the timber. I do not consider it feasible for the individual mills to successfully work up export business single-handed. The trend of the business in the United States supports this belief. There the merchandising of the lumber shipped off shore has passed into the hands of trading companies who buy it from the mills, transport it to the foreign port, sell it, and finance the transaction. So much of the expert and speculative shipping element enters this trade that a lumber manufacturer, working individually, cannot hope permanently to compete and get the best out of his opportunities.

Sooner or later the development of Canadian business in other commodities as well as in lumber will necessitate the development in Vancouver of a company specializing in the export of Canadian products, and the importing of such foreign necessities, raw and manufactured, as must continue to come to this side of the continent. Once this company has secured the support of a large enough body of Canadian mills to enable it to meet United States price competition it will be able to form working connections with strong firms in all importing countries, and a sound, permanent export business will be developed.

Summing up, it is safe to say that the export trade is capable of great expansion, that co-operation to increase the price to a profitable level could be made to strengthen rather than weaken the position of Douglas fir, and that care is necessary to extend the use abroad of lower grades.

The situation regarding Canadian exports is more serious. Canada is not now keeping pace with the growth of the trade. Canadians may think they do not want the export trade; any who think so will in a few years be found to be wrong. The only possible salvation of much of our timber investment and the only realization of much of our timber asset depends upon the broadening of the export market. This broadening can only come when foreign buyers are satisfied, as they are not at present, that the manufacturing facilities exist in Canada for handling export business of any character in any volume; that the manufacturers are prepared, until lumber prices are maintained at a uniform level on the coast, to meet United States competition, and that there exist in Canada strong trading companies capable of representing the foreign buyers' interests in every way, in quoting competitive c.i.f. prices at foreign ports. No port in the world can expect to build up export business on any other terms. We must develop the facilities and compete or go without the trade.

The Reader's Viewpoint on Current Topics

Ontario's Forest Fire Protection Useless

Editor Canada Lumberman: Smooth Rock Falls, N. Ont., Sept. 9th.

I have followed with interest the various articles in your magazine with reference to forest protection from fire, but consider that the keynote to the situation is contained in the extracts from an unsigned letter published under the heading "Ontario's Unscientific Fire Ranging," on page 74 of your issue of September 1st. I have been for the last eighteen years connected with lumbering firms in the province of Quebec and have recently come to Ontario, and find that the same state of affairs exists here as in Quebec, the limit-holder, who pays large sums to the governments is not allowed to protect his limits from fire, as he is not allowed to exclude any one who wishes to go through the limits, with the result that fishermen, hunters, gum-pickers, and in Ontario more than Quebec, prospectors roam at their will through the limits, placing fires where and when they wish and often, sadly too often, going away without taking the trouble to see that their fires are out. These are the men who cause fires in forest lands. It is very seldom that a lumberman carrying on his legal vocation sets fires which do damage to the forests, as he realizes the danger to which he and his living are exposed by fire.

Until the governments give the power to the limit holder to forbid anyone without a permit from the fire guardian to pass within the boundaries of his limits, it will be lost time for companies to spend money on fire ranging, and although I must agree that such systems as are advocated by Mr. R. O. Sweezey in his article on page 73 of the above mentioned number of your journal are a step in the right direction, still, they would be made vastly more efficacious if the men employed had the power to arrest any trespassers on the limits.

Yours truly,

J. McD. Grosart.

* * *

Operating Costs Advancing Heavily

Editor Canada Lumberman:

The labor situation at the present time is very bad. Men are hard to get, and most of those you do get are very indifferent workers. We are operating this season at about 50 per cent. of our usual output. We hope to be able to keep our mill running the entire season. At present it looks as though we would not be able to get sufficient men to take out enough logs during the coming season to replace the stocks of lumber we are selling this year.

Operation costs will show a large advance compared with any previous year. Labor will be about 40 per cent. over normal. Supplies, so far as we can figure, will cost about 35 to 40 per cent. more than they did in 1913. We cannot give you any comparison as regards wages in the woods. We have not yet started our woods operation, and will probably not start to any large extent unless conditions show a considerable improvement within the next two months.

Ontario Manufacturer.

* * *

Want to See White Pine Advertised

Editor, Canada Lumberman:— Penetanguishene, Ont.

We have read with a great deal of satisfaction your article in regard to an advertising campaign in favor of white pine, and feel sure that the benefits that would accrue from such a campaign, would be so encouraging that white pine manufacturers would wonder why they had not taken this in hand long ago.

There is certainly no question at all as to the superiority of white pine over every other kind of lumber, and, as you point out in your article, the advance in white pine has not been equal to the advance in other kinds of lumber; in fact it has been at a standstill for a great many years now. We certainly think it should deserve every consideration when the cost of taking out stock is now so considerable. There is not one lumberman who is making an adequate return for the investment and amount of labor entailed in getting into the country where they now have to go to secure the timber.

We therefore would have much pleasure in entering into any such undertaking as a campaign to advertise this, the most desirable of woods.

Yours truly,

The C. Beck Manufacturing Company, Ltd.

A despatch from Nanaimo, B.C., states that the outlook in the lumber business is better today than it has been for a long time past, there being an unusually brisk demand, and an indication that prices will stiffen.

Mr. S. F. Rutherford, managing director of the Dominion Box and Package Company, has been elected a member of the Montreal Board of Trade.

Use and Accuracy of Topographic Maps

Log Transportation Problems Simplified—An Outline of Map Making—A Great Assistance to the Superintendent

By Samuel A. Stamm, Logging Engineer, Hamilton, Wash.

The day of the "grub stake" logger with the ox-team and skid road method of logging is rapidly passing into history. With the donkey yarder and the line horse, later the haulback, we entered a new era. The old method served its purpose well because the timber, as a rule, was logged close to the water courses. However, as the logging receded further and further into the mountains, a more scientific and efficient system had to be developed. Necessity, therefore, gave us by degrees the more complex methods in use to-day. As any task becomes more complex the handling of it arranges itself into departments, and these departments develop specialists. So in these recent times we have an engineering department connected with the more modern logging operations.

It is the duty of this department to facilitate the transportation of the logs from the stump to a point where the mill can handle them. A very simple statement of so great a task—so simple, in fact, that one is apt to pass it over without giving the matter any further consideration. Not so with the man who has to solve it. The most up-to-date manner of getting at the solution of this problem in all its details is by means of a topographic map. From it one can ascertain the location of logging railroads, camps, water supply, landings, and operating plans in general. In order to discuss the subject more intelligently let us pause at this point to take up briefly the making of a topographic map. There are numerous methods, but we prefer the strip method—running three times through each forty-acre tract in dense timber and twice through each forty in open stands. The first operation consists of establishing a base line through the tract of timber, preferably through the centre of it, and in such a manner that the contours will be at or nearly 90 degrees to the strips. On this base line we establish monuments 440 feet apart and ascertain the sea level elevation of each monument. In the office we plat the line and the strips at right angles to it, 440 feet apart, to a scale of 330 feet per inch. There being no such scale on the market we made one. This scale facilitates the platting of all field and office work on the topographic map.

The Field Party's Operations.

The field party consists of a cruiser and mapper. The cruiser's duty is to estimate the timber and note its condition, etc. The mapper, equipped with a forest service compass, 10-inch board with plat attached, pocket aneroid and scale; runs compass, reads the aneroid barometer, and notes the same on the map. While passing through the country on the strip he puts in contours as his judgment, checked by the aneroid, dictates. He also checks in on each monument, making a notation of the time of day, the sea level elevation recorded thereon, and his barometer reading. The difference in elevation between two monuments should be checked by the aneroid differences and the office correction. If not, distribute the excess difference as a field error, according to the per hour rate as obtained by dividing the excess difference by the time it took to go from one monument via the strips to the other monument. The 20-foot contour interval seems to give sufficient detail, and is consistent with the pacing and aneroid accuracies. An office aneroid read every hour or a barograph will detect the fluctuations in air pressure and show the particular time of day when they occurred. From this office record corrections are made on the field work, as stated above, and the contours connected between strips. When completely corrected for errors in elevation and pacing, a tracing is made. The tracing will show all details obtained in the field. From it we get blue prints, and these are our working plans for logging operations and railroad location. The routes can be sketched in roughly with lead pencil, according to the per cent. of grade. The landing locations may also be shown. On it one can point out to the manager, logging superintendent, office man, or woodsman any or all information required to carry on the operation in a businesslike manner—namely, burned or deteriorating bodies of timber which should be logged first, camp locations, water supply, railroad locations, landings, and any or all operating plans in detail. The maximum value is in the map before any loggings is begun. As the logging progresses its value depreciates in the same ratio as the number of thousand feet logged bears to the total feet in the tract.

Checking Up Results.

The accuracy of the map for railroading in particular and operation plans in general depends upon the personal equation of the mapper. The care used in pacing and reading the aneroid, the distribution of pacing and aneroid corrections, the connecting up of contours between strips and the preservation of contour detail when tracing the map off the field sheets aids wonderfully in obtaining a good map. The per cent. of permissible error varies. On maps made by the students of the University of Washington on their field trip to the Hamilton Logging Company at Hamilton, Wash., in 1913 and 1914 preliminary lines were laid out on topographic maps constructed by them, the length of line scaled, and the grade figured necessary to reach a given point. When the field location was completed and the sea level elevation taken the work checked out within five feet. This is an error of one in eight hundred. Other lines so laid out checked even better, and one checked one in five hundred. These accuracies are, indeed, phenomenal and surprising, to say the least. However, such results cannot be so easily obtained where one man makes the map and another uses it, because the latter is not aware of the degree of accuracy used by the maker of the map. For operations in large, difficult tracts of timber it certainly pays to have maps made early and accurately. The cost of the map is small indeed compared to the returns on the investment.

Keeping a Tight Rein on Forest Fires

How does the permit plan of controlling settlers' fires work in other provinces and states? This question has aroused public interest since the disastrous consequences of uncontrolled settlers' fires in Northern Ontario in July and August.

"After a careful study of the question," writes Hon. Jules Allard, Minister of Lands and Forests for Quebec, "we came to the conclusion that the most efficient means of protecting the forests from damage caused by settlers' fires, at the same time fostering the agricultural development of the province, was the permit system. This year there must have been over 2,500 permits granted. There has been no damage caused by fire for clearing purposes made in virtue of these permits."

The President of the St. Maurice Forest Protective Association of Quebec, patrolling 12,000 square miles of forested and partly settled country, states under date of August 31, 1916:—"We have been so successful under the permit system that we would under no circumstances go back to the old way of handling fires. The settlers have co-operated with us in every way and their satisfactoion is universal. So far, we have had not a single fire caused by a settler, a most unusual and satisfactory record."

The Chief Forester of the Western Forestry and Conservation Association, Portland, Ore., says:—"In our Pacific Northwestern States, the burning permit is as accepted a part of fire prevention as patrol or fire fighting. No one considers abandoning it. Last year in the State of Washington alone, nearly 13,000 burning permits were issued and under them 118,000 acres were burned over. The permit is an absolute essential of any serious attempt to reduce fire in a developing forest region."

From experience gained in British Columbia the unqualified statement is made by the government that unless brush burning is controlled by means of permits, no real fire protection is possible in a timbered country.

Advises B. C. Exporters to get Together

Mr. P. E. Stainton, representing the firm of J. C. Spedding, Auckland, New Zealand, is on a visit to Vancouver and other B. C. centres in connection with a tour which he is making around the world in the interests of his firm. In an interview at Vancouver Mr. Stainton said that B. C. would never get the lumber business of New Zealand or Australia, unless the lumber interests of the province went after it, not as individuals, but conjointly. "There is no use," he said, "in any one firm trying to get business down there off its own bat; it will not have any effect. The only thing to do to get hold of the markets is to get together and work together, and so far as I can hear that is not being done at the present time in British Columbia. What you need is more co-operation. It has been said that America is selling us their lumber at a loss. It is the greatest nonsense to suggest such a thing. Did you ever hear of an American doing that? They are making a profit and the British Columbians could do the same thing.

"To get this business what is wanted is a trade representative in centres that will be able to put the lumbermen of British Columbia in touch with the firms in Australia and New Zealand engaged in the business. I know for a fact that the Americans act on that principle and they are getting 97 per cent. of the business. Year after year British Columbia has been losing and unless you wake up you will lose the other three per cent. that you now hold, but which you will not hold very long the way things are going."

Lumber Cost Accounting

AN OUTLINE OF METHOD IN USE IN A LARGE MILL ON THE PACIFIC COAST

By William Brims, Vancouver, B. C.

In a factory where only one article is made, and that article in one quality, the figuring of manufacturing costs is a comparatively simple matter. On the other hand, in a plant that turns out several materials of different qualities, going through various processes of manufacture, the determining of the exact cost of each article in its different grades requires a considerable amount of time and labor.

The business of lumber manufacturing must be grouped with the latter class, for, while it is true that all lumber is produced from the same raw product, i.e., the log, the raw products differ in quality and value, and the manufactured article varies to a much greater degree.

Form No. 1. LOG ACCOUNT - MONTHLY REPORT

	Number of feet	Cost	Average per M
Inventory - beginning of month			
Purchased during month (add)			
Total			
Logs sold during month (deduct)			
Total "X"			
Logs sawn during month			
Inventory at end of month			

It is the allotment of the costs of manufacture to the several grades of manufactured lumber that presents the greatest difficulty in compiling a cost accounting system for a sawmill that operates its own dry-kilns and planing mill.

The writer will endeavor in this article to explain briefly a system of cost accounting similar to that adopted by Messrs. J. Hanbury & Company, Ltd., of Vancouver. Mr. J. Hanbury, president of that progressive company, readily saw, after recently completing his up-to-date plant, that it would be necessary to keep a close tab on the manufacing costs, in order to follow his policy of manufacturing lumber of the highest quality and, at the same time, meet competition in prices.

The reader will observe, in looking over the forms shown here, that to get over the difficulty of defining the actual cost of the different classes and grades of lumber the cost has been based on the total sawmill cut, as compared with the total net average selling price of all grades, and, further, that the cost of manufacture is figured on the government log scale, with no allowance made for over-run. This was done to give a conservative showing in costs and to make things appear not too rosy. There is wisdom in this method, because should the manufacturer base his costs on the sawmill tally of lumber sawn, he is likely to overlook the waste in subsequent manufacturing and to find a shortage in stock when the inventory is taken. Then, again, when the log scale is used as a basis for computation, the over-run is always in reserve to provide for any unforseen expenses.

In going over the forms shown with this article we will assume that they are to cover the first operating month of the fiscal year, and that the log and lumber inventories have been taken and valued accurately at the beginning of the year. As all operating expense is based on the log cut, we shall begin by finding the quantity and value of the logs sawn for the month.

The first thing is to take an inventory of the logs on hand at the end of the month. By using a little foresight in keeping as few as possible loose logs in the log pond at the end of the month, the inventory can be taken with little trouble, as the government scale can be used on all unbroken booms. With Form No. 1 (Log Account) we can determine the number of feet and the total and average cost of logs sawn. The number of feet of logs sawn during the month is found by deducting the number of feet in the "inventory at end of month" from the total marked "X" and, as the number of feet and cost of "logs sawn during month" added to "inventory at end of month" must equal the total "X," the average cost per thousand feet will be the same as shown for that total. The figures of the log inventory at the end of each month will, of course, be used as the inventory at the beginning of the following month. Having found the quantity and value of the logs sawn during the month, we will turn to the cost of manufacture.

Form No. 2 (Time Sheet) is a sample of the form used as a monthly time sheet for each employee, giving the distribution of his labor cost. By making a summary of all the time sheets we have a complete distribution of the total labor costs of the different departments for the month.

Form No. 3 (Power Operating) should be made up next, and the cost divided amongst the different departments. The proportions of power used by the sawmill and the planing mill can be computed by the horse power used, and the engineer should be able to determine the percentage used in supplying heat for the dry kilns.

Forms Nos. 4 to 10, inclusive, can now be made up from the distribution of labor and power and the other expense accounts as shown by the books of the company. At the foot of Form No. 4 is figured the average sawing cost per thousand feet (log scale) or, as it is shown on the form, "average cost over trimmers." This shows the actual cost of sawing the logs, exclusive of the costs of sorting, grading, and further manufacture. Forms Nos. 8 and 9 show the average "cost of handling, per M feet." These figures are based on the number of feet shipped, and are used only as a means of checking the handling expense of the output of the plant from month to month. It is evident that, to have the cost of handling figured on a true basis, the amount of lumber shipped each month must be the same as the sawmill cut.

Form No. 11 (Cost of Manufacture and Shipping is a recapitulation of the different manufacturing expenses shown on Forms Nos. 4 to 10, and gives the total average cost, per thousand feet, for manufacturing and handling.

Form No. 2. TIME SHEET

Month of_____ 19__ Name_____ No.____

	POWER			SAW MILL					KILNS		PLANING MILL			SORTING GRADING			WHOLESALE YARD				RETAIL YARD				EXTRAS					
Date	Engineer	Fireman	Electrician	Boom	Sawing Burner and Cleaning	Oiling	Filing	Repairs	Kilns	Repairs	Planing Mill	Sizer	Repairs	Grading Sorting Chains			Shipping	Piling Repairs Platform, etc.			Shipping	Piling Repairs Platform, etc.			Yard and Road Cleaning				Total Hours	Rate
1																														
2																														
3																														
4																														
5																														
6																														
7																														

Form No. 3. POWER OPERATING

Engineers - Labor	
Firemen - Labor	
Electrician - Labor	
General Expense	
Power Repairs - Labor, etc.	
Power Purchased (if any)	
Water Rent	
Total	
Proportion charged to Saw Mill	
Proportion charged to Planing Mill	
Proportion charged to Kilns	
Total	

Form No. 4 SAWING EXPENSE

Boom Labor	
Boom Expense	
Sawing Labor	
Burner and Cleaning Labor	
Burner and Cleaning Expense	
Oiling Labor	
Oil	
Filing Labor	
Filing Expense	
Operating Expense	
Repairs - Labor, etc.	
Power	
Total	
Total feet sawn	
Average cost over trimmers	

Form No. 5. KILNS

Labor	
Kiln Repairs - Labor, etc.	
Power	
Total	
Total feet through kilns	
Average cost per M feet	

Form No. 6. PLANING MILL AND SIZER

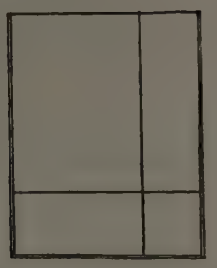
Planing Mill Labor	
Sizer Labor	
Operating Expense	
Repairs - Labor, etc.	
Power	
Total	

Form No. 7. GRADING AND SORTING

Labor - General

Labor - Sorting Chains

Total



Form No. 12 (Lumber Trading Account) is the most important statement shown, for it brings the manufacturer face to face with the net result of the month's operations. It shows the net average, per thousand feet, received for the lumber sold as compared with the actual cost of manufacturing. During the years of depression that the lumbering industry has experienced it required a sawmill owner or manager of robust constitution and iron nerve to peruse this statement month after month. The item of "sale deductions," shown as being deducted from the total gross sales, is made up of advertising expense, salesmen's commissions, discounts, and exchange on drafts and cheques and other similar expenses, so the "net sales" shows only the actual amount received for the month's shipments. This form shows also a monthly inventory of the stock on hand and the total and average value of that stock. The total and average of this inventory is found by deducting the number of feet sold from the total marked "X," and as the number of feet and amount shown in "total cost of sales" and "inventory at the end of month" equal the total marked "X," the average value of these items will be the same as of that total.

Form No. 8. WHOLESALE YARD AND SHIPPING

Shipping Labor
Piling Labor
Total
Yard Expense
Repairs to Platforms, Trucks, etc.,
Total
Lumber shipped
Cost of handling, per M feet

Form No. 9. RETAIL YARD AND SHIPPING

Shipping Labor
Piling Labor
Total
Yard Expense
Repairs to Platforms, Trucks, etc.,
Total
Lumber Shipped
Cost of Handling, per M feet

One of the greatest benefits of a cost system is to have a ready comparison, month with month, of the manufacturing cost and selling average. Form No. 1 should be kept up, showing the accumulative number of feet, costs, and averages for the year to date, so that these averages may be compared with those of the month under analysis. This will show the total quantity of logs purchased for the year to date, with the total and average costs, and the total logs sold for the year to date, and the total and average receipts, and the total logs sawn for the year to date, with the total and average costs.

Form No. 12 should be treated in a like manner. The accumulative totals on this form will give the total number of feet of lumber sold for the year to date, with the total receipts and average price obtained, the total operating expense for the year to date, and the average operating cost, the total lumber purchased for the year to date, and the average price paid, the present stock on hand and average cost, and the net profit or loss on sales for the year to date. The total for lumber sawn, log scale, for the year will be the same as the logs sawn on Form No. 1.

Form No. 10. GENERAL EXPENSE

Salaries - Officials and Office Staff
Insurance - Fire
Insurance - liability
Stationery and Supplies
Office Expense - Janitor, etc.,
General Expense
Taxes
Rent of Plant and Sidings
Oil
Watching
Electric Light Maintenance
Depreciation
Yard and Road Cleaning
Total

Form No. 11. COST OF MANUFACTURE AND SHIPPING

Sawing
Planing
Kilns
Wholesale
Grading and Sorting
Retail
General Expense
Total operating expense
Lumber sawn - Log Scale
Average cost per M feet

Form No. 12 LUMBER TRADING ACCOUNT - MONTHLY REPORT

	Feet	Amount	Average
SALES			
Wholesale			
Retail			
Construction, repairs, etc			
Total gross sales			
Less sales deductions			
Net sales			
COST OF SALES			
Lumber sawn - log scale			
Total operating expense			
Lumber purchased			
Total			
Add inventory at beginning of month			
Total "X"			
Deduct inventory at end of month			
Total cost of sales			
Net Profit or Loss			

Form No. 13. MONTHLY GENERAL SUMMARY

Average cost of logs sawn - log scale
Average cost of sawing expense
Average cost of total manufacturing expense
Average cost of lumber purchased
Total average cost of production
Total average cost of stock on hand

Wholesale average selling price
Retail average selling price
Construction average selling price
Net total average selling price
Net total average selling price for year, to date

Margin per M feet on lumber sold - profit or loss

GRADES OF LUMBER SOLD
Percentage of clears
Percentage of commons
Percentage of culls

Over-run at saw-mill over log scale

Several forms of general summary may be evolved from the information now obtained, and Form No. 13 is a simple sample of this form. It shows, in a concise manner, the average manufacturing costs as set against the average selling prices. The difference between the "net total average selling price" and the "total average cost of stock on hand" tells, under the "margin per M feet on lumber sold," the profit or loss on each thousand feet sold during the month. Where a tally of the sawmill actual cut is kept the percentage of over-run over the log scale can be shown at the foot of this summary.

When shipments are comprised of shingles and lath, as well as of lumber of all grades, a careful distribution of sales must be made to show the actual amount received at the mill for each of the articles named, and, at the same time, to show the number of feet of clear, common, and cull lumber shipped. This distribution can be made most easily from the invoices, and it should be kept up daily, so as not to entail too much work at the end of the month. It will be found necessary to keep a record of the grades of lumber sold, as the net average selling price naturally depends greatly on the quality of the products marketed. This average might mislead the manufacturer by appearing satisfactory when, in reality, the shipments for the month were of a higher grade than the stock on hand. The manufacturer has to guard against pushing the sale of his uppers and allowing the lower grades to accumulate, as when inventory time comes he is likely to have a rude awakening to the fact that a large percentage of his stock is composed of culls and other low-grade material.

Percy E. Heeney in Business for Himself

Percy E. Heeney, wholesale lumber dealer, Kitchener, Ont., who started in business for himself in March of this year, is well known to a great many lumbermen of Ontario on account of his long connection with the business in its various branches. He was born in the Gatineau district in 1882 and his father was one of the early jobbers in that country for Gilmour and Hughson, Hull, P.Q. Mr. Heeney has had experience in the shanties and sawmills for many years. In his early days he drove the Kazabazua River for several years. He has been more or less in the lumbering business since boyhood, but his first definite connection with it in a business way was with Geo. C. Goodfellow, of Montreal, in 1904. He lived in Montreal for nine years, and then moved to Berlin, Ont. For six months he travelled western Ontario and then he formed the Glengarry Lumber Ltd., of Berlin, in 1912, being vice-president and general manager of the company until March of this year, when he started in business for himself. Mr. Heeney deals principally in American hardwoods, being the sole agent for D. E. Hewitt Lumber, from Huntington, West Va. He also handles Canadian hardwoods, B. C. shingles and fir. To a great extent he confines his business to the furniture trade. Before leaving Montreal he travelled mostly in the eastern provinces, going as far as Prince Edward Island and St. Johns, Nfld. At the first of next year he will be placing a man in this territory.

Reports from Vancouver, B.C., state that all danger from forest fires during the present year is now practically over, according to advice received from district foresters. Of course, the situation will depend entirely upon weather conditions, but with normal weather the outlook is for no further fires this year.

The West Coast Lumbermen's Association, of Seattle, is distributing a "Structural Timber Handbook" on Pacific Coast woods, the idea being to supply architects and engineers with reliable information as to safe loads, strength, etc., and at the same time present a lot of interesting facts relating to the creosoting and kiln drying of lumber, the merits of wooden silos and red cedar shingles, and other data calculated to promote the use of wood in place of substitutes. The Handbook was compiled by O. P. M. Goss, consulting engineer of the Association.

Retail Costs—How Do You Figure Them?

A Practical Outline of Methods That Have Been Used With Success—Elusive Profit Chasing—How to Track It Down

The ways in which costs are checked up in connection with the retail lumber business are so numerous and various that the task of unifying them would be a big undertaking. There has already been a good deal of study of the subject, however, especially among retail associations and on the part of some of the larger, more progressive yards, and much of the spade work has been finished. Many of the elementary points of importance are covered in a summary of the problem which we were fortunate enough to come across recently, and which we reproduce for the benefit of our retail readers, both large and small. The subject of cost finding is discussed in fourteen concise paragraphs, as follows:—

1st. Charge interest on the net amount of your total investment at the beginning of your business year, exclusive of all real estate.

2nd. Charge rental on all real estate or buildings owned by you and used in your business at a rate equal to that which you would receive if renting or leasing it to others.

3rd. Charge, in addition to what you would pay for hired help, an amount equal to what your services would be worth to others, also treat in like manner the services of any member of your family employed in the business, but not on your regular pay-roll.

4th. Charge depreciation on all goods carried over, on which you may have to make a less price because of change in style, damage, or other cause.

5th. Charge depreciation on buildings, tools, fixtures, or anything else suffering from age or wear and tear.

6th. Charge the amounts donated or subscriptions paid.

7th. Charge all fixed expense, such as taxes, insurance, water, light, fuel, etc.

8th. Charge all incidental expense, such as drayage, postage, office supplies, livery, or expense of horses or wagons, telegrams, and 'phones, advertising, canvassing, etc.

9th. Charge losses of every character, including goods stolen or sent out and not charged, allowances made to customers, bad debts, etc.

10th. Charge collection expense.

11th. Charge any expense not enumerated above.

12th. When you have ascertained what the sum of all the foregoing items is, prove it by your books, and you will have your total expense for the year, then divide this figure by the total of your sales, and it will show the percent which it has cost you to do business.

13th. Take this percent and deduct it from the price of any article you have sold, then subtract from the remainder what it cost you (invoice price and freight) and the result will show your net profit or loss on the article.

14th. Go over the selling prices of the various articles you handle and see where you stand as to profits, and then get busy in putting your selling figures on a profitable basis, and talk it over with your competitor, as well.

Cost of Doing Business—Figure it Out

An article cost $1.00 to manufacture. The expenses of selling the article are 18 per cent. For what must it sell to make a net profit of 10 per cent.?

Nine out of ten men can't solve it. Can you?

Practically every business arithmetic on the market would give $1.28, taking the first cost as the basis for estimating cost of sales and profit.

Imagine our surprise upon being informed that the result is $1.39, the author insisting that the expense of selling and the cost should be quoted on the basis of the selling price.

Many failures in business are due to the practice of basing desired profits on cost. Yet, many business men seem to have persistently refused to acknowledge that any per cent. of a smaller sum is a smaller percent of a larger sum; that if a fixed sum is a certain per-cent of a certain sum, it is a smaller percent of a larger sum, or, to put it correctly, that if 25 is 25 per cent. of 100, it is only 20 per cent. of 125, and 25 per cent. increase over cost is 20 per cent. profit on the selling price.

Applying the above example to the retail lumber business:

Stock costing $20 per M. should be sold for $28 per M.
Stock costing $30 per M. should be sold for $42 per M.
Stock costing $40 per M. should be sold for $55 per M.

Government statistics for 1914 on 250,000 corporations throughout the United States give the following information:

10,000 made more than $5,000 profit for the year.
190,000 made less than $5,000 profit for the year.
50,000 showed a loss.

Statement of the Retail Lumber Company

Inventory, on hand January 1st, 1915	$25,000	
Stock purchased during 1915	88,000	
	$113,000	
Inventory, on hand January 1st, 1916	30,000	
Mdse cost for 1915	$83,000	
Sales		$125,000
Mdse. cost	$83,000	
Carpenter wages	5,400	
Power in mill	300	
Depreciation in machines	300	
Other mill expense	1,000	90,000
Gross profit		$35,000
Expenses		
Yard wages	$5,000	
Rent	2,500	
Insurance	400	
Office salaries	6,000	
Hauling expense	5,700	
Drivers, feed, harness repair, wagon repair, shoeing, depreciation).		
Advertising	600	
Bad accounts	1,000	
Office supplies (light, heat, telephone service)	600	
Interest and discount	700	22,500
Net profit		$12,500
Cost to do business	18 per cent. on sales	
Net profit	10 per cent. on sales	
Gross profit	28 per cent. on sales	

In order to obtain above profit you must add forty per cent. to cost of material, as follows:

Lumber costing $20 per M. should be sold at $28 per M. ft.
Lumber costing $50 per M. should be sold at $70 per M. ft.

If lumber must be surfaced or work in mill this additional expense should be added to cost before adding forty per cent for selling price.

The following sample statement of a retail lumber company shows in concrete form the way in which this end of the business is handled by a successful firm:

An illustration of the relation existing between profit, overhead expense, selling price and the volume of business is shown in the following table, from which it will be seen that it is far more important to get a price that includes a real profit, than it is to turn over a large quantity of stock.

Large sales and small profits, or smaller sales and larger profits (All based on same priced lumber and 20 per cent expense of doing business).

Ft. Handled.	Cost per M.	Percent Added.	Selling Price.	20 Percent Overhead.	Profit per M.	Total Profit.
4,000,000	$23.00	25%	$28.75	$5.75	$0.00	$0000
3,000,000	23.00	30%	29.90	5.98	.92	2760
1,500,000	23.00	35%	31.05	6.21	1.84	2760
1,000,000	23.00	40%	32.20	6.44	2.76	2760

An analysis of the average expense of a retail yard doing business in a small town, as worked out from a large number of reports received shows the following results:—

	Per M. ft.
Unloading	$ .50
Loading on wagons	.50
Hauling and delivery	1.00
Depreciation of equipment and sundry expense	.75
Rent	.25
Insurance	.10
Interest on borrowed money	.25
Interest on capital invested	.50
Office expense, light, heat, telephone, office supplies, etc.	.50
Management expense	.50
Bad accounts	.25
Advertising	.25
	$5.35

The figures and ideas given above, while the result of actual experience covering many years' business, are not given as hard and fast rules by which to regulate the affairs of any yard. Local conditions will always have to be considered, which will affect results. We would appreciate an opportunity of expanding upon these ideas by publishing the conclusions reached by retail readers in their own business. Let us have your opinions and experience to hand on to others.

Timber Trade of the Fiji Islands

A Comparatively Small Market, But One of Exceptional Interest to B. C. Shippers

The Fiji Islands afford a timber market depending exclusively, even in normal times, upon sailing vessels for transport. The market, therefore, possesses for the owners of sailing vessels now building on the Canadian Pacific coast an interest disproportionate to its size, says H. R. MacMillan, in a special report to the Department of Trade and Commerce, published in the Weekly Bulletin.

The total importations of timber into the Fiji Islands during the year 1914 are given in the following tabular statement:

Commodity.	Quantity, Feet, B.M.	Value.
Fruit case shooks	4,730,623	£10,598
Rough lumber	3,750,360	27,145
Dressed lumber	2,261,443	12,938
Sash and doors	.....	1,385
Total	10,742,425	£52,066

The islands produce no quantity of timber suitable either for general building purposes or for shooks for the important fruit exports.

Douglas fir is the universal building material. There being no sawmills, all timber is imported in the sizes in which it is to be used. The trade of the islands is in the hands of two importing companies, who carry stocks at the principal ports—Levuka and Suva. Sailing vessels only are suitable for the trade. Vessels carrying 600,000 to 1,200,000 feet are preferred.

The long use of Douglas fir under tropical conditions in the Fiji Islands affords a valuable illustration of the suitability of the timber for service in the tropics. Buildings built thirty years ago with Douglas fir flooring, studding, and siding are still standing sonud in Suva.

White ants are present everywhere, though not so voracious as in parts of India, Africa, and Australia. Douglas fir is regarded in Suva as ant resistant. Where New Zealand kauri and Douglas fir were placed side by side as studding several years ago the kauri has been eaten out by white ants and the Douglas fir remains sound.

The only railways existing in the islands are those operated by the sugar companies, some of which reach a length of sixty miles. Up to the present the sleepers have been of Australian ironbark. The high price and growing scarcity of this timber renders possible competition by creosoted Douglas fir in times of normal freight rates. This question should be taken up by Canadian exporters of creosoted fir sleepers.

Canada stands first in the list of countries supplying Fiji with timber. The position is due not so much to the exportation of lumber as to the facilities which the Canadian and Australian Royal Mail Line have afforded for capturing the fruit-case market.

The prospects are good for increasing the proportion of Canadian exports. The exports from the United States to Fiji consist wholly of Douglas fir. The existence of Canadian-owned sailing vessels will enable lumber manufacturers to quote competitive c.i.f. prices and secure a large share of the trade.

The most important section of the timber trade in Fiji is the supplying of fruit cases. No woods suitable for fruit cases have been exploited on the islands. The Australian woods are unsuitable. The Canadian woods have established over the New Zealand shooks a superiority in price, delivery, and sustained quality. So long as it is possible to make regular monthly deliveries by the Canadian-Australian line or periodic deliveries by schooner sailings with lumber cargoes Canadian exporters will command this increasing trade.

The chief opportunity for Canada in rough lumber lies in the fact that the United States exports are now twice the volume of the Canadian. Canadian lumber is preferred to the United States lumber, but up to the present there has been only one Canadian exporting firm quoting competitive c.i.f. prices with which Fiji importers have been able to form permanent connections. As soon as another Canadian firm takes up the trade persistently Canadian exports will increase. The name of an important importer desirous of forming Canadian connections may be secured from the Commercial Intelligence Branch of the Department of Trade and Commerce, Ottawa.

The rough lumber imported into Fiji is nearly all in one and two-inch thicknesses, widths up to twelve inches, about half merchantable and half select.

About half the Douglas fir imported to Fiji is dressed, the lines being flooring, drop siding, ceiling, and partition stock. The interior finish used is wholly Douglas fir, chiefly in Pacific Coast standard sizes of beaded and V-jointed ceiling and partition stock. Practically no panelling is used. The market for wide panelling or three-ply for interior trim is capable of only very slight development. Douglas fir shelving is used to a limited extent for shelving in competition with New Zealand kauri. For this purpose wide clears are imported.

In a trip extending through several European countries, Africa, India, and Australia, the Fiji Islands were the only point visited where Douglas fir flooring was in use as a staple article. That Douglas fir flooring should be in almost as universal use in tropical Fiji as in British Columbia is an indication that an active policy of market development would greatly extend its use in other southern and eastern countries in competition with the Scandinavian flooring now used or the tropical hardwoods likely to be developed in the next decade or two.

The specifications for Fiji cargoes usually provide that each shipment is approximately half rough and half dressed lumber.

Canada at present supplies less than one-quarter of Fiji's imports of dressed lumber and only one-third of Fiji's imports of dressed Douglas fir.

Fiji is dependent entirely on outside sources for doors and sash. New Zealand and Australia have up to the present done the whole of the trade.

The manufacture of doors is at least three times as costly both in New Zealand and Australia as it is in Canada. Australia, in particular, is dependent upon imported timber for doors and sash. This is to an important degree true also of New Zealand. The fact that Canadian manufacturers have been able to build up an important market in New Zealand itself and that where quality is considered, as well as price, Canadian doors can be sold in Australia, makes it certain that Canadian door exporters may, if they desire, secure the whole of the Fiji trade. The regular sailings of the mail line from British Columbia ports to Suva afford Canadians an opportunity for dominating the door trade as they already have the shook trade.

The names of the chief importers of doors may be obtained from the Department of Trade and Commerce.

The use of fir doors may be expected to develop a small demand for fir, three-ply, for interior finish.

In all foreign markets visited the use of fir doors has been the chief agent in introducing a further use of fir in panels or three-ply wainscotting and accompanying interior finish.

Canadian exporters may secure the whole of the Fiji trade if they desire it at the governing prices. The names of importers desirous of receiving Canadian quotations when they are next in the market may be secured from the Commercial Intelligence Branch of the Department of Trade and Commerce, Ottawa.

The Fiji trade is important to British Columbia shipping interests in that it is entirely dependent, even in normal times, upon sailing vessel shipments. The size of the market and the limited discharging facilities render impossible the acceptance of steamer cargoes. Conditions in Fiji may further be taken as indicative of the remainder of the South Sea Island trade, amounting normally to 10,000,000 feet annually. This trade has in the past gone almost wholly to United States ports, and has furnished eight to ten sailings yearly for American schooners, most of which receive return cargoes.

The South Sea Islands may not be regarded at the present time as a market worthy the attention of Canadian exports. They constitute, however, over 10 per cent. of the market open to lumber-carrying schooners during periods of normal freight rates. Connections formed in these islands now, by the managing agents of the schooners building in Canadian ports, will prove valuable when the tramp steamer again enters the Australian timber carrying trade.

There is no preferential tariff in Fiji for British products. The general tariff on timber products is as follows:

Class of timber.	Customs tariff, per cent. ad valorem.
Timber cut for cases, not exceeding 3 feet in length	12½
Doors and sash	12½
Timber, dressed or undressed, not over two inches wide	12½

	Per hundred feet. s.	d.
Undressed timber, over two inches wide	1	6
Dressed timber, over two inches wide	2	0

Representatives of American lumber interests, aided by the United States Government, laid plans, at a conference at Chicago recently, for sending expert business promoters to Europe to obtain a share of the business of reconstruction after the war. The conference was called by Dr. E. E. Pratt, chief of the Bureau of Foreign and Domestic Commerce. Agents for the lumbermen will leave for Europe, probably in November, accompanied by Government experts, to study trade conditions.

Early Days Among Loggers

Reminiscences of a Pioneer Recalling Stirring Events of Three Score Years

Life along the St. John River during my early boyhood was full of activity; and in the forest or on the farm every moment of the day, from dawn until twilight, was given up to labor. The period was one of abounding prosperity. The demand for timber from abroad, especially for masts and spars, was apparently unlimited and as the forests were cleared away the fertile soil, especially in the intervals, yielded rich harvests. These opportunities were the goal for an unending stream of immigrants principally from Ireland and Scotland.

The St. John River, the broad thoroughfare to the sea, was a constantly shifting panorama of the industries which prevailed along its banks, from the wilderness above to the city at its mouth where the tide rolls in with resistless energy from the Bay of Fundy. At Hartland and Spring Hill I saw, as a child, the products of the forest go by in an endless stream of rafts, the towboats laden with supplies for the farms, the canoes of the Indians and white men, the pirogues of the Acadians carrying to market the woolen garments made from their own flocks of sheep, and maple sugar obtained in the woods. Even at night it was not still. Through the darkness flared the flambeaux of the fishermen, the lure of the salmon of which its waters yielded rich harvest.

The lands bordering upon the river from the mouth to Grand Falls, over which I have seen huge logs plunge like ships in a torrent, were considered from the point of view of the time a well settled area. Villages and small settlements were numerous and at intervals between them were small water-mills, taverns and stores at which the farmers obtained their supplies. In addition to the common occupations, farming and lumbering, vessel-building had become a well established industry. It was carried on at Hartland, Squire Nevers' place and at Taylor town and Sheffield—the one above, the other below, Maugerville. It is recorded that Benedict Arnold, who took refuge in the province and lived for a time at St. John, came into possession by not altogether honorable means of the Lord Sheffield, the first ship built on the river. As far back as 1800, sixty-seven ships were launched on the St. John; and at one time during that period two hundred square rigged vessels lay in St. John harbor awaiting cargoes.

For those who were old enough life meant, at this time, little more than hard work. My father gave his attention to the farm during the summer time. In the winter and spring he was away in the woods, lumbering or logging. This routine was followed by most of the men on the upper St. John; and not a few of them, when the long day was over, came home to thresh grain and attend to the needs of their live stock.

The Maine Boundary Dispute

The most important historical event of which I have a clear recollection was the controversy in 1839 over the boundary between Maine and New Brunswick, sometimes called the Aroostook War. In the diminishing perspective of three-quarters of a century this incident appears to have been of little consequence, but in the environment in which I lived it loomed large in its proportions and to the people of the province it was a matter of grave portent.

The region involved in the controversy was that in which my father lumbered and was generally known as Madawaska, the territory originally occupied by the Acadians when they were transferred from their earlier settlements along the St. John.

Under the shadow of war in 1839 lumbering operations in Aroostook County and along the upper St. John generally ceased. On March 1st eight hundred fusiliers arrived in St. John from Cork and five hundred British regulars were sent to Madawaska. The farmers and lumbermen of the vicinity under British jurisdiction were pressed into service to haul soldiers to Quebec where the garrison was being strengthened; and on both sides of the boundary the militia was held in readiness for war, trains of sleighs laden with soldiers and munitions stretching along the roads through the forests.

Fortunately, the war over the boundary was averted largely through the efforts of Sir John Harvey, Governor of New Brunswick, and General Winfield Scott.

At this time the dominating industry along the St. John River which overshadowed every other activity was lumbering. It was to the forests that the province owed in greatest measure its prosperity and its rapid development. From the very outset of its history they attracted the attention of explorers. French and English navigators skirting the shores of the St. John River observed that the trees were of a size far greater than those yielded by the forests of the old world, and because of their straight trunks and great height were incomparable for masts and spars. Nowhere else, it was thought, could such timber be obtained, and the constantly increasing size of sailing vessels demanded loftier masts for their equipment.

When the English dominion was extended into Canada, after the battle of Quebec, the English Government itself adopted a plan prohibiting the cutting of pine trees within three miles of the shores of the St. John River. Later surveyors of the Crown were sent into the woods to select trees suitable for masts, which they marked with broad arrows. Afterward this plan was abandoned and a law was passed allowing a bounty for trees beyond a certain size. This, I believe, is still in effect, although it is no longer observed.

Commencement of the Mast Industry

Immediately after the Revolution, when the supply from the colonies was cut off, the British Government entered into contracts with New Brunswick lumbermen to provide masts for the Royal Navy, and two or three firms took up the work. The arrival of the first cargo at Halifax on the way to England in a navy transport was considered of such importance that it was announced to the British Secretary of State by the Lieutenant-Governor.

The rivalry to obtain suitable trees was keen among these early operators. The importance which the industry assumed may be gathered from the Francklin, Hazen and White correspondence, according to which success was measured in terms of the number and size of logs obtained. "I take this opportunity," Peabody, one of the agents wrote to his firm in 1782, "of acquainting you that I have the offer of about twenty sticks from Samuel Nevers and Mr. Tapley. The sticks is well sized, one mast of 30 inches and one 23 inch Card, and others of lower sizes. I finished hauling masts at Roosegwanis last Thursday. Got out 37 sticks without any misfortune, and tomorrow morning shall move our teams to Glazier's, where I expect to get out 40 or 45 sticks.

The greater proportion of merchantable timber at this time was ton timber or hewn timber, although some lumber was sawed in the small water-mills along the river and at St. John. A ton or load was twelve inches square and forty feet long. Sometimes as much as eight or ten tons were obtained from a single pine tree and timber from twenty to thirty inches square was exceedingly valuable. In this form it was transported, in ships built especially for that purpose, to England, Ireland and Scotland, where it was in great demand, and whip-sawed by hand.

Saw the Forests Melt Away

To digress for a moment; I doubt whether anyone has a keener realization than I of the extent to which the timber resources of the United States are being exhausted. When I was a boy the thousands of rafts floated down the St. John River gave evidence of the wealth of the forests that were falling before the axe of the colonist and the lumberman. Later, when I went to Maine with my father, the upper reaches of the Penobscot poured a constant stream of logs down to the busy mills between Oldtown and Bangor. What the great stretch of continent to the westward was to yield in the way of timber was as yet a closed book, some of the pages of which I myself turned from day to day in the way of work and experience. It fell to my lot in some measure to blaze a way through some of the most extensive forests that have added millions to the wealth of the country and contributed more than can be easily estimated to its upbuilding.

Within the limits of a single lifetime, a rather long lifetime, perhaps, what once seemed to be illimitable stretches of virgin forest in New Brunswick, in Maine, in Wisconsin and Michigan, have melted away before the westward tide of settlement. The scarcity of timber that seemed so remote then is now ominiously close. I have seen the pine forests of Wisconsin and Michigan, untracked by white men, disappear, the hard woods going and the developed farms spreading over what was not many years ago the heart of the wilderness.

East of the Rocky Mountains timber has been cut so rapidly that there is now a scarcity of raw material for lumber, ties, pulpwood, and other products. The question of reforestation is upon us. Devastated areas must be replanted and the resources that still remain to us husbanded. This, of course, will be a slow process. From now until our efforts have yielded fruit we must look to Canada, where there is an immense wilderness of forest north of Lake Superior and west of Hudson Bay, for lumber, pulp and pulpwood. From this region the eastern portion of the United States can be supplied, and for this reason I believe there should be no tariff on lumber or any raw material coming from Canada. As a matter of fact, I am in favor of the free admission of all raw material.

Twenty-five years ago the Menominee River region was producing more logs than any other place in the world, between seven and eight hundred million feet a year, and many of the more experienced lumbermen were reaping the harvest that had been awaiting the axe from immemorial time. If the prediction had been made then that the pine timber would have been exhausted in a quarter of a century,

* From "Recollections of a Long Life, 1829-1915," by Isaac Stephenson.

it would have been received with derision. Yet this has come to pass.

There are still great forests in California, Oregon, and Washington, but I now venture to make the prohpecy that in another twenty-five years this supply will be practically exhausted if restrictive measures are not imposed upon the activities of the lumbermen. What with the cutting and the waste, the devastating forest fires, and the perisistent extension of the cultivated land area, timber will be scarce and we shall be obliged to look to the British possessions for our supply.

The Use of Wire Rope

Wire ropes are in such general use among the sawmills for logging and log handling that some technical knowledge in the selection and care of ropes should be of interest and advantage, so there are offered here some features pertaining to rope handling, that were developed recently at a mining institute under the subject of the care of wire rope.

The first essential seems to be that of selecting a rope of the right size and lay for the work in hand. If a rope is too large it is not only burdensome to handle but the bending strain is increased, and in the end the user pays more for rope than if he had bought smaller rope. The right idea is to secure rope of just the size needed for the work to be done, making the proper allowance for safety.

Unusually in wire rope calculations the allowance for safety is a factor of 5 to 7. This means that the breaking strain of a rope of a given size should be divided by the factor of 5 or 7 and the answer will be the largest load it should handle. Or, taking it another way, know the largest load that should be handled, multiply this by the factor of 5 or 7 and you have the tensile strength necessary in your rope; and this, in turn, will furnish a gauge to the size of rope that should be used.

The tensile strength of wire ropes range from a minimum of 60,000 pounds per square inch of cross section for iron to approximately 280,000 pounds per inch for the better quality of steel ropes.

This means that with an iron rope of one-inch cross section the largest load handled should not exceed 12,000 pounds, using the factor of 5, whereas if it were a good steel rope one inch of cross section, using the factor of 5, would be good for handling a load of 56,000 pounds.

When one buys a size or a grade of rope that will not insure a proper factor of safety, the result is a continual over-straining of the rope, and eventually it will give way under some sudden load, and, if it does no other damage, it will mean providing a new rope in so much shorter time that it would have been better to have provided the right kind of a rope in the beginning, either one of larger size or of a higher quality of material, so as to insure the proper factor of safety. Besides that, there is the element of danger attached to breaking ropes.

The majority of wire ropes are made with a fibrous centre usually termed hemp, though a number of different fibrous materials are used by the various manufacturers. There are some cases where ropes are subject to heat and soft iron centres are substitutes for the hemp and, on some occasions, steel centres are used. The general run of rope, however, for outside operations are with hemp centres, around which are wound the lays of the rope. What is means by the lay of the rope is the distance in length for each complete revolution or twist of a strand. The usual length of a lay is seven times the diameter of the rope, which in the case of a rope one inch in diameter would be 7 inches, from the exact top centre of one twist to the next. To vary this, to shorten the length of the lay adds flexibility to the rope, while to lengthen the lay increases the stiffness of the rope. In other words, a rope with comparatively short twists in it is more flexible than one of longer twists.

It is pointed out that the three desirable factors in a wire rope are strength, toughness, and flexibility. There must be strength enough to sustain the load with a reasonable factor of safety, which is given as from 5 to 7, it must have enough flexibility to minimize the bending stress, and finally the wires must be of such a size as to withstand a reasonable reduction in size through abrasion, and they must be tough to resist the tendency to crystallization and become brittle from bending and from rapid operations. Sometimes it is found that no one factor here can be increased materially without detracting from the other. For example, to get toughness and freedom from crystallization often calls for softer metal, which, in turn, will wear quicker from abrasion. So a sort of happy medium must be arrived at from a consideration of the service to be given, and the needs to secure long life and safety in a rope for this service. For example, a rope that is subject to unusual abrasive wear may well be made a little harder, and some sacrifice must be made of the toughening qualities to get resistance to abrasion. All these things, however, must be handled thoughtfully and by men who understand thoroughly what they are doing.

While the use of rope too small is bad practice and dangerous practice, one should not, for this reason, go to the other extreme and use rope too large, because a rope too large is stiffer, using up unnecessary power in bending, and it is heavy to handle. The right idea is to get specific data on the tensile strength of the rope to be used. Then taken into consideration the largest load likely to be handled and the average load handled regularly, and from this figure out the exact size that will give the required factor of safety.

In using rope one should guard against what is termed over-winding on the drum. To wind one layer of rope over another on a drum increases the wear on the rope, especially if it is allowed to wind and overwind unevenly. Also it is likely to jam and mesh, and, wherever practical, one should avoid overwinding. Also the guiding sheive should be set far enough from the drum that there may not be short angles. This makes the load easier and saves bending strain.

Proper lubrication is another item of importance. This is important not only in determining, or rather regulating, the wear of the rope, but in protecting it from what might be termed interior decay. A wire rope must be lubricated for this purpose, because, in winding around the drum and running over sheives, the rope bends and the strands and wires move on each other, and they must be kept lubricated to prevent excessive wear. Also lubrication serves to prevent corrosion.

Generally when wire ropes are made they are thoroughly lubricated through and through, and it is important for the user of the rope to keep up the good work by supplying lubrication from time to time as it is needed.

The question of the best lubricant for a rope is the subject of just as much discussion as the best lubricant for machinery bearings. There are many different ideas and opinions, but when they are all summed up, what they amount to is that a lubricant should have friction-reducing qualities and staying qualities—that is, it should have the quality of adhering to the metal and staying on the job. About the best way to determine the right lubricant to use here is the same as in the case of machinery. Try a few of those offered, study the claims made for them, and watch the results. In time you will not only come to understand fairly well what lubricant to use, but also how often and in what manner to apply it.

Careful attention to lubrication will do much to lengthen the life of a wire rope and to insure good, satisfactory service from it.

The 25th annual meeting of the Concatenated Order of Hoo-Hoo will be held in Memphis, Tenn., on September 9th to 12th at the Hotel Chisca.

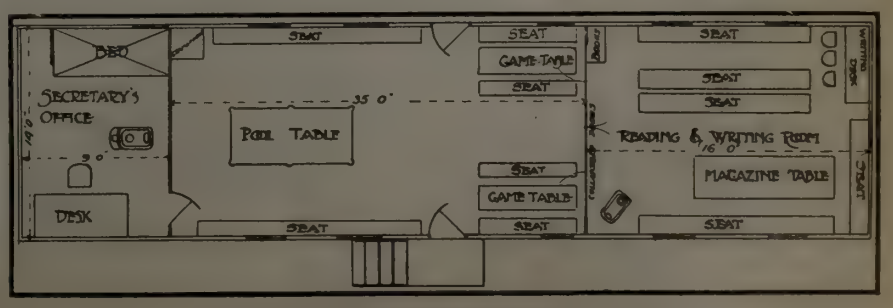
A Pacific Coast Lumber Company's Y. M. C. A. Car

The dedication of a car for the Industrial branch of the Y.M.C.A., to be used both for the mill town and the logging camps of a Pacific Coast lumber company took place recently. The car is constructed upon a set of standard trucks and is 60 feet in length and 14 feet wide, giving ample facilities for general games and lounge room, reading and writing room, also office and bedroom for the local secretary. The plan herewith shown gives a clear idea of the furnishing and equipment. The car is equipped with air brakes and is admirably constructed for the purpose. It is proposed to keep the car at both the mill town and the camps for a period of two weeks each. Should the innovation prove a success, a permanent Y.M.C.A. may be built at the mill town, and the car utilized entirely by the logging camps.

The Y. M. C. A. work in logging camps is divided into three main units; physical, educational and moral. The physical work embraces boxing and punching the bag, fencing, contests of all kinds, log rolling, games, etc. The educational work embraces general educational talks, literature, magazines and a circulating library. The moral and religious work consists of personal influences of the secretary on the men and the holding of religious meetings every Sunday night. Memiorial services are held in case of death occurring in a camp.

These industrial branches are possible under the following conditions. The employer agrees to build the car and pay the salary of the secretary on one hand, and the employees agree to raise the money to furnish and equip the interior and its maintenance.

Membership costs $1 for three months, or $3 per annum, holders of membership cards being entitled to privileges in any Y. M. C. A. building in any part of the world.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Bad Accounts a Drag Upon Business

A Rational Plan for Extending Credit Based on Co-operation Among Dealers the Only Feasible Protection Against Loss

By G. W. Bulmer

Credits and terms of sale seem to me to be two of the big problems the retail lumberman has to solve. The weak spot in the operation of the average retail lumber business is found in the way we promiscuously extend credit to Tom, Dick, and Harry without definitely knowing whether they are really safe gentlemen to extend this credit to. And we send wagon after wagon load of what we believe to be the finest lumber that ever happened, and which cost lots of real money, to Tom, Dick, and Harry, their uncles and their aunts, their sisters and brothers, without saying a word about when, how, or where it is to be paid for.

I'll bet a dollar to a doughnut there is hardly a retail lumberman that has not noticed with horror that the accounts decorating his ledger on August 1 amount to more in dollars and cents than his total sales from inventory since the first of the year. That's pretty nearly a fact, is it not? We will all hurry home to get our share of the fine business that's coming up, but will find that we haven't as much time to devote to it as we would like to have because we must get out and hustle for our share of the crop money before it is all gone. And, even after hustling like candidates for office from September to February, and smoking out everything that looked like a loose dollar, we find that 40 per cent. of our previous year's sales are still on the books, and we figure we have fought a good fight, but have been whipped to a frazzle once more. So, in admiration, we take off our hats to the butcher, the baker, and the candlestick maker because they had been wise enough to find out if good old Uncle Tom had the wherewithal to pay—and, if he hadn't, promptly told him that there'd be nothing doing in the way of credit unless he put up security. So the country clerk was as busy as a nailer recording securities in favor of those wise guys, and the lumberman had the pleasure of watching them carry off not only the cream, but the smear case as well, and the lumberman humbly sneaked off with the whey.

Now, gentlemen, I'm not going to take up your time talking about how much this grey-whiskered, bald-headed custom in the lumber business costs us, but, believe me, the accounts we wipe off the slate, the cost of collection, the legal fuss, the tieing up of capital that we need so badly in our business, the weeping and wailing and gnashing of teeth, the stenographers we employ, the stamps and stationery we waste, the salaries of collectors and special help, the oceans of gasoline we burn in our little old cars amount to a pretty penny at the end of the year, and gather unto their vampire bosoms a chunk of the gross profits of our business that would prove astounding.

Here's another way it works out: A business that nets you $1,500 at the end of the year returns 15 per cent. net on an investment of $10,000, which on analysis, shows that $6,000 is in stock and plant and $4,000 in accounts. So you smile a smile like a slice out of a watermelon and next year you get $1,500 out of that same little old business again. But behold! when you figure up your profit on your investment you find that you have only made 8 per cent. out of the same business, and the whole thing comes out in the wash when you find that whereas you still have $6,000 in plant and stock, your outstanding accounts have jumped up to $12,000 on a total investment of $18,000. Your smile fades away into a scowl when you realize that your business is no longer a profitable one, and you wonder if you're not getting old, and consider selling the darned old business, lock, stock, and barrel, and putting your money out at 8 per cent. on gilt-edged security. And I'll bet you'd do it mighty quick, too, if it wasn't for the fact that half of your operating capital was borrowed. But that's another story, too, if you tumble to the fact that your borrowed capital costs you 9 per cent., and the best you were able to make it earn was 8 per cent., or a net loss of 1 per cent. in the shuffle.

I want to say this—and I want to say it as loudly as I can—and I believe every man here will chime in "Ab-so-lute-ly!" when I say that it's time the retail lumber dealers adopted, first, some kind of a system for the intelligent extension of credits, and, second, certain definite terms upon which our merchandise shall be sold, and sold on those terms only.

Credit Rating Reports Formulated.

A year ago our company formulated what we call a credit rating report. One side of this report blank bears the form of a very complete property statement; the other side is a blank form, wherein the name and address of the person reported upon is inserted, as well as general information bearing upon his credit standing. Below is a blank space, on one side of which are listed all instruments and judgments recorded against him, and on the other side are listed all releases. This information is secured from bulletins published by the abstractors in business at the various county seats, and the service costs $15 a year in advance or $24 a year on time. Even the abstractor, you see, knows the value of cash on the counter.

We don't wait for trouble to happen, but as soon as a new man comes into a community we put his name down on one of these reports, as well as the information we can get, and then watch the bulletins. He may be doing business with the lumber company down the street, and we don't know much about him except in a general way; but when finally he comes in to buy a granary bill on credit and we turn to our book for a look and find his homestead mortgaged for $1,200, including an interest mortgage for $120 and a chattel mortgage on everything he has under the sun, including his two old nags, Tom and Jerry, hitched to the wagon with which he hopes to haul out our lumber, we can turn him down without batting an eye. We don't even go to the trouble of having him sign the property statement unless we're curious to know if Ananias is really a back number when it comes to fancy fabrication. Our general report tells the story, and we rarely use the property statement anyway except when we're in doubt.

A year ago we were struck with the brilliant idea that we'd establish definite terms of sale and stick to them. All bills were to be figured in our "Estimate Book." If the estimate was sold and cash paid on the nail, our proposition was to allow 5 per cent. discount from our retail price. If the customer bought on credit we proposed that he immediately sign a note, rate of interest 10 per cent.—no interest to be charged for the first sixty days if paid when due. We figured to file a lien or demand other security for all notes where there was the least doubt about the customer's ability to pay. Do you think we could put it over? Not on your life. If we had adhered to our policy the tumble weeds would now be growing a mighty forest in the alleys of the lumber yards. So, instead of putting into effect a plan that we felt sure would minimize our troubles, we went back to the old way of getting the purchaser to sign a contract properly, setting forth the terms of sale and taking notes for credit sales where we could get away with it—and instead of having what we hoped to have to-day—90 per cent. of our accounts in the form of notes all bearing interest—we have a scant 50 per cent., and no hope for the future.

Your book accounts are smashing, telling blows on the solar plexus of your business. How long will the business stand it? Your customers are complaining, too, of high prices, yet your profit is only a very common, every-day profit, indeed. The burden of accounts your business is carrying is almost entirely responsible for this condition.

One man or one firm cannot remedy the situation—cannot establish definite terms of sale—but if the lumber dealers of a district would put in effect some rational plan for extending credit I feel that it would be a huge success. As I see it, it is a cinch that something of this kind must be done, because if you continue to load down your business with the handicap of the careless, inefficient methods of yesterday and enter in the race with the keener competition of to-day, something is going to happen, sure's you're born.

Let us figure out some system for the intelligent distribution of credits. Allow the cash customer the discount he's entitled to; get a note from the customer at the time of sale, with proper security where necessary; then let us put the plan into permanent and absolute effect, and I'll promise you that you'll grow fatter and sleep easier in the days to come and you'll find fewer grey hairs in your head and more profits in the bank when you size up your business at the end of the year.

Death of J. O. Smith

Many readers of the Canada Lumberman will regret to learn of the recent death of Mr. J. O. Smith, superintendent of the mills of the Spanish River Lumber Company, Limited, at Aird Island and Cutler, Ont. In our issue of September 1st we reported that Mr. Smith was on sick leave and that his many friends were hoping he would soon be back at work. Unfortunately these good wishes were of no avail. Mr. Smith passed away at Detroit, Mich., on August 30th. The mills of the Spanish River Lumber Company, Limited, at Aird Island and Cutler had always been under the superintendence of Mr. J. O. Smith, who came from Bay City, Mich. He was a gentleman of extremely genial disposition, hail fellow, well met, wherever he happened to be, and he will be greatly missed, both by the company and by the large number of lumbermen throughout Ontario to whom he was personally known.

A Unique Logging Railroad Bridge

By Samuel A. Stamm*

Hamilton Creek Logging Company, Hamilton, Wash., is constructing the Lyman Pass R. R. This road will have no adverse grade and a maximum of 3.75 per cent. grade in favor of the load. In crossing Red Cabin creek a gap 132 feet deep by 600 feet in length was encountered. In spanning this a unique bridging structure was evolved.

The bridge is of the single storey bent type; 132 feet in height from the water level to the top of the rail, and 600 feet long. The construction material consisted of fir poles in various lengths, from 70 to 130 feet with 14 inch tops, which were brought in from the camps. The mud sills varying from 30 to 70 feet were obtained on the ground. The caps 16 in. x 16 in. x 16 ft. long and 3 in. x 12 in. bracing material were mill sawed timber. The stringers, hewn with a 16 inch face and 16 inch depth by 42 feet long were imported from the camp.

The mode of construction and the details thereof are worthy of mention and will be outlined in the order in which they were encountered in constructing the bridge. The mud sills are spaced 20 feet centre to centre. The notches for the plumb and batter posts are 24 inches wide and cut to the same level; the ones for the plumb post being spaced 4 feet 8 inches centre to centre, those for the batter posts are spaced as figured on the basis of 2 feet centre to centre from the plumb to the batter post on top and a 2-inch per foot batter. The heel daps were cut on a line at right angles to the centre line of the bridge, thus aiding the framing and squaring of the bents. Twenty-one bents were framed, squared and braced on the ground. The poles were carried out to the proper bent on the sky line by one donkey and hauled side wise to place by another donkey; the butt of the post being placed in the heel dap, the tops spaced 4 feet 8 inches centre to centre of the plumb posts and 2 feet centre to centre from the plumb post to the batter post; the cap was then made fast to each post with a ¾ in. x 26 in. drift bolt. The top of this skeleton bent was shifted so that the centre of the cap coincided with the centre line of the bridge; thus squaring it on the ground, where it was braced on one side, thereby insuring a uniform turning of the posts on their respective heels while they were being raised. Also that they would stand square and firm after being raised. Those bents farthest from the donkey were put together, squared and framed first; each succeeding one was laid, tier on tier, on the previous one. The bracing material for the other side of each bent was sorted, as per following list, and placed off to one side of the mud sill of the bent on which it was to be used. Longitudinal bracing poles were also distributed along so as to do away with hauling after starting to raise the bents.

List of 3 x 12 Bracing Material

Bent No.	18′	20′	26′	28′	34′	36′	40′.	44′	46′
1	.....	2	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	2	.....	.....	.....	.....	.....
3	2	.....	4	.....	.....	.....	.....	.....	.....
4	2	.....	2	.....	.....	.....	2	.....	.....
5	2	.....	4	2	.....	.....	2	.....	.....
6	2	.....	8	2	2	2	.....	.....	.....
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11	2	.....	4	2	2	2	4	2	2
12	2	.....	4	2	2	2	4	2	2
13	2	.....	4	2	2	2	4	2	2
14	2	.....	4	2	2	2	4	2	2
15	2	.....	4	2	2	2	4	2	2
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Totals ..	52	2	108	58	38	38	40	30	34

* Logging Engineer, Tacoma, Wash.

Logging Railroad Bridge Across 600 ft. Gap, 132 ft. Deep

The first eight bents were put together in the air, each post being cut to length and placed in a semi-vertical position, i.e., the butt in the notch on the mud sill and the top leaning against a false cap swung from the cap of the last bent constructed. The proper spacing of the posts being observed the cap was made fast and the offside bracing put on. The bent was then tilted forward to its final vertical position, made fast by two planks on top, afterward braced on the other side and made fast to the bents previously erected with 5-inch top hemlock poles 45 feet long. After the eight bents were raised in this manner, a loading donkey on a 54-foot sled was hauled out onto the structure so that the front end of the sled overhung the last bent about 15 feet. Its sole office there being to haul bracing material up to the workmen as it was required to be put on the bents.

The remaining twenty-one bents were raised by the donkey on the bank with the assistance of a block and one-half purchase, in the vertical to the sky line. This, however, proved to be a hinderance in view of the fact that it brought the bent up by jerks and put a heavy bight in the sky line which threw an excessive strain into the top of the bent with a tendency toward breaking the top off. This was all overcome by using a double block purchase in the horizontal, i.e., two single blocks with crotch lines on the bent, a tail hold to a stump on the bank and a block lying on top of the cap of the last bent raised, which block was anchored by a 1⅜ inch cable to the donkey on the bank. This method brought the bent up very steadily so that there was no danger of jarring the posts off of their respective footings. The haulback was used to snub the bent from going beyond the vertical. After testing the bent for plumb it was made fast with two planks on top, then the sway and longitudinal was placed. The bent having been completed the donkey on the bridge was moved ahead to go through the same process as before.

Having raised and braced all bents thoroughly, the stringers were hauled out on the bridge and spotted in place. The ends having been trimmed off and the joints broken on alternate bents, they were drift bolted to the caps. Bridge ties 6 in. x 8 in., 12 feet long, surfaced two sides were spaced 18 inches centre to centre.

The consensus of opinion now is that the building of the bridge could have been facilitated by raising the individual poles on their proper footings, permitting the tops to lean back against a false cap swung from the last bent raised as in the case of the first eight bents, then measure the proper lengths of the poles; nail on a marking board and cut off the four poles to this board thereby acquiring a snug fit for the cap.

Newspapers recently received from Christiania, Norway, contain reports of the preparation of plans for establishing a large paper mill in Brazil, to be financed by Norwegian interests. The Oversea Company and the Young Company, of Christiania, are taking the lead in the formation of the new concern, with a minimum capital of 1,250,000 kroner. They will erect a mill at Pernambuco. Shares in the company will be valued at 1,000 kroner each. The output will be one-half kraft paper and one-half manilla paper.

The 238th Forestry Battalion, which has been raised by Lieut.-Col. W. R. Smyth for work in the forests of Great Britain, and possibly also on the Continent, left recently for Halifax, where they will spend some time in training before embarking for England. The regiment, which was recruited in a very short period, is something like 200 men over strength. A base company will be left over to join the 242nd Forestry Battalion, now under formation by Lieut.-Col. J. B. White, with headquarters at Montreal.

Dealer's Interest in Proper Painting

By R. H. Brooks

As a prologue to the subject of painting it appears pertinent to bring out one or two phases in the prosecution of the retailer's daily business that are closely related to the point at issue and yet which may have been overlooked by some of you. Therefore, this question:

Next to yourself, your family and your employees, what persons are most concerned in your lumber yard and the fact that you are a lumberman? Perhaps your answer is already on your tongue. In the majority of cases it is your creditors, the tax assessor and your immediate neighbor, who grows nervous when there is a high wind at night which blows from your direction.

Have You Done Your Part?

Have you, as a merchant, with a useful commodity to sell, done your part in helping your customer by selling him the wood best adapted to certain purposes, and have you kept faith with him in advising and counselling him in the uses of such wood? If you have, then each man or woman so treated is also interested in your business in more than an impersonal way, because you have done that vital thing which lifts you out of the storekeeper class and on to the higher plane where are found the successful merchants of this country, namely, to a place among those who render merchandising service. Did you ever stop to consider that service is the greatest profit getter known in business and that the more persons to whom real service is rendered the greater the returns? "Service" is a threadbare over-worked and much abused word, but it embodies in its widest sense every factor in commerce which makes for success. In your case it means that you tee your ball on reliable lumber; that you drive with honest sales arguments and that you follow through with your personal interest in seeing that each wood is used where the Lord meant it to be used and where you, as a God-fearing lumberman know it should be used.

Value of Enthusiasm

"Familiarity breeds contempt, but respect begets admiration." Do not get over familiar with the woods you handle, but rather respect them, study them, know them, and then you can admire them. Once you admire them you become enthusiastic. Following enthusiasm comes a desire to tell the other fellow what a fine thing such and such a wood is, and right away you have your man more interested in what the wood you are boosting will do than in what it costs. By boosting I do not mean merely superficial talk, but rather the expressing of a deeply founded, sincere admiration for the product.

I can perhaps best convey to you the attitude of the average retail lumberman towards his stock by relating as an instance a thing which we experienced during our exhibit at the Complete Building Show held at Cleveland. While that show was in session the Ohio retail lumbermen held their annual convention there. Of course, many of them visited the building show. Those lumbermen wore little ribbons which told who they were. Our exhibit was clearly identified by easily read signs. Some of those lumbermen stepped in for an inspection, but over forty, whom I personally saw, passed it by with only a look at the sign. I was not offended, nor did I feel slighted, but it stirred me to the core to realize that so many men of my business fraternity, every one of them selling our wood, unconsciously regarded themselves as so familiar with Arkansas soft pine that they could not learn anything new. Yet in that exhibit was information and display material which would have given each of those dealers some new idea and most helpful, valuable advice which it would have profited them to know. Merely emphasizing that familiarity breeds contempt. In passing just grasp this, that while those lumbermen passed by on the other side 122,000 consumers visited that show and a very comfortable percentage of them stopped at ours and other lumber exhibits and asked questions, rubbed their hands on the woods, requested literature, information, painting formulas and facts, which they took home and digested, and, as sure as we are here, a lot of them know more right now about the physical make-up and finishing possibilities of the wood which they saw than do those dealers who will eventually sell them, but who unfortunately think there is nothing new under the sun regarding their own merchandise.

Right Wood for Right Use

Your part begins before it is time to paint. First, sell the proper wood for the right use, either outside or in; then, instead of losing interest beyond the sale, follow through the point of instructing your customer in the proper painting or finishing formula. Some of you may be saying that you cannot do this because you do not know how. Our answer is, if you cannot that is your own fault, for several lumber associations will give you the information by any return mail. The paint manufacturers themselves will do the same thing.

Incident of Cleveland Show

Speaking of painting, during the Cleveland show a woman and her husband were attracted to our exhibit by a frame of finished specimens, one of which was done in white enamel. She exclaimed, "Isn't that a beautiful finish!" but a second later caught sight of the word "Pine" at the top of the frame. "What!" said she, on pine? Why, I have put nine coats of white enamel on my woodwork and it looks worse than ever." I asked her if it was "Georgia pine," and she said, "Yes," but before I could tell her the difference between the pine which she knew as Georgia pine and the pine of our state she flounced out of the booth with a final "Never again!" The whole trouble with that good woman was that an indifferent lumberman sold her long-leaf yellow pine for white enamel treatment, when in the general scheme of creation it was never intended for any such purpose. Long leaf, as we all know, has its rightful use, but the very qualities which make it desirable for those uses, namely, weight and heavy resinous content, likewise render it less desirable for certain other uses, among which is as a base for white enamel. No applied treatment can prevent the pitch from discoloring the white enamel from underneath, and as this fact has been demonstrated times without number the dealer who continues to sell it for this use commits an offense against his customer and his business and injures the cause of wood finish as a whole. Incidentally, we found out who the dealer was who sold the woman that particular bill. Taking an opportunity to ask him whether he made a point of explaining the adaptability of certain yellow pines to certain uses, his answer was, "No, we just sell it as Georgia pine or yellow pine and it goes." Well, it certainly did go that time. It went so far with that woman that it will never come back, and if she ever becomes a wealthy investor and puts up an office building, for example, depend upon it, her building will be finished throughout in steel trim.

Every Wood Has Its Rightful Place

Every wood has its rightful place and proper use, and as all woods are treated in one form or another with some form of applied paint, shellac, stain, varnish or enamel, there is a proper formula for such one. You as a lumberman should know those formulas or specifications so that you might not only protect the woods which you sell against improper treatment, but, in addition, to naturally impress upon the mind of your customer the fact that you are an authority on building, from the foundation to the painting and decorating. In this connection may I quote from one of the ready-cut house company catalogues just from the press: "We have a long-term contract with the best known and perhaps the largest paint makers in America to supply us with a special extra grade of pure white lead and linseed oil paint. Needless to say, we include paint as an economy and convenience to customers. Sufficient paint is furnished for two coats outside and inside. You will also receive full quantity of stain and varnish—or paint, oil and varnish for interior use—and shellac and putty. Send for our big color card and select the colors you choose for body, trim, porch, floor, etc."

Now that isn't a formula or specification, of course, yet it is service in that it submits suggestions and ideas and, as a matter of fact, the so-called "best known" paint manufacturer probably sends along a set of painting instructions for which the house-building people get the credit, which is merely another instance to indicate the point.

No commodity is adapted to any purpose unless it fulfills that purpose satisfactorily. If you, as a lumberman, neglect to see that the woods you sell are rightfully used and painted, you invite a boomerang against the profit side of your ledger. Certain pines require shellac or filler before stains or enamels are applied, while other species should be stained or treated with white lead first. How many of you know which specification applies to which wood and have told your customer so? You may put your head in the sand and say to yourself that the supplying of such information is outside your field, but if that be your attitude your more enterprising competitor could ask no more desirable competition.

So far as painting in general is concerned, each wood requires individual treatment, and it therefore behooves you to become paint experts as well as lumbermen, in order that you may render the sort of service we have mentioned. More good lumber has been discredited with the public through the ignorance and misguided prejudice of the ordinary painter and the use of inferior paints than we have any means of accounting, and as long as you neglect your duty in this direction you will suffer the effects. Doubtless every one of you now recommends cut iron and galvanized nails when you sell a shingle bill. You had to come to it because you finally convinced yourself that the wooden shingle itself is one of the best roofing materials in the world if properly laid. Well, then, just so is each lumber the best material for a special use if properly painted. In a way, the paint people themselves have set the pace for us. As far back as 1904 they established the educational bureau of the paint manufacturers of the United States, first as an advertising scheme and later as a combined publicity and research bureau. In the twelve years of their existence they have accomplished many things which have created service ammunition for retail lumbermen, but of which, also, the latter have

been slow to take advantage. For example, according to their booklet, a chemical laboratory and later a physical laboratory, was installed, in charge of the scientific section, which promptly began a series of investigations, the results of which have made an ineffaceable mark on the paint industry. An appropriation was made for this work and a series of paint formulas was selected for the tests, the range including what were believed to be good as well as bad. The material, as well as the work of preparing these test paints, was voluntarily contributed by a number of the leading paint manufacturers of the country.

During the following year North Dakota being far distant from most of the paint manufacturing centres, and the wear on paints in North Dakota appearing to be slow, it was decided to duplicate the North Dakota tests at Pittsburgh, in conjunction with the Carnegie technical schools, and at Atlantic City, with the co-operation of the American Society for Testing Materials. Ground for two test fences was lent by the Carnegie schools and the Pennsylvania Railroad, respectively, and in due time the fences were erected, the painting work being done under the supervision of men designated by the Pittsburgh and Philadelphia Master Painters' Association.

Test Made at Nashville

Later in 1910 a similar test fence was erected in connection with the Tennessee State Food and Drug Commission, on the State Fair grounds at Nashville, Tenn. This test included, at the request of the U. S. Forest Products Laboratory of Madison, Wis., tests of a number of grades of wood turpentine prepared for use as volatile thinners in paints.

Now, take shingles. In 1912 the Fire Prevention Association instituted a campaign against shingle roofs and incidentally against the use of wood in general as a structural material, and several cities passed ordinances prohibiting the use of shingles for roofs. The paint bureau got in touch with the lumber associations and their technical experts with an offer of co-operation, which was gladly accepted. A series of tests was instituted and a preliminary report was made thereon in Bulletin No. 42. Later work proving conclusively that a painted roof does not take fire from firebrands, cinders, etc., a tabloid was issued on the subject. At the same time the paint bureau recommended that members print upon their envelopes the words, "Paint your roof and prevent fire." Many of them have promptly adopted the suggestion. The effect of this work increasing the use of paints for roofs has already manifested itself. In one case a single contractor wrote for advice in connection with the painting of the roofs of 100 frame buildings. Had he been able to get that advice from his lumber dealer, that dealer's moral stock would have risen 100 per cent. in that contractor's mind.

All of which may be included and concluded in these words, if you would profit as a lumberman, know your own game from A to Z and give your customers the benefit of your best knowledge.

Logging Costs for Southern Pine

Lumber manufacturers in Canada are naturally interested in anything pertaining to the production of southern pine, because many of the lines of lumber produced in Canada have to compete with southern pine in most of their principal markets. Our readers will be interested therefore, in the following discussion of logging costs presented by Frank Schopplin at a recent meeting of the Southern Pine Association:

The records of the Association, Mr. Schopplin said, indicate that the various companies reporting their logging costs to this association for the first three months of the year 1916 took their stumpage into account at amounts ranging from $2.00 to $7.00 per thousand, log scale; and the average for all companies was $4.88 per thousand feet, log scale, or $3,986 per thousand, board measure.

The difference in stumpage between log scale and board measure is, of course, caused by overrun, and this question of overrun is probably one of the most mooted questions in the lumber business, as it is affected in so many ways, by a diversity of causes: First, the different log scale rules in themselves give different results as to overrun, and then the same rule applied in different ways produces different results as to overrun. Overrun is further affected by the method of deducting for defects in logs; by the manner of slabbing; by the character of edging done and by the judgment of the trimmerman in trimming the lumber, and, of course, by many other causes too numerous to mention here. As an illustration of this point, the records show that for the three months' period above mentioned, some of the companies reported their overrun as low as 5 per cent. and others as high as 58.3 per cent., so that it will readily be seen that there is a very great variation in the question of overrun itself.

The logging costs, on the form used, are divided into the following headings: Stumpage, cutting, skidding, loading, spurs, transportation, and total cost of logs in pond.

Under stumpage, of course, is taken up the cost of the timber standing in the trees.

Cutting covers the cost of severing the tree from the ground and this cost is affected largely by the locality of the timber, character of labor obtainable and to some extent by the height of stump. The average cost of cutting of all companies reporting for the three months' period was $0.385 per thousand.

Under skidding is taken up the cost of getting the logs from the stump to the upper tracks, preparatory to loading on cars and bringing into the mill. Of course, the cost of skidding is affected by the method employed; by the contour of the country; by the density of the standing timber on the ground, and very largely by the weather conditions. The methods employed range all the way from the bull tractor to the four-line rehaul skidder, and the average cost of skidding, as shown by the records for the three months' period, was $1.023 per thousand.

Under loading is taken up the cost of loading logs from the skids on log cars for transportation to the mill, and this, of course, is affected not only by the size of the trees, but by the method of cutting the logs; that is, whether the logs are cut short in the woods or cut to longer lengths and cut to the desired length at the mill, and it will also be governed largely by the method of loading used. The average cost of loading for the three months' period, according to the figures, was $0.239 per thousand.

Under the cost of spurs is taken up the cost of laying, lifting and maintaining tram track to reach the timber, and this is an item that will show a very great variance with the same efficiency in the work, according to the contour of the country.

Under transportation is taken up the cost of what is known as the "main line" railroad, or the road from the mill to the point of concentration of logs in the woods and the cost of operating the necessary train crews to bring the logs into the mill. This is naturally affected by the distance the timber is from the mill, the character of the country through which the road runs and the grades that are encountered in handling the trains over same. The average cost of transportation for the three months' period was $0.911, making the total cost of logs in pond, for the three months' period, according to the association figures, $7.141 per thousand.

From the Canada Lumberman of Thirty-five Years Ago

Paper Pulp from Wood:—The following is a description of the process of making wood pulp: The wood, four feet in length, and of any thickness, is brought in at the basement of the manufactory, placed in the barking jack (one stick at a time), where two men with draw knives rapidly peel off the bark. It is then conveyed by an elevator to the first floor, sawed in two-foot lengths with crosscut saws, and passed on to the rip-saw, where it is slabbed (that is, a small portion of wood on opposite sides taken off), to permit it resting firmly in the grinding engine. It is then passed to the boring machine (an upright 1½ inch auger, with foot attachment, driven by power), where the knots are bored out. The wood is then placed in racks of the same size as the receptacle in the grinding engine, and carried out to be ground. The grinding engines are upright, and receive at a filling one-twentieth of a cord of wood. The wood is placed in a receptacle, and by a simple variable, automatic feed process, is pressed flatwise between two outward revolving rolls, composed of solid emery, which are flooded with a spray of water, carrying off the filbrilized pulp in a stream through revolving screens to the tank or stuff-chest in the basement. It is then pumped into a vat which forms part of the wet machine. In this vat is constantly revolving a large cylinder faced with fine brass wire-cloth, which picks up the particles of pulp out of the water and places them on the felt (an endless piece of woolen goods which makes between rolls, for different purposes, a continual circuit of the wet machine). On the cylinder is turned a heavy roll, called the "couch"; between the two, where they meet, the cylinder leaves the pulp, with most of the water pressed from it. The pulp now makes its appearance on the felt above the concha roll in a beautiful sheet, 38 inches in width, and is carried along in a steady flow a distance of about eight feet, where it passes between (the water here being pressed from it) but not beyond two heavy rollers, the upper one iron, the lower one wood; it adheres to the upper roll, which is constantly turning, wrapping it up, and when a sufficient thickness is attained, is cut off by a knife being pressed to the roll, which is attached to the machine for that purpose. It now leaves the roll in a thick white sheet, 36 x 38 inches, where it is received by a boy in attendance on a table conveniently attached to the machine, and folded into a sheet 16 x 26 inches. It is then placed on scales until the weight is 100 pounds, when it is placed in a press and firmly tied into square, compact bundles. It is now ready for shipment to the paper mill.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch. each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Wanted—Quotations on 1¼ in. and 1½ in. Hard Maple lumber. J. H. Connor & Son, Limited, Ottawa, Ont. 15-16-17-18

BASSWOOD AND PINE WANTED.—No. 2 Common and Mill Cull Basswood, 1 in. cull pine, Winter cut preferred. Apply M. Brennen & Sons, Hamilton, Ont. 16-21

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Lumber Wanted

We are in the market for a quantity of Birch, Soft Elm, Hard Maple and Basswood, dry stock, for immediate shipment. Will be pleased to receive full particulars as to quantity, grade, and lowest prices. Apply, The London Lumber Co., Ltd., London, Ont. 18-21

Wanted

We will purchase several million feet of Spruce, Norway and Jack Pine 1 in., 2 in. and 3 in.; state how the stock is piled as to widths and lengths and quantities now on the sticks in each width and thickness; we are also interested in a limited quantity of 1 in. Mill Run White Pine. Advertiser is a large concern and buys for cash only. Apply Box 441, Canada Lumberman, Toronto, Ont. 17-18

For Sale-Lumber

For Sale

1 car 1 x 4 in. and wider, 37 in. long.
1 car 1 x 4 in. and wider, 31 in. long.
1 car 1 x 4 in. and wider, 22 and 25 in. long.

Dry Quartered White Oak, Clear 1 face 2 ends and 2 edges, 2 years old, nicely figured, Ohio stock. Write us for delivered prices.

PROBST LUMBER COMPANY,
18-21 Cincinnati, Ohio.

For Sale

One car 3-in. Practically Clear White Oak, all 12 ft.

Two cars 1½, 2, 2½, and 3 in. No. 1 Common and Better Dry Red and White Oak, all Ohio stock.

The Probst Lumber Company,
15-18 Cincinnati, Ohio.

For Sale

Three carloads of 1 in. No. 2 and 3 Common Maple. The Bradley Company, Hamilton, Ont. 18-19

Cedar Ties

Wanted a buyer to contract for 10,000 No. 1 and 2 Cedar Ties, for next spring delivery. Box 447, Canada Lumberman, Toronto, Ont. 18-19

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal

GEO. C. GOODFELLOW,
Montreal, Que.

For Sale

We have the following stock for immediate delivery:—

50,000 ft. 3 x 6 Hardwood Hearts, mostly Maple.
25,000 ft. 4 x 4 Hardwood Hearts, mostly Maple.
200,000 ft. 1 in. Hardwood crating, principally Maple and Birch.
100,000 ft. 1 in. Birch, No. 2 Common and Better.

The Pedwell Hardwood Lumber Company,
18-t.f. Toronto, Ont.

For Sale-Machinery

Saw Mill Machinery

Complete equipment for 40,000 capacity mill, including belts, conveyors, etc., with or without boilers and engines. For sale cheap to quick buyer.

St. Maurice Lumber Company,
15-18 Gaspe Harbor, P.Q.

FOR SALE

1—Wicks Gang.
1—Ideal Engine, 13 in. x 12 in.
1—Plain Engine, 16 in. x 24 in.
1—Plain Engine, 5 in. x 7 in.
1—Boiler, 72 in. x 16 in.
1—Boiler, 54 in. x 12 in.
2—Upright boilers.
1—Cookston water heater.
Several steam pumps.

CHAS. PEDWELL,
16-t.f. McVicar, Ont.

For Sale
Woodworking Machinery

1 Jackson-Cochrane 54-in. Resaw; 1 Cowan 42-in. Sander; 1 Jackson-Cochrane 36-in. Sander; 1 Egan 36-in. single Surfacer; 1 McGregor-Gourlay 2-drum 30-in. Boss Sander; 1 Egan 30-in. 2-drum Sander; 1 C. M. C. 8-in. 4-side Sticker; 1 No. 108 Berlin 30-in. double Surfacer; 1 Ballantyne 12-in. Sticker.

P. B. YATES MACHINE CO., LIMITED,
17-19 Hamilton, Ont.

Wanted-Machinery

Boring Machine Wanted

Wanted a second-hand double bit boring machine, suitable to the manufacturing of Birch Shims. Must be in good working condition. In answering this ad. state the price and make of machine. Box 456, Canada Lumberman, Toronto, Ont. 18-18

Saw Mill Wanted

We require a saw mill, capacity about 40,000 feet daily. Machinery, boilers and engine must be in good condition. The Field Lumber Company, Limited, Field, Ont. 18-18

Refuse Burner

Wanted to buy one brick-lined refuse burner, 30 feet in diameter. Address with all particulars, "Burner," Box 446, Canada Lumberman, Toronto, Ont. 18-19

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

EXPERIENCED LUMBER WOODS CLERK wishes to make a change. With same company several years. Good references. Box 434, Canada Lumberman, Toronto, Ont. 16-18

MARRIED MAN, THIRTY YEARS OLD, ten years' experience in office work as Accountant, speaking both languages, desires to change, best of references. For particulars write to P. O. Box No. 69, Three Rivers, Que. 16-24

WANTED POSITION AS LUMBER SALESMAN—15 years' experience in hard and soft woods. Connection Eastern Ontario and New York State. Married man, 37 years of age. Apply Box 442, Canada Lumberman, Toronto, Ont. 17-18

POSITION WANTED BY EXPERIenced Office Clerk (lady), three years' practice. Timekeeping, Pay Rolls, Shipping Bills, Cashier, Typing; or any line of office work. Lumber company's plant, Quebec or northern New Brunswick. "Lumber," Box 451, Canada Lumberman. Toronto, Ont. 18-18

MAN EXPERIENCED IN THE MANUfacture and sale of woodenware of all kinds, including household utensils, toys, etc., is open for position as manager or sales manager. Results guaranteed. Woodworking concerns looking for profitable lines to manufacture should communicate. Address, Specialties, Box 450, Canada Lumberman, Toronto, Ont. 18-18

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

BAND-SAWYER Wanted, and a few all-around machine men for furniture plant. Inquire, Luger Furniture Company, North St. Paul, Minn. 18-18

EXPERIENCED SHINGLE GANG wanted to saw, joint and pack season's cut white cedar shingles. The Pearce Company, Limited, Marmora, Ont. 18-18

WANTED a good Ontario White Pine grader to go to British Columbia as shipper and grader. Climate mild and salary good. Apply Box 443, Canada Lumberman, Toronto, Ont. 17-18

A few good saw mill men wanted, good board and lodging, steady work until snow flies.

JOHN B. SMITH & SONS,
17-19 Callander, Ont.

Business Chances

SAW MILL FOR SALE—Capacity 25 M. ft. per day. Located in Alberta on two trunk line Railroads, with good Spruce timber available and good market for lumber. Would like to sell an interest to practical sawmill man who would operate it. A good money-making proposition. About seven thousand dollars required.

Address, G. M. POOLE,
P. O. Box 1353,
17-18 Edmonton, Alta.

For Sale

Planing Mill and Lumber Yard in Town of Sudbury, Ont. Electric power, 40 h.p. motor, planer and matcher, surfacer, rip-saw and dado saws, sticker, circular resaw, crosscut saw, turning lathe, mortiser, tenoner, borer, sander, sash and door clamp, shaving baler, automatic knife grinder, fan and blowing system, knives, etc. Mill now running, dressed lumber buildings, barn. No better location in town. Splendid rail facilities, and no doubt the best thriving town in Ontario.

Address, Box 457, Canada Lumberman, Toronto, Ont. 18-t.f.

Miscellaneous

Tenders for Pulpwood and Pine Limit

Tenders will be received by the undersigned up to and including the 1st day of December next for the right to cut pulpwood and pine timber on a certain area situated on the Pic River and other territory adjacent thereto, in the District of Thunder Bay.

Tenderers shall state the amount per cord on pulpwood, and per thousand feet, board measure, on pine, that they are prepared to pay as a bonus in addition to dues of 40 cents per cord for spruce, and 20 cents per cord for other pulpwoods, and $2.00 per thousand feet, board measure for pine, or such other rates as may from time to time be fixed by the Lieutenant-Governor-in-Council, for the right to operate a pulp mill and a paper mill on or near the area referred to.

Such tenderers shall be required to erect a mill or mills on or near the territory and to manufacture the wood into pulp and paper in the Province of Ontario—the paper mill to be erected when directed by the Minister of Lands, Forests and Mines.

Parties making tender will be required to deposit with their tender a marked cheque, payable to the Honourable the Treasurer of the Province of Ontario, for twenty-five thousand dollars ($25,000), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said $25,000 will be applied on account of bonus dues as they accrue, but the regulation dues, as mentioned above, will require to be paid in the usual manner as returns of cutting of wood and timber are received.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.
Toronto, August 28th, 1916.

N.B.—No unauthorized publication of this notice will be paid for. 18-22

Timber Tract and Mill

Valuable Timber Tract, British Columbia; nearly 10,000 acres; 60,000,000 feet of timber; on railroad. Local market for mine props. First class mill, 30,000 feet daily capacity. Very attractive proposition. George W. Grant, P. O. 1676, Calgary, Alta. 18-21

Timber Limit For Sale

Thirty-six square mile limit, North Shore, License allows cutting all kinds of timber. Contains Hemlock, Birch, Spruce, Pine, Cedar Ties and Poles, Pulpwood and Hardwood. Railroad runs through part of berth. Cheap operation. Splendid opportunity for small mill. Apply Box 423, Canada Lumberman, Toronto, Ont. 13-t.f.

Pacific Logging Congress Annual, October 26-28

The eighth annual session of the Pacific Logging Congress will be held at Portland, Ore., and Grays Harbor, Wash., October 26, 27 and 28. This meeting will be preceded by a two days' convention of the Western Forestry and the Conservation Association. These two meetings are among the most important held annually on the Pacific coast covering the timber and logging industries. The trip of the Pacific Logging Congress to Grays Harbor will be as guests of the Polson Logging Company, the largest logging concern in the northwest, and the Grays Harbor loggers.

Blister Rust Alarms Wisconsin

The white pine blister rust, which has been attacking pine forests in the east, has made its appearance in Wisconsin and has so alarmed the state authorities that the department of agriculture has placed a strict quarantine on the importation of any pine nursery stock. J. G. Sanders, state entomologist, in an outline of the discovery of the pest, the nature of its growth and spread, and the danger of its existence, says:

"The dangerous nature of this disease has not been fully realized even by state officials, but the federal department has recently taken active steps toward the control of the situation in the several states where the disease is known to occur and is seeking for evidence of undiscovered outbreaks.

"The insidious nature of the disease and its peculiar habit of working on two entirely different host plants combine to make it a most dangerous pest. In some of the Eastern States I fear that sufficiently drastic measures were not taken for the control of this disease when first discovered, with the result that it has spread to a considerable degree and has been discovered to be established in six or seven of the Eastern States.

"Early this summer the disease was discovered in Polk County at Lake Waupogasset on plantings of white pine trees which originally came from Germany. Although these trees were imported in 1912 and were infected previous to their importation, the fruiting stage of the disease did not appear until last year.

"On account of the fact that the infected and fruiting pines were planted over the entire island, and having in mind the serious danger of reinfection, we decided to destroy absolutely every white pine, large and small, on this island to the number of 4,000.

"If this disease should escape into the native timber, it would rapidly spread and in a few years the growing of white pine and the propogation of new plantations would be hopeless. In this way the future of the lumber industry would be seriously hampered for all time."

Shipping Oak Ties to France

A Charleston, Miss., company has begun to load 50,000 white oak ties as the first shipment of a large contract with the French Government. The second shipment left on September 1. Beginning about July 1 the company began to operate its mill night and day to fill contracts with the French Government. Whether these ties are to be used in laying tracks for railroads to haul munitions of war to the firing line or for quick mobilization of troops, or are being purchased in anticipation of a cessation of hostilities and the rehabilitation of French railroad lines destroyed by the war, is not known.

Redwood Posts Used on Highway

The Lincoln Highway between Salt Lake City and San Francisco, Cal., will be marked with redwood posts, one post to each mile, the distance between the two points being 1,000 miles. These posts will carry a sign indicating that it is the Lincoln Highway. The posts are 4 x 4—12, and taper at the top. They will be set rough and will require no painting to protect them from the weather. Each post will be stenciled "Redwood from California's Big Trees."

Furniture From Sawdust

A new manufacturing corporation has been formed at Sheboygan, Wis., to make furniture out of sawdust, according to processes upon which the government forest products laboratory at Madison is now working, in its efforts to utilize sawmill waste. The furniture will be of twisted and hardened paper, and this concern will be the third similar company to be formed in Sheboygan in a few months.

Shingles Lasted Fifty-Six Years

The story of ancient lumber being used again, after years on an old barn, is told by T. E. Allen, of Lebanon, Wis., who recently decided to re-shingle his barn, after the old shingles had worn fifty-six years. When the shingles were removed they were found so sound that they were used to roof a shed on the same farm.

Union Lumber Co.
Limited

1915 CUT—MILNET (Sellwood Jct.)

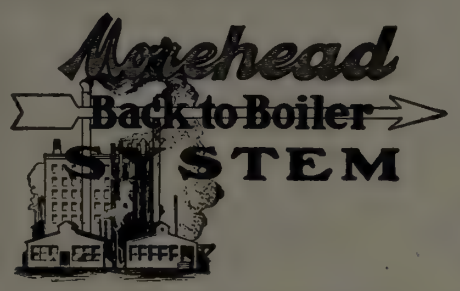
40,000 feet 2 x 10—10/16 Norway.
500,000 feet 1 x 4 and up 6/16 No. 1 Mill Cull.
1 Car 3/8 x 1½—4 ft.—No. 2 Red Pine Lath.
1 Car 3/8 x 1½—4 ft. —No. 3 Red Pine Lath.
5 Cars 3/8 x 1½—32 in. Mill Run White Pine Lath.
5 Cars 3/8 x 1½—32 in. Mill Run Red Pine Lath.

Red and White Pine Timbers

12 x 12—5/20 - 5/22 - 5/24 - 13/26 - 1/28 - 1/30 - 3/16.
10 x 12—10/26 - 6/24 - 5/28 - 3/20 - 3/16.
10 x 10—2/26.
8 x 10—1/24 - 2/22 - 5/26.

Write, wire or phone for prices.

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA



They Saved 25% in Fuel and 50% in Repairs

SO WRITES Mr. Wm. H. Turner, secretary and treasurer of **The Easton Furniture Company**, of Easton, Md., after giving the "Morehead" system a thorough trial.
Until you are draining the condensation from your kilns and returning it—every drop—to the boilers at the **original temperature**—
—you are wasting heat units that **cost** you DOLLARS to produce.

STOP THAT WASTE!

Rejuvenate your entire steam plant by making the inexpensive "Morehead" system a part of it.
Save **fuel** by bringing the pure condensation directly back to the boilers HOT!
Save **repairs** by eliminating forever the necessity for the wasteful and constantly out-of-order steam pump. The simple, easily installed "Morehead" system will much more than pay for itself the first year of use.
Write for the proof to-day.

The "Morehead" book shows actual photographs of some interesting installations. Don't you want your copy at once?

Canadian Morehead Mfg. Company
WOODSTOCK, ONTARIO

Review of Current Trade Conditions

Ontario

The lumber trade in Ontario continues along much the same lines as have prevailed throughout the summer. There is a fair demand only, in the larger centres, being the result almost entirely of the activity of the manufacturing interests, such as furniture producers, farm implement manufacturers, etc. The building trade in the cities continues to show no life worth mentioning. During the last week of August and the first week of September wholesalers report that the country retail trade showed a moderate improvement. It is expected that this will be the commencement of a fair amount of trade during the fall. Ontario farmers have done exceptionally well this summer with most of their crops and products, and are in a good position to purchase lumber in considerable quantities. Moreover, they are, in a great many cases, in actual need of lumber for new buildings, alterations, repairs, etc., which have been postponed from time to time during the past year or two. Country retailers report that this demand is now developing and is responsible for the improvement of the past fortnight.

The controlling factor in connection with the lumber producing industry in Ontario continues to be the great scarcity of men. The situation is daily becoming more critical. A wholesaler who recently called on a number of Northern mills states that it has now become almost impossible for the manufacturers to ship their stock in anything like the quantity required by the trade. All wholesalers report that they have orders in at mills for numbers of cars which they cannot obtain. In conversation with bankers regarding this subject lumbermen are invariably told that they must be patient, and bear in mind always that the most important matter to be attended to to-day is the prosecution of the war, and that, so far as the shortage of labor and the inability of railroads to handle shipments are concerned, it is up to manufacturers, wholesalers, and retailers to accept what they can get and make the best of it. This does not mean that the trade should lie down and wait for something to turn up, but that everyone, in addition to doing what he can to keep the wheels of industry on the move, must also be patient in regard to the matter of deliveries.

While the manufacturers at Northern Ontario points are having trouble making shipments, the likelihood is that long before next spring the available stocks at mill points will have been greatly depleted, if not almost wiped out. A prominent wholesaler, discussing this point, reported that a year ago he had plentiful stocks on hand at mill points, whereas to-day nearly all of his stock has been shipped out, and every foot of it has been sold. Moreover, he is finding it difficult to obtain small lots, of, say, one to five car loads, at scattered points where he formerly was able to dig them up without much difficulty. The same condition he reports in connection with hardwoods, stating that the 1916 cut has all been shipped out, so far as it is fit to ship.

Eastern Canada

The demand for shell box lumber at Montreal is again the chief feature of the trade. The Imperial Munitions Board recently placed another order for 250,000 Bethlehem boxes at Montreal, and this calls for a large quantity of 1½-inch stock, which at present is scarce. There is also a good demand for ordinary boxes for commercial purposes, and wholesalers are finding the box trade an interesting end of the business. Otherwise business is slow. Wholesalers at Montreal, in common with those in other centres, are looking for an advance in the cost of lumber next year, as a result of the scarity of labor, high wages, advanced cost of food and equipment, etc., in connection with logging operations. The export trade from Montreal to Great Britain is quiet. The Government is taking up a large quantity of vessel space, leaving only a little for lumber shipments. Rates, however, are a trifle easier, but not low enough to bring out much demand.

Spruce quotations at Boston have recently shown an advance. August trade was unusually good. Wholesalers and manufacturers who sell direct to the retail trade are taking nothing less than $27 base for frames, an advance of $1, and within $1 of the record high price last spring. Quotations for frames now are as follows: 8-inch, $27; 9-inch, $28; 10-inch, $29; 11-inch and 12-inch, $30. Randon quotations are also firmer, at the following range: 2 x 3, $21 to $22; 2 x 4, $22 to $23; 2 x 5, 2 x 6, and 2 x 7, $21; 2 x 8, $24.50 to $26; 2 x 10, $26.50 to $28; 2 x 12, $27.50 to $29. A falling off in the demand for spruce is reported from New York, but as stocks at mill points are low, it is expected that higher prices will soon prevail. The building outlook is fair, but the yards are holding off and purchasing only what they require from day to day. A better demand for hemlock is reported at Boston, and prices are stronger. A satisfactory volume of hemlock business is also in progress at New York.

Shingles are firm and active at Boston. Nice white cedar extras are bringing $3.50 to $3.60 and clears $3.10 to $3.30, but the lower prices will not bring out the best of this grade. Red cedars are not so active. Lath have been rather unsteady. Manufacturers of spruce lath are quoting $4.25 for 1⅜-inch, but some large retail buyers say they can obtain stocks at $4.15 and even $4.10. For 1½-inch lath the prevailing price is $3.65.

United States

The removal of a fear of a general strike among the employees of railway companies in the United States engaged in the operation of trains has resulted in business returning to its former encouraging activity. The expectation is now general that during the fall and winter season the industries of the United States will experience the busiest time they have had in recent years. Although the lumber business has been rather slow to respond to the general prosperity, its condition now is more favorable than at any former time since early in the present year. Complaints of car shortage are numerous from the chief producing centres, though this is more particularly the case where there is no competition among railroads for the trade. The approaching demand upon the railroad companies for cars for the removal of the crops is causing retailers to anticipate their requirements to a fair extent. Retail stocks, as a rule, are not now large. In many sections they are, in fact, below normal.

Reports from the Southern pine manufacturing sections are all encouraging, so far as the market situation is concerned, but they all refer also to the scarcity of cars for shipment. The policy of curtailment which has been in operation for some time now is having a good effect upon the market for Southern pine. The Northern pine trade at Chicago shows no change during the past fortnight, the volume of trade being only moderate. Improvement is expected in yard and factory buying in the near future. Prices continue firm. At Buffalo the trade in Northern pine is a little larger than it was a short time ago, and wholesale yards are busy getting out orders that were held up by the threatened railroad strike. Orders for future delivery are not very plentiful, but are increasing to some extent as the vacation season passes by. Wholesalers at Buffalo are finding it necessary to add to their stocks by rail deliveries more than usual, on account of the scarcity of boats and the high freight rates. Increased sales of Northern pine are reported from North Tonawanda, and prices have stiffened. There is a good demand for nearly all grades, and some wholesalers are predicting an unprecedented shortage of desirable stock when navigation closes this year. There is a healthy demand for hemlock at Buffalo. Country dealers are coming into the market more generally than they were during August. Prices are steady at the slight advances recently reported. Improvement is also reported in the hemlock market at North Tonawanda. Wholesalers are getting some of the business that yellow pine dealers are unable to handle promptly. Prices are stronger, and further advances are looked for.

Great Britain

A little better tone is reported in connection with the spruce market in Great Britain, especially in regard to deals. Business, however, cannot be described as active. The demand for spruce continues good, but the heavy drop in all wood values has created some nervousness about paying prices above the current market figures. Canadian shippers are holding out firmly, and the result of the disinclination of both sides to come together is a reduced volume of trade.

The spot market at London has been quiet, as most merchants are still on the cautious side. The requirements of the forces are still extensive, and are likely to continue so for some time to come, but other large consumers are very quiet. Deliveries at London docks during the week ending August 19 amounted to 11,588 standards, as compared with 4,944 standards during the corresponding week of last year.

At Liverpool the principal demand is for Government requirements, and even in this line there has been a somewhat reduced activity. Prices at Liverpool are stiff, with an upward tendency in spite of a limited demand. The possibility of much higher freight rates is influencing merchants' ideas of values.

At Manchester the timber trade at present is only in moderate volume. One of the most extensive sources of consumption is the demand from the railway companies, which continue to use very large quantities of timber. The general industrial situation at Manchester is good, and is leading some of the chief manufacturers to express the opinion that there will not be any depression of a lasting character after the war. In connection with this question, manufacturers are foretelling that the trouble after the war will be much the same as it is now, viz., a shortage of labor, not of work.

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Montreal Trade Slightly Improved

Montreal, September 11th; (Special to the Canada Lumberman): The demand for shell box lumber is again the dominating feature of the market. Additional orders for boxes have recently been placed here by the Imperial Munitions Board, including one for over 250,000 "Bethlehem" boxes. These call for large quantities of 1½ inch stock, which is difficult to obtain. Box makers are also busy on ordinary commercial boxes. The result is that wholesale lumber firms who are specializing on this business report that trade has lately improved considerably. In other directions, business is slow, although dealers state that, except for pine, prices are keeping very firm.

Wholesalers are generally of opinion that we must look forward to a substantial rise in prices next year, as the result of a short cut, due to labor scarcity and higher production costs generally.

An encouraging sign is the increase in the value of building permits. For the second month in succession, there is an increase on the period in 1915. During August the total was $601,340, a gain of $291,575; while for the eight months the value was $3,581,554, a falling off of $579,808, as compared with last year. Although the bulk of the work is for small properties, of late there have been several projects for building factories.

Only a small amount of lumber is being sent to the United Kingdom. Space is restricted, owing to Government requirements, and although rates are a trifle easier, they are not sufficiently attractive to induce large shipments even were room abundant. Unless there is a considerable impetus to exports, of which there is no prospect at present, the season will show a very material falling off as compared with last year.

The persistent demands for sulphite pulp have left the mills with only a very small stock for immediate requirements. Prices are exceptionally strong, and so far as can be judged, there is no indication of any break in the market. In fact, the chances are that quotations will go still higher. A considerable quantity continues to be shipped to England. Ground wood is also firm. Newsprint mills have a ready market for all their production, and with the good outside buying prices are very stiff.

Quebec Cullers' Report

The following comparative statement of timber, measured and culled, is furnished by the Quebec Supervisor of Cullers' office under date of September 7th:—

	1914 Cubic Ft.	1915 Cubic Ft.	1916 Cubic Ft.
Waney white pine	546,240	395,120	140,160
White pine	.....	.....	....
Red pine	1,040	.....	.....
Oak	292,560	104,960	286,960
Elm	299,280	46,840	69,440
Ash	680	840	1,680
Butternut	.....	.....	40
Birch and maple	50,800	48,880	46,880

St. John Shipments Show Increase

The following comparative statement shows lumber shipments from St. John, N.B., to the United Kingdom, Continent, and South Africa, for the six months from January 1 to July 1, 1915 and 1916:—

	1915	1916
Spruce, superficial feet	63,611,539	74,827,393
Hardwood, superficial feet	805,218	741,484
Birch timber, tons	206	.....

China to Be Big Lumber Market

Julean Arnold, United States commercial attache for China and Japan, now visiting various cities in the Pacific Northwest, is confident that China will some day develop into a great lumber-consuming country whose requirements will naturally be largely supplied by North Pacific mills. At present China is not buying any great volume of lumber because of high ocean freight rates and scarcity of available tonnage. Just before the European war China was consuming about 161,000,000 feet of softwood lumber a year. Generally the Chinese people are now learning the value of lumber as a building material, and, with all conditions favoring important development of the country, the Chinese nation seems almost certain to become a great lumber-using people, wholly without merchantable softwood resources of their own.

Western United States Trade Conditions

The West Coast Lumbermen's Association, in a bulletin under date of September 8, say: On a market admittedly weak in price a fair volume of new business was placed with Pacific Northwest sawmills last week. Car shortage in Oregon caused transcontinental shipments to drop off, but the decrease was more than made up in cargo and local shipments. Water business, while showing increases both in orders and shipments, continues discouragingly below normal.

Production of lumber has gone slightly above normal. This is partially explained by the fact that there is now a tendency to accumulate stocks at the mills, owing to badly broken assortments and in anticipation of at least normal fall buying of retail yard material.

Orders are below normal production, 4.58 per cent. on 3,201,570 feet. Orders are below actual production 8.33 per cent., or 6,056,998 feet. In comparison with the previous week orders show an improvement of 1.46 per cent.

Prince Albert Mills Exceptionally Active

H. J. Weinrich, who is in charge of employment for the Prince Albert Lumber Company, reports that 5,000 men will be required this winter for the logging operations in the Prince Albert district, Sask. This is the largest number ever employed. He reports that the demand for lumber is very heavy and that employment can be found for every man obtainable. The company's mills are being cleaned out of lumber as fast as it is run through the mill. The company will build eight new camps and will hire 4,000 men, while the Finger Lumber Company and other firms will hire at least 1,000 men. The annual output of the Prince Albert and Big River mills, operated by the Prince Albert Lumber Company, is placed by Mr. Weinrich at 100,000,000 board feet, and that of the Finger Lumber Company at 25,000,000. The Prince Albert Company's limits will keep them cutting at the present rate for twenty years.

Trinidad Lumber Imports

Imports into Trinidad, B.W.I., during the last three calender years include the following:

	1913.	1914.	1915.
Wood and timber—Undressed	35,592	52,409	24,631
Dressed	17,746	31,234	16,797
Wood, manufactures of	33,288	34,792	13,130

Stocks at Liverpool and Manchester.

The following report upon Liverpool and Manchester stocks for the month ending August 31st, 1916, is furnished by H. W. Lightburne & Company, Liverpool, and their St. John, N.B., representatives, John E. Moore & Company, Limited.

Spruce and Birch

Month ending 31st August, 1916

Liverpool

	Import 1914.	Import 1915.	Import 1916.	Consumption 1914.	Consumption 1915.	Consumption 1916.	Stock 1914.	Stock 1915.	Stock 1916.
N.B. & N.S. Spruce & Pine, Stds.	1,370	5,400	5,240	2,760	3,830	3,980	6,650	14,000	11,140
Birch Logs, Loads	...	680	680	100	420	160	500	600	1,300
Birch Planks, Stds.	61	818	394	164	303	140	334	764	533
Manchester									
Spruce, Stds.	4,640	10,130	10,140	4,230	6,810	3,150	14,100	16,550	20,970
Birch Logs, Loads	...	1,240	60	100	220	60	880	1,400	300
Birch Planks, Stds.	18	364	158	97	255	55	521	600	527

Stocks in Manchester and Liverpool Combined

Spruce

	1912.	1913.	1914.	1915.	1916.	
Manchester	17,580	21,820	14,100	16,550	20,970	
Liverpool	9,740	9,800	6,650	14,000	11,140	
	27,320	31,620	20,750	30,550	32,110	Stds.
Birch Logs						
Manchester	600	340	880	1,400	300	
Liverpool	1,280	580	500	600	1,300	
	1,880	920	1,380	2,000	1,600	Loads.
Birch Planks						
Manchester	746	564	521	600	527	
Liverpool	782	740	334	764	533	
	1,528	1,304	858	1,360	1,060	Stds.

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FOR EVERY CLASS OF TIMBER

***Head Office:* HULL, England**

To the Lumber Companies of Canada:

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PLEASE NOTE.—We pay cash against all documents, and take the whole of the Delcredere risk on Buyers.

Extend Your Overseas Trade

IMPERIAL TRADE! Have you fully considered this phase of the World-War? British interests are determined to foster Canadian products, and as one of the oldest-established firms of Paper Makers and Importers in the United Kingdom, we are anxious to hear from Canadian Mill Owners and Exporters; and especially from Manufacturers Specializing in NEWSPAPER Production. Let us hear from you

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War Time Opportunity

Canada has another big war opportunity. Great Britain needs more wood pulp. Install a small Soda Pulp Plant and Supply this need by converting your Slats, Tops, Bottoms and waste wood around the Saw Mill into pulp. We can dispose of any amount. Previous sources of supply in Sweden, etc. have recently been withdrawn and Canada now has a free field in Great Britain to market unlimited quantities of wood pulp. We can arrange contracts for long periods. The cost of installing plant is small and you make a sure profit from waste material.

WRITE US FOR DETAILS

We have imported ninety per cent. of the Canadian Wood Pulp supplied to Europe since 1899.

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Limited
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LONDON, E. C. ENG.

South Africa Market Important to Canadians

A report from the Canadian Trade Commissioner at Cape Town, South Africa, published in the weekly bulletin of the Department of Trade and Commerce, states that since the departure of Mr. H. R. MacMillan from South Africa, special efforts have been made to secure cargoes of Douglas fir which were cancelled owing to shortage of available tonnage. Scarcity of tonnage from eastern Canada has held down the exports of eastern wood, as about only one-third of the quantity on order has been delivered. During the latter part of 1914 and during 1915 the supply of Scandinavian and Russian wood was very limited, but during the past four months of 1916 good supplies have come forward from Swedish ports at only slightly lower prices than the North American quotations. The imports into Cape Town in this period are a record in quantity for this port.

The imports of unmanufactured pine into South Africa during 1913, 1914 and 1915 were as follows:—

Countries	1913.	1914.	1915.
Canada	$ 151,000	$196,000	$148,000
United States	521,000	414,000	240,800
United Kingdom	170	200	5
Sweden	1,254,000	871,000	593,000
Norway	503,000	288,000	159,000
Russia	75,800	98,000	30,600

In addition to the above there was imported for South African Government stores the following quantities of unmanufactured pine:

Countries	1913.	1914.	1915.
Canada	$ 11,200	$ 750	.....
United States	53,500	42,000	$4,800
United Kingdom	500	.....	.....
Norway	10,000	1,000	.....
Sweden	115,000	16,000	.....

For the past three years, trade inquiries have been published for many firms anxious to take up the representation of Canadian box makers, and a number of trade inquiries have been published from South African merchants prepared to purchase in 100,000 lots. Business has not resulted, and it is hoped that some organization will take up the manufacturing of box shooks for export on the most modern plans so that Canada may secure a good share of the present demand as well as that of the near future, which, competent authorities say, will be in the millions of boxes for oranges only.

Several Canadian handle manufacturers are now represented in South Africa by first-class agents and good results should be shown in next year's returns, although it is a hard and long task to substitute the maple handle for the hickory. There is no doubt when the value of the better grade maple handle has been proved to the South African trade, good results will follow. South Africa manufactures annually from a special hard wood, about 20,000 pick handles; all other handles used in South Africa are imported, and the importance of this trade for Canadian maple handles will perhaps be better appreciated by a reference to the quantity of imports of pick, shovel and hammer handles, which number respectively 66,000; 450,000 and 236,000.

The steamer sailings under Government contract from Canada to South Africa have continued to carry lumber in good quantities. The lumber cargoes are not all Canadian timber, but the percentage given to Canadian lumber has increased considerably during the past eighteen months.

Imports of Canadian lumber into South Africa during 1913, 1914 and 1915 were as follows:—

	1913	1914	1915
Doors, bdls.	1,416	1,153	1,645
Box shooks	.....	.....	447
Staves, pcs.	243,368	188,127	155,521
Beaver board, crates	78	363	347
Maple flooring	.....	1,338	.....
Shingles, bdls.	.....	68	68
Deals (sup. ft.)	3,951,387	4,687,989	4,644,362
Lumber (sup. ft.)	4,718,671	1,767,543	2,471,685
Woodenware, pkgs.	506	161	496
Handles, sacks.	2,273	1,671	3,554

B. C.'s Fine Exhibit of Lumber and Timber at the C.N.E.

The exhibit of the B. C. Forest Service at the Canadian National Exhibition this year was a great drawing card to the thousands of people who saw it daily. In conception and arrangement the exhibit was a decided improvement upon anything of its kind that has formerly been seen at the exhibition. It was carried out upon an exceptionally ambitious scale, some idea of which can be obtained from the accompanying illustration. The handsome facade consisted of solid Douglas fir logs and heavy beams. Behind these the smaller exhibits were arranged in six divisions treated in separate woods as follows:—(1) Western soft pine; (2) Western white pine; (3) Western red cedar; (4) Douglas fir; (5) Western hemlock; (6) Western larch and Western spruce. In each section the separate woods were backed up by beautiful panels showing the results secured by various finishes in oil, stain, varnish, wax, polish, etc. In this way the beautiful characteristics of the different woods were shown to the very best advantage. The exhibit contained everything produced in B. C. in the way of timber and lumber of commercial value, including an extensive range of mouldings and turned stock in all the woods. In each case, moreover, the wood was exhibited both as finished stock and as board and plank in various grades. The flooring of the exhibit was of Douglas fir, edge grain. The doors were pine, cedar and fir. In the exhibit there were also three tables 48 inches in diameter, three chairs and one settee, illustrating the use of B. C. woods for furniture production. The table tops were of rotary cut veneer. An exceptionally interesting part of the exhibit was a fine red cedar chest.

B. C. red cedar shingles were shown in all grades, and the exhibit included two sample roofs. Information was given to a great many visitors upon the best methods of laying and nailing B. C. shingles.

The exhibit also included an interesting range of wood products including a boat built in Vancouver, with unfinished lumber, so as to show the class of wood used. There were also oars, finished and in the rough, and a great variety of boxes, including fruit boxes of B. C. spruce, which is odorless and free from defects, making it an ideal package for the conveyance of food. Other features of the exhibit were paving blocks, tight and slack cooperage, wood stave pipe, silo stock, in fir and cedar, verandah posts and balustrades, window frames and a panel from a clear log 9 feet in diameter. The log from which this panel was taken contained 17,000 feet of lumber to the first knot.

Mr. L. B. Beale, B. C. Lumber Commissioner at Toronto, whose offices are in the Excelsior Life Building, was in charge of the exhibit. Its conception and carrying out were planned by him and reflected great credit upon his originality and energy.

British Columbia's fine exhibit of timber, lumber, etc., at Canadian National Exhibition.

Camp Groceries

You can always be sure that we have at all times a good supply of everything that is needed by the cooks in the camp.

Buying in large lots, we can quote the lowest market prices which are prevailing at the time of inquiry.

We solicit a share of your business requirements and will gladly quote and send samples on request.

H. P. ECKARDT & COMPANY

WHOLESALE GROCERS

Church St. and Esplanade, TORONTO

McLennan's Lath Mill and Bolter

Utilize your unsaleable lumber with a lath mill.

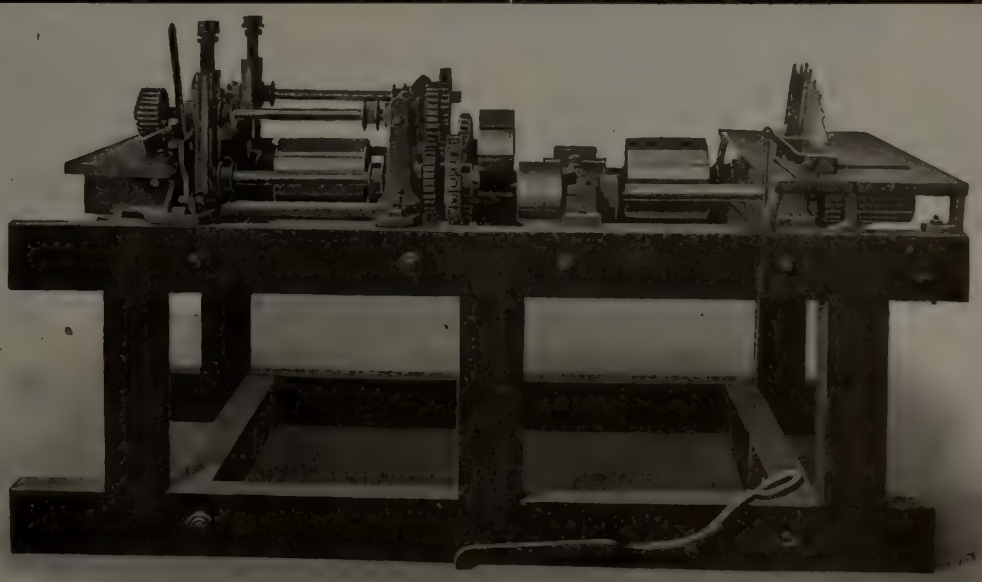
This lath mill and bolter is designed along simple lines with bolted wooden frame, making it inexpensive and substantial.

Capacity 45,000.

Specifications; Lath machine pulley 7 inches diameter x 9 inches face.

Floor space 7 feet 6 inches x 3 feet 6 inches.

We make gang edgers, shingle machines, sleeper machines and barkers, etc.



McLennan Foundry & Machine Works

CAMPBELLTON, N.B. Limited

A Few of the Mistakes I Have Made

It is rather a queer occurrence for one of us to sit right down and "fess up!" Well, they say confession is good for the soul, so I believe if I admit some of my many errors some of you may "soften" and say, "Me, too!" Just like the bashful girl and boy—after the boy pours out his soul to the girl, no matter how well she had guarded her feelings, she generally admits that she, too, has the "same feeling" towards him, says the Lumber Doctor in the St. Louis Lumberman.

Now, you perhaps have heard a thousand times at least that "experience is a good teacher"; so we will admit that fact, and I will tell you just a few things that you can benefit by avoiding.

A couple of months ago I put every account that I considered undesirable on my book onto a separate list. Now, in the first place, don't you ever let two hundred people who are undesirable customers get onto your books. That's bad policy; but if they are there, get your money out of them, if you can. Well, I did get a lot of them to settle—in fact, about one hundred and forty. Now, I still have about sixty of the very worst kind to collect from.

I have tried coaxing, begging, suing, filing liens, garnisheeing, and no telling what. I have not given up very many of them yet, and I won't till they die, and then I'll take a try at what is left by them, which usually is not very much.

I am now working on a contractor who is everlastingly tearing up the sod because I have told him that he must settle up his account, because it had not been "red inked" for twelve years.

Now this fellow quit me cold, and is as mad as a wet hen, and I guess he will cause me all kinds of trouble before he settles with me. Nevertheless, we are going to settle, or get the courts to settle for us. I much prefer the former, but if nothing but courts will do him, he will get the courts.

Of course, some of you will say I should never have let it run on this long, and I guess you are exactly right. But he paid us many a hundred dollars, although he would pay up no certain bills, but just so much on account, and let the thing keep running along, and I kept charging him interest and selling him stuff—and so it got into this shape.

When I ask this man for money he won't answer me, or if I try to stop him and talk to him about the account he won't pay any more attention to me than to a hobo asking for a drink. Now, I have sent him notice that he must set a date to begin to settle, within a week, and I mean just what I say. I should, of course, have made him settle each job within three months and twenty days of the time of purchase of the last material, and then all this would not have occurred, and I could have either fallen out with him long ago or else had him for a good customer now, instead of have him "knocking" me at every opportunity. But I didn't. I lost, and am now telling you how to avoid such things—and perhaps you will take the warning, and perhaps you won't till you get "stung" a bit yourself.

I have another contractor who has failed to settle for six years, who just has a peculiar way of getting the best of everyone he comes into contact with.

He knows how, and just makes use of the valuable knowledge he has accumulated.

Let me tell you one thing: Begin right now, and don't let any job go by the time for filing a lien, no matter who the party is. Make it a rule and stick to it; then they can't blame you. I made it a rule to charge interest and collect it, and I am $10,000 better off by it. Lots of them made rules to charge interest one week and broke them the next.

Run your own business. Don't let everyone come to you and tell you what you must do. By this I don't mean not to take and consider the advice of others, but I do mean don't let your customers bulldoze you.

I have let several "prince-of-soft-silk artists" get me good and plenty, and then refuse some poor devil $5 worth of credit. How many of you will "fess up" to having done this? And yet you know you have.

I have just sued one of them, and will be ten years getting what he owes me, and will have his enmity the rest of my life. Whereas, had I guarnisheed on all the bills he owes me for, I would have the money and, besides, I would have him "pulling" for me.

Had I notified the parties before they paid the contractor whom I have filed liens on for unpaid bills by the contractors, I would be thousands of dollars better off and have a few more customers besides.

Don't be afraid to notify the owner on anything where you doubt the contractor's paying qualities; it is no more than fair. Of course, he may show his appreciation of your kindness by telling the contractor, but you will get your money, and be that much ahead. It is better to fall out at first than after they have you a few thousand dollars to the bad.

A mistake I have not made which, no doubt, some of you have, is to sign contractors' and others' bonds.

This is a great mistake, and lumbermen had better keep off of this practice; and, furthermore, refrain from signing notes for anyone, and you will be thousands of dollars to the good. I have an ironclad contract not to sign anything but a merchant's license bond, and I stick to it, too; and I don't believe I have lost the sale of $100 worth of stuff by so doing.

A mistake that I have just corrected and quit making is that of giving credit for wet and damaged cement sacks. "Hearken unto me, my lads!" don't send out cement or plaster in bad sacks, and don't accept any bad sacks in return. I have a stamp that I put on every ticket that has plaster or cement on it, which says: "Don't accept any bad sacks, as you will receive no credit for torn or wet ones," and I fine any of my help who take out torn sacks, and now I can stand on my refusal to "pony up" for sacks that are worthless to me. Let me tell you that there isn't one of you who hasn't lost money by taking back sacks, stray sacks, and wet sacks. Besides, if you stand for such practice you are not treating your competitor who wants to do business on business principles right. There are a whole lot of us who don't care much for our competitors, but we shouldn't fail to be as decent as we can, for our competitors are seldom as black at heart as they look to us.

A good many of us have made the mistake to send out a lot of advertising under a one-cent stamp. Not guilty here. But I have friends who have done it. Please avoid it.

Another thing to save time and money by is not to fail to put on all sales tickets the address of the purchaser. It saves you money in time that your yard man won't lose by asking the one who makes the ticket, and your yardman and your collector won't have to look up the addresses when they go after the money. Oh, yes, don't forget to make every fellow who receives any material from you on either a cash or credit ticket sign up the receipt. Don't be afraid to demand this; it has saved us many a dollar, and many customers whom we would have lost otherwise.

Another mistake that some of us are still making is to allow beer-canning in our lumber yards and foul language. We have three ladies in our office, and our yard is just as refined as any place of business in the city, and the "can" don't go any more here.

Another way we can load ourselves down with a lot of undesirable stock is to take an order over the telephone and not have the customer sign up a verification slip of it before we order.

One other thing that you must not overlook to avoid is, don't buy everything that is offered you for sale. I have a lot of articles that I have had a hard time trying to move; but they are not going to be a dead loss.

Now, some of those things might move nicely in some communities, but have proven a failure in ours. I am just cleaning up a lot of hog dip that I had on hand for three long years. I have a bunch of paint and wallpaper cleaners and a lot of waterproofing compounds on hand. Some of these are all right, but the others are not. With all these things I have a whole lot of unfulfilled promises of the fellows who sold them to me. They promised to send a man here to canvass with us, and introduce them, but never did. I just traded off a lot of metal weather strips, the kind of strip that rises and drops as the door opens and closes. I traded those back to the firm for some sliding door track and hangers that I sold since and got my money out of them.

Then there is one very important thing. Yes, I believe it is more important than all the rest of them, and that is one that we all have made a great mistake in. It is losing our temper. Now, let me tell you, every time you lose your temper you lose your money.

There positively is nothing in "calling a fellow down good and proper," "telling him what you think of him," etc. Hold your temper and you will hold your trade. It is not necessary to be a "good piece of road" and have everybody run over you when he fees like it, but don't sit around "half cocked" all the time.

When a fellow tells you he only got five pieces of 2/4 by 16 when you know you loaded six on the wagon, or if a fellow says your plaster fell off the wall as fast as he could put it on, or some fellow says your paint is no good, don't call him a liar or swell up about it. There are so many cases where we lose customers just by not being able to sit quietly and let them tell us their troubles, and then explain things to them and give in to them, if they are right, and show them, when they are wrong (if that is the fact of the case). Now, you know you make mistakes. I make mine; and we often think we get sore at some fellow that we buy from for a just reason—although, in truth, sometimes without grounds. So it is with the fellow that buys from us. He has a right to an explanation; and just like us when we go after the fellow whom we favor with our business—if he is a diplomat—he gets us tighter than ever into his grasp, while, if he is an old bear, we quit him cold and never miss an opportunity to "knock" him. We all like to tell about our successful moves, but are loath to tell of our failures. But while, relating our sunshine ventures, we may inspire our brothers to try to succeed. They can learn much by our telling them how we failed and keep them from "driving into the same ditch." Now this may be a homely expression, but you fellows who have been out "just for a few minutes' ride with a few friends," and have gotten into a real ditch and had to ask your friends to walk home, rather than "call a taxi, and let all your friends know that you had a mishap," can certainly appreciate this and will admit that it isn't very "far-fetched."

CAMP FOOD

A whole lot depends on the food your men get to keep them in the glowing health necessary for strenuous camp work. Their food should be made from the best flour it is possible to secure.

Cream of the West Flour

the hard wheat flour that is guaranteed for bread

has the reputation of being the most wholesome, nourishing flour on the Canadian market. Lumber camps are learning more and more, the best is cheapest in the long run.

Your horses need special camp feed, too. Our Crushed Oats, Mixed Crushed Feed and Chop are the very finest grades of feed for camp use. You'll notice the difference in good work done by your horses in a short while after using these products.

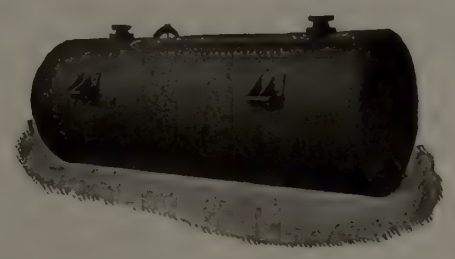
Write us for special prices to Lumbermen

THE CAMPBELL FLOUR MILLS CO., LIMITED

TORONTO PETERBORO

MONTREAL—W. J. McAuley, B-24 Board of Trade Bldg.
QUEBEC—Paul F. Gauvreau, 84 St. Peter St.
HALIFAX—H. E. Rains, 112 Lawrence St., Halifax, N. S.
C. E. Chote & Co.

Jenckes Boilers



We make a Specialty of

Horizontal Tubular Boilers

for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

Sherbrooke Montreal Cobalt So. Porcupine St. Catharines Toronto Vancouver Nelson

If you will avoid all the bad places in the road you will not be able to appreciate the good highways, so just miss the worst of them and grow fat.

Forests and the War

The devastation of the forests by shot, shell, and soldiers in the warring countries of Europe is described by Percival S. Ridsdale, editor of American Forestry, Washington, D.C. He says:

Belgium, the major portion of which is in possession of the Germans, had some forested land, which was, as it might well be termed, more of a scenic than a commercial nature. Advices indicate that these forests have practically been destroyed. Much of the timber was used by the Germans for military purposes—in the construction of trenches, in road building, in the erection of shelters, barracks, etc. Considerable was used for firewood, and it has been stated, with what accuracy it is impossible to say, that timber not used in this way or needed in the military zone has been shipped to Germany for home consumption. Most probably this is so. Before the war Germany imported large quantities of timber from Russia, and in the last few years preceding the war these imports greatly increased. English writers, calling attention to this fact, insinuate that the Germans knew the war was coming and imported as much timber as possible in order to conserve her own supplies, and to be able to provide for the expected large demand by the military in case of war.

As regards Belgium, then, it would not be at all surprising to learn, when the war is over, that there remains on Belgian soil no timber of commercial value; that her scenic forests have been wiped out, and that thousands of her roadside and street trees have been used for fuel and for other purposes by the Germans.

In Northern France, on both sides of the fighting front, great damage has been done the forests, not only by the tremendous bombardments which have marked the fighting there, and by the hail of bullets from small arms which have swept forested spaces, but by the trench builders, the road engineers, and others who needed timber for construction work. Thousands of new roads or passageways have been built for the rapid transportation of guns, munitions, supplies, and men, to thousands of points along both fronts. Many of the roads or passageways are of the type known as corduroy roads, the base being made of tree trunks, overlaid with branches and these branches overlaid with earth. These roads alone necessitate the cutting of thousands upon thousands of trees. In the lining of trenches and the building of shelters there has been unceasing demand for more and more timber, and when it has been on hand in the shape of single trees, groups of trees, woodlands, or forests, it is fair to assume that it has been freely used.

In addition, the destruction by shot and shell is tremendous. Trees that have not been blown down or cut through or shattered have been so badly damaged that they will die; others, pitted with bullet holes or wounded by other shot, are now open to disease or insect attack, while there are long stretches of forested lands where there has been no fighting, not much is known, but the inference is that, owing to the unceasing military demands for timber, the annual cutting is very much greater than it was in times of peace, and this means, doubtless, that practically all timber that has matured has been cut and used, for France, like England, was in times of peace a large importer of timber, and, like England, her supply from Russia, whence most of it came, has been cut off since the war started.

There is no occasion for concern regarding Russian forests, for the losses due to warfare are infinitesimal when compared with her tremendous forest resources. Then, too, even in the forests where there has been severe fighting, the damage done the trees is hardly worthy of note, because the forests are so dense and so extensive. Russia, with her wonderful forests, will have a glorious opportunity for an immense lumber business when the war is over, and if she can take advantage of it she will become the main source of timber supply for all the warring countries of Europe.

Practically no advices have come from Italy regarding any destruction of forests due to the war, nor has much been reported or written about Austria's situation in this respect.

It is certain that Germany has done a great deal of cutting in captured enemy territory, chiefly in Poland and Western Russia, and that she has conserved her own forest resources in the thoroughly efficient and scientific manner in which she has for so long managed her forests, but news of what she has or has not done would doubtless be of some military value to her enemies, and so in America nothing of importance has been heard regarding her forests.

The effect of the war on the forests of the British Isles will likely be the utter destruction of most of them. The war has created imperative need of lumber, and at the same time has cut off England's main source of supply, as well as made prices for what can be imported almost prohibitive. In time of peace England's timber imports were valued at about $215,000,000 a year, and this figure gives some idea of the amount she has needed since the war started. So great is her need, in fact, that already many of her home forests have been cut down, and, as everything must be sacrificed to the war, it is altogether probable that trees on many estates and on many private parks and woodlands have been turned into lumber for barracks and other military uses.

The Canadian Lumbermen's Insurance Exchange

"The Canadian Lumbermen's Insurance Exchange," with head office at Ottawa, is the name which has been given to the new Exchange created as a result of discussion upon insurance for lumbermen which took place at the annual meeting of the Canadian Lumbermen's Association at Ottawa, early in the present year. This Exchange is now operating under the most improved form of mutual protection and is subject to the supervision of the following advisory committee:—W. E. Bigwood, of Graves, Bigwood & Company, Ltd., Toronto and Byng Inlet; Duncan McLaren, of the Union Lumber Co., Ltd., Toronto; Arthur H. Campbell, of the Campbell, MacLaurin Lumber Co., Ltd., Hull, P.Q., with E. D. Hardy and Co., Ottawa, Attorney. The Exchange confines its operations to the better classes of mill property and lumber yards. The cost of operation is limited to 20 per cent. of the premiums, whereas approximately 50 per cent. of the premiums paid to stock companies is consumed in home office expenses, agency expenses and profits. The Exchange will therefore be in an excellent position for arranging reliable insurance at practically the cost of operation. Good risks will not be paying for losses on inferior plants, as is the case in connection with stock company insurance. By confining themselves to the best class of lumber plants and yards, the Exchange will be practically free from the conflagration hazard which often involves a series of heavy losses as a result of a single fire. Lumber plants are so widely scattered that it is impossible for a conflagration to affect seriously more than one operation, except in larger cities, where protection is much greater and where it is an easy matter to regulate the amount of insurance carried for the entire area. The high class of risk carried will also render the Exchange immune from the risk of incendiary fires.

Only sawmills of standard construction with five years' timber supply and some form of protection are elegible for policies with the Exchange, but lumber yards with 100 feet clear space, or over, from mill property, are being written for substantial amounts. Under this plan of indemnity the initial cost to the policyholder is no more than for the same security in other companies of recognized financial responsibility, and any profits accruing from the operations of the Exchange, after providing for losses and expenses, are placed to the credit of the policyholders, thus providing indemnity for lumbermen under the most favorable conditions at actual cost.

Some of the lumber mutual insurance organizations of the United States are returning 40 per cent. dividends to policyholders, and it is expected that the Canadian organization operating upon similar lines will not only be successful from the start, but will be a source of much advantage to those who participate in its benefits.

Turner Brothers, Canada, Ltd., Increase Their Accommodation

To take care of the rapidly increasing demand for goods of their manufacture (asbestos products and Balata belting) Messrs. Turner Brothers, Canada, Limited, Montreal, have just completed the erection of a new building, 400 feet long by 70 feet wide, along the waterfront, giving them excellent facilities for shipping by rail and water. Mr. Gavin Milroy, Managing Director of Messrs. Turner Brothers, Canada, Limited, has just returned from a two months' visit at the factory, Rochdale, England, where he has been looking after the interests of the Canadian branch.

It was announced at the annual meeting of the Laurentide Company, held in Montreal, that the new sulphite plant, with a capacity of 100 tons, will be completed by November. The profits for the year were the largest in the company's history, totalling $1,244,283, an increase of $209,677. The profits from lumber were $101,409.

At the Quebec Exhibition the C.P.R. exhibited a quantity of construction material made from Canadian lumber. The same company also exhibited a number of toys, showing the possibility of this industry in Canada. A number of returned soldiers were engaged in making duplicates of the toys on view.

Canada's exports of forest products during the twelve months ending July, 1916, were valued at $54,642,375. During the twelve months ending July, 1915, the exports of forest products were valued at $44,068,654, and during the twelve months ending July, 1914, the value was $43,400,015.

D. B. Sprague, lumber merchant, Winnipeg, Man., recently visited the Pacific Coast to make arrangements for shipment of large quantities of British Columbia fir to prairie points. He reported prosperous conditions in connection with the retail trade on the prairies.

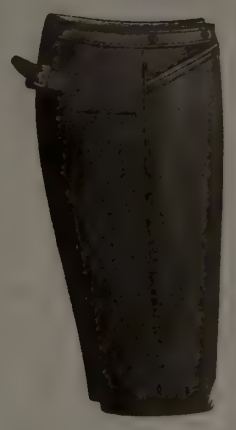
Lumbermen's and Railroaders' Clothing

Guaranteed Pure Wool Mackinaw Coats, Pants, Shirts, Mitts, Socks, Underwear, Etc., of the Highest Grades.

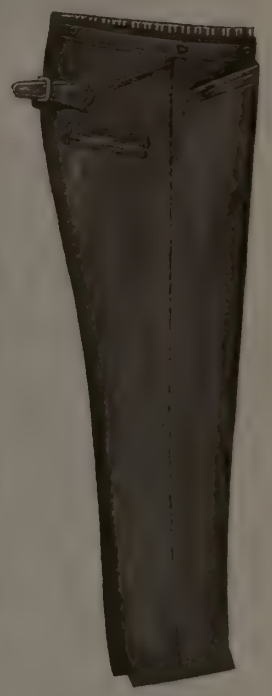
Bird's Pure Wool Mackinaw Coats with high seven inch collar, close fitting with tab at throat. Sizes 36 to 46.

Smart-Woods Home-made, Hand-knit Wool Mitts, as cut. Generous sizes, perfectly proportioned. For use with large fitting pullovers.

All-Wool Long Stockings, as cut. Black or fancy striped or checked.



Bird's Pure Wool Mackinaw Knickers, as cut. Top and hip pockets. Strap or wool cuff. Sizes 32 to 44. Black shades.



Men's Heavy Pure Wool Mackinaw Pants, as cut. Black, Khaki and Olive Green shades. Generous sizes, well made.

Write for Our Catalogue

Send Post-card, Name and Address

Smart-Woods LIMITED

Ottawa — Toronto
Montreal — Winnipeg

Original "Dunbar" Machines

We are the original and the only makers of "Dunbar" Shingle Machines, Lath Machines, Clapboard Machines, Steam and Gasoline Logging Engines. Each is the best for its particular work. Are you using the best?

Lath Machine

From our many years of experience we evolved this "Dunbar" Original Lath Machine. Every improvement that could be suggested, every time-tested idea for the betterment of product and for greater speed, has been incorporated in this machine. We believe it has no equal, and there are a great number of mill men throughout Canada who share this belief with us. Carefully constructed of high grade materials and designed to work steadily under the hardest conditions.

Steam and Gasoline Logging Engines

Conditions in Canada necessitate an engine that will stand any amount of strain and hard work in the lumber industry. With this idea in mind we have brought out the "Dunbar" engines perhaps a little stronger than is really needed. They do their work easily and willingly, and stand a great amount of hard usage. Built entirely in Canada for the Canadian lumber trade.

Clapboard Machine

You will need no excuse for the quality of your product if you use the original "Dunbar" Clapboard Machine. Expert in every detail. This machine will give you the very best service under most trying conditions. It will turn out work without delays. It will need practically no repairs and will increase your output. We cannot recommend it too highly because it is giving this very service to lumbermen in all parts of this country.

Send for catalogues of any or all of these machines.

Dunbar Engine & Foundry Co.

WOODSTOCK, N.B.

The EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS·DIEU·RIEN
MONTREAL·Canada

Head Office at Montreal.

SPRUCE
ROUGH or DRESSED

Saw Mills at
MONT LAURIER, QUE.
STE. MARGUERITE, QUE.

Dressing Mills at
ST. JEROME, QUE.

"Sound Wormy White Pine"

We have accumulated the following Wormy Pine, which we offer at special prices. It is a regular grade of Mill Run except that it is wormy.

2 cars	3 x 6	and wider	10 to 16 feet.
1 car	4 x 5	" "	10 to 16 feet.
3 cars	4 x 6	" "	10 to 16 feet.
3 cars	4 x 8	" "	10 to 16 feet.
2 cars	4 x 10	" "	10 to 16 feet.
1 car	4 x 12	" "	10 to 16 feet.
2 cars	6 x 6	" "	10 to 16 feet.
1 car	8 x 8	" "	10 to 16 feet.

Also some 2 inch.

Write or phone for prices.

Herman H. Hettler Lumber Co.
Midland, Ont.

CEDAR
Shingles

Campbell, MacLaurin Lumber Co.
Limited
Board of Trade Building, MONTREAL

Pine, Spruce
Hemlock
Hardwoods, Lath

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber. Lath and Shingles
Offices—500 McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

It is reported that fire recently destroyed the sawmill and machinery belonging to Geo. McAllister, Guelph, Ont. The loss is estimated at $5,000

Ewing & Murphy, 18 Cameron Street, Toronto, are having plans prepared for repairing their planing mill, which was recently destroyed by fire. The repairs are to cost $6,000.

The McDonald Lumber Company, Webbwood, Ont., have taken over the office and storehouses of Chant and Company at that point and are already commencing operations in the woods.

The planing mill, etc., belonging to A. E. Pedwell, Clarksburg, Ont., was recently destroyed by fire. The amount of the loss is estimated at over $10,000 and the insurance $4,000. A large concrete factory will be erected immediately.

Hanna Brothers Planing Mills, Ltd., have secured a charter to carry on business as manufacturers of sash and doors, etc. The capital stock of the company is $75,000, and the head office is at Fort Erie, Ont. The provisional directors of the company are A. J. Hanna, F. Claus, and A. R. Ellis.

The Pigeon River Lumber Company, Port Arthur, Ont., have been making extensive improvements and additions to their plant, involving an expenditure of $15,000. Two new boilers have been installed; a new boiler house has been built; a brick shaving shed has been erected, new piping has been laid down from the cyclone and a new stack has been erected, etc.

The Department of Lands, Forests and Mines of the Government of Ontario is calling for tenders until December 1st, for the right to cut pulpwood and pine timber on an area situated on the Pic River in the district of Thunder Bay. The area covered amounts to 1,400 square miles. The successful bidder will be required to deposit $25,000 as a guarantee of carrying out the requirements of the tender. He will also be required to erect a pulp mill, which is to cost, with its equipment and machinery, not less than $1,000,000. The output of the mill is to be at least 150 tons daily and employment is to be given to 300 hands on an average throughout the year of ten months. The company will also be required to spend $200,000 upon the erection of their plant during the first year, $350,000 during the second year and the balance during the third year. The terms of the tender also require the successful bidder to erect a paper mill at such time as may be directed by the Minister. The mill is to have a capacity of at least 100 tons of paper per day and a daily output of not less than 75 tons. In connection with this tender the government is introducing a new feature in regard to Crown dues upon pulpwood. Former tenders called for a bonus in cash on the part of the bidder. The new tender requires the bidders to state the amount of bonus they will be prepared to pay per cord of pulpwood taken out. This is the first time that a stipulation of this sort has been included in a pulpwood tender in Ontario, though the same principle has been applied in connection with timber lands for some years.

Eastern Canada

J. H. Starrack, Little Cascapedia, P.Q., recently lost his shingle mill by fire. The plant will be rebuilt.

Pauze & Gohier, lumber merchants and owners of saw and planing mills, Cote des Neiges Road, Montreal, have dissolved partnership.

The sawmill belonging to Alex. Gagnon, Chicoutimi, P.Q., was recently destroyed by fire. The amount of the loss is estimated at about $40,000, with insurance of $15,000.

Work is to start at once on the erection of a sawmill at Magog, P.Q., for D. Audet. The building will be 96 x 85 feet, and is to cost $8,000. The owner will be in the market for woodworking and sawmill machinery.

James Holmes & Son, Doaktown, N.B., recently suffered a serious loss by fire, in which the sawmill and 250,000 feet of lumber were destroyed. The loss is estimated at $8,000, and there was no insurance on the building.

According to a despatch from Fredericton, N.B., the Phoenix Mills at that point are being purchased by Donald Fraser & Sons as an outcome of a settlement of a suit between Jas. Murchie & Sons and Donald Fraser & Sons.

The auction sale of the assets of the St. Simeon Lumber Company, Limited, in liquidation, which was held by Messrs. Lefaivre & Gagnon, 147 Mountain Hill, Quebec, P.Q., resulted in the limits, mills, rolling stock, wharves, equipment, etc., being sold to Napoleon Lavoie (in trust) of Quebec, for $125,500. The stock in trade, valued at $11,309, was sold at 33c on the dollar, to Napoleon Lavoie (in trust). The book debts, amounting to $18,300, were sold at 27c on the dollar, to Napoleon Lavoie (in trust). All the wood remaining in the rivers and lakes and about 1,000 cords were sold for $500 to Napoleon

Lavoie (in trust). The refuse lumber and culls, about 408½ cords, were sold for $225 to Messrs. Auger Rancourt & Company, of Quebec, P.Q.

Western Canada

Harrison & Son, lumber merchants, Neepawa, Man., have been succeeded by the Dutton Wall Lumber Company, Ltd.

Negotiations are under way for the construction of a sawmill on the Capilano Indian Reserve near West Vancouver, B.C.

The Brunette Saw Mills Company, Ltd., New Westminster, B.C., recently lost their shingle mill, boiler house, and log chute at Sapperton, B.C., by fire, incurring a loss of $20,000. The owners will rebuild.

The Northern Pacific Logging Company, Ltd., has been incorporated, with head office at Victoria, B.C., and capital stock of $25,000, to carry on business as timber and lumber merchants, sawmill, shingle mill, and pulp mill proprietors, loggers, etc.

The Dominion Shingle and Cedar Company, Ltd., has been incorporated, with head office at New Westminster, B.C., and capital stock of $45,000, to carry on business as timber merchants, shingle mill, planing mill, and sawmill proprietors, loggers, etc.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 27th day of September, 1916, for the purchase of License X677, to cut 1,956,000 feet of Douglas fir and cedar on an area adjoining Lot 672, Fuller Lake, New Westminster District. Two years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 27th day of September, 1916, for the purchase of License X612, to cut 2,390,000 feet of fir, cedar, hemlock, balsam, spruce, and white pine on an area adjoining Lot 561, Green Point Rapids, Coast District, Range 1. Three years will be alowed for the removal of the timber.

The Acorn Lumber & Shingle Company, Limited, are building a shingle mill costing $10,000 at New Westminster, B.C. Mr. M. D. Irvine, Kelley Street, New Westminster, is at the head of the new concern and Mr. John Kelly is also interested. The firm have already been operating in East Burnaby for the past two years. The mill will be equipped with two machines and provision will be made for a third.

Lumber Advances Slow Compared With Other Commodities

"Lumber has gone up in price somewhat in 1916 as compared with prices in 1915, but the increase is far below the percentage of increase in cost of almost any other article in the world of commerce," according to a report by S. Kellogg, Secretary of the National Lumber Manufacturers' Association, based upon a government report of the average values of various species of wood. The increase is not even applied to all species, for some species of wood are actually valued at less this year than was the case in 1915, western pine being an instance. Furthermore, the lumber trade was in a state of depression for many years, manufacturers were cutting and selling lumber at a loss in order to secure money to pay fixed charges on their investments, and what slight advance has been made in the past year should be compared with the great increase in food, clothing and other materials during the past ten years, to give the lumber trade its comparative relation to the rest of the nation's commerce."

The average f.o.b. mill value per thousand feet of the principal kinds of lumber was as follows:—

Softwoods	Average Values Per M. 1915	1916
Yellow pine	$12.50	$15.02
Douglas fir	10.50	14.20
White pine	18.00	18.32
Hemlock	13.00	15.31
Western pine	14.50	14.01
Spruce	16.50	17.33
Cypress	20.00	21.94
Redwood	13.50	16.64
Cedar	15.50	18.12
Larch	11.00	11.91
White fir	11.00	12.91

Hardwoods	Average Values Per M. 1915	1916
Oak	$19.00	$21.76
Maple	15.00	15.53
Yellow poplar	22.50	24.21
Red gum	12.50	13.46
Chestnut	16.00	17.49
Birch	16.50	17.24
Beech	14.00	14.05
Basswood	19.00	18.66
Hickory	23.50	30.42
Elm	17.00	18.08
Ash	22.50	24.35
Cottonwood	17.50	17.15
Tupolo	12.00	14.13

We handle

Everything in Lumber

We can offer at very attractive prices, if interested, the following:

50 M 1" No. 1 Common & Better Birch
140 " 1" Good Pine Sidings
50 " 1½" No. 3 Barn & Better Strips
80 " 3"x11" Red Pine
42 " 1" A. Sidings
90 " 1½" S.C. Sidings
98 " 1¼" " "

Have also considerable dry stock for shell box making in 1" x 9" and 10" Pine and Spruce.

Write or wire for prices and stock lists.

The McLennan Lumber Co.
Limited
21 Dorchester St. W. Montreal, Que.

H. BOURGOUIN
Dominion Express Bldg., 145 St. James St., Montreal
Wholesale Lumber and Timber
SHELL BOX STOCK
White and Red Pine, Spruce
Hemlock, Birch, Maple
Railway Ties, Fence Posts, Etc.
Prompt shipment. Satisfactory stock. Good service Write for Prices.
A. F. B. AUSTIN, Manager

Your Blower System

If you contemplate installation of a new blower system or an extension of your present one, write us, as we have a unique proposition to offer. There is no heating, clogging or shaking with our system.

Prices on application

The Toronto Blower Co.
156 Duke St., Toronto

WAR LOAN

DOMINION OF CANADA

Issue of $100,000,000 5% Bonds Maturing 1st October, 1931.

Payable at par at

OTTAWA, HALIFAX, ST. JOHN, CHARLOTTETOWN, MONTREAL, TORONTO, WINNIPEG, REGINA, CALGARY, VICTORIA

Interest Payable Half-Yearly, 1st April, 1st October.

Principal and Interest Payable in Gold.

ISSUE PRICE 97½

A FULL HALF-YEAR'S INTEREST WILL BE PAID ON 1st APRIL, 1917

The Proceeds of the loan will be Used for War Purposes Only.

The Minister of Finance offers herewith, on behalf of the Government, the above named Bonds for subscription at 97½, payable as follows:—

10 per cent. on application;
30 " " 16th October, 1916;
30 " " 15th November, 1916;
27½ " " 15th December, 1916.

The total allotment of bonds of this issue will be limited to one hundred million dollars exclusive of the amount (if any) paid for by the surrender of bonds as the equivalent of cash under the terms of the War Loan prospectus of 22nd November, 1915.

The instalments may be paid in full on the 16th day of October, 1916, or on any instalment due date thereafter, under discount at the rate of four per cent per annum. All payments are to be made to a chartered bank for the credit of the Minister of Finance. Failure to pay any instalment when due will render previous payments liable to forfeiture and the allotment to cancellation.

Subscriptions, accompanied by a deposit of ten per cent of the amount subscribed, must be forwarded through the medium of a chartered bank. Any branch in Canada of any chartered bank will receive subscriptions and issue provisional receipts.

This loan is authorized under Act of the Parliament of Canada, and both principal and interest will be a charge upon the Consolidated Revenue Fund.

Forms of application may be obtained from any branch in Canada of any chartered bank and at the office of any Assistant Receiver General in Canada.

Subscriptions must be for even hundreds of dollars.

In case of partial allotments the surplus deposit will be applied towards payment of the amount due on the October instalment.

Scrip certificates, non-negotiable or payable to bearer in accordance with the choice of the applicant for registered or bearer bonds, will be issued, after allotment, in exchange for the provisional receipts.

When the scrip certificates have been paid in full and payment endorsed thereon by the bank receiving the money, they may be exchanged for bonds, when prepared, with coupons attached, payable to bearer or registered as to principal, or for fully registered bonds, when prepared, without coupons, in accordance with the application.

Delivery of scrip certificates and of bonds will be made through the chartered banks.

The issue will be exempt from taxes—including any income tax—imposed in pursuance of legislation enacted by the Parliament of Canada.

The bonds with coupons will be issued in denominations of $100, $500, $1,000. Fully registered bonds without coupons will be issued in denominations of $1,000, $5,000 or any authorized multiple of $5,000.

The bonds will be paid at maturity at par at the office of the Minister of Finance and Receiver General at Ottawa, or at the office of the Assistant Receiver General at Halifax, St. John, Charlottetown, Montreal, Toronto, Winnipeg, Regina, Calgary, or Victoria.

The interest on the fully registered bonds will be paid by cheque, which will be remitted by post. Interest on bonds with coupons will be paid on surrender of coupons. Both cheques and coupons will be payable free of exchange at any branch in Canada of any chartered bank.

Subject to the payment of twenty-five cents for each new bond issued, holders of fully registered bonds without coupons will have the right to convert into bonds of the denomination of $1,000 with coupons, and holders of bonds with coupons will have the right to convert into fully registered bonds of authorized denominations without coupons at any time on application to the Minister of Finance.

The books of the loan will be kept at the Department of Finance, Ottawa.

Application will be made in due course for the listing of the issue on the Montreal and Toronto Stock Exchanges.

Recognized bond and stock brokers will be allowed a commission of one-quarter of one per cent. on allotments made in respect of applications bearing their stamp, provided, however, that no commission will be allowed in respect of the amount of any allotment paid for by the surrender of bonds issued under the War Loan prospectus of 22nd November, 1915. No commission will be allowed in respect of applications on forms which have not been printed by the King's Printer.

Subscription Lists will close on or before 23rd September, 1916.

Department of Finance, Ottawa, September 12th, 1916.

WHY WHEREFORE

THE P. T. GENDRON SHOE PACK CO. MIDLAND GENDRON ONT. CAN.

Anything that makes for a longer wear, ensuring comfort, **Foot Comfort we mean,** makes for economy.

That's why the **"GENDRON" Draw String Shoepack** is economical, because of its 100 per cent. **QUALITY,** and **HAND MADE** for **Foot Comfort.**

All our Shoepacks carry this guarantee. We will cheerfully replace any that may prove defective.

Catalog and Prices for the asking

The P. T. Gendron Shoepack Co.

Midland, Ont.

Canadian Made Locomotives

There is no need to go outside of the Canadian market in order to obtain the best logging locomotives. We have been specializing in this line for fifty years. You will find the design of our locomotives complete and the sturdy construction equal to every test of the severe service of logging operations.

Repair parts can always be had on the shortest notice.

This engine is 13½ ins. x 18 ins. and weighs 35 tons.

Grey Iron Castings—any size or shape—ordinary or intricate—made promptly. New foundry, splendidly equipped We would be pleased to quote on castings—singly or by contract. We also make drop forgings of all descriptions.

MAY WE SEND YOU SPECIFICATIONS?

Canadian Locomotive Company, Limited, Kingston, Ont.

Taylor and Arnold Ltd., Sales Agent, Montreal and Winnipeg

"Maple Leaf" Brand

Stitched Cotton Duck Belting

A trial Belt will convince you. Write for prices and samples.

Excels all others in economy, strength, efficiency and true running, whether for transmission of power or conveying. A test recently made at McGill University, Montreal, of a 6-ply **"Maple Leaf"** belt, a light double leather, and a 6-ply rubber belt, showed that our **"Maple Leaf"** Belt stood a breaking strain 50 per cent. greater than the leather, and 25 per cent. greater than the rubber belt.

"Maple Leaf" Main Drive Belts
Are the Best on the Market

"Maple Leaf" Belt Dressing is the best for all kinds of belts

Dominion Belting Co., Limited
HAMILTON - ONTARIO
Branch: Montreal—Office 51 Duluth Building

CROWN BRAND CORN SYRUP

Cheaper and Better than Molasses

Barrels, about 700 lbs.	Pound	.4
Half Barrels, about 350 lbs.	Pound	.4¼
Quarter Barrels, about 175 lbs. . ..	Pound	.4½
2 Gallon Wooden Pails, 25 lbs. each,	Per Pail	$1.50
3 Gallon Wooden Pails, 38½ lbs. ea.,	Per Pail	2.10
5 Gallon Wooden Pails, 65 lbs. each,	Per Pail	3.35

Prices subject to change without notice.

FREIGHT PAID

to all Steam Railroad Stations in Quebec and in Ontario East or South of Sault Ste. Marie, Sudbury, North Bay and Mattawa inclusive, to all Lake Ports during season of open navigation.

Any Wholesaler will Supply You

The Canada Starch Co., Ltd.
MONTREAL

The Lumberman's Milk
IN POWDER FORM

KLIM

READ BACKWARD

Klim is pure—cheaper than fresh liquid milk. One-third the cost of condensed milk. No freights on useless water—keeps in any temperature—no waste. Packed for camp use especially in 10 pound tins $2.00 each, the pound makes one gallon. Case lots, special price.

Write for samples, etc.

Canadian Milk Products Ltd., Toronto
Plants:—Belmont, Ont., Brownsville, Ont. Head Office:—Mail Building
Montreal Office—508 New Birks Building

Planing Mill Improvements

Every Manufacturer in the Lumber Industry realizes that to be "up-to-date" their Factory should be installed with **Shaving Exhaust Fans.**

The Sheldon Shaving Exhaust Fan
is especially designed to suit your particular requirements giving greater efficiency and independence than any other on the market.

See our New Catalogue

Sheldons Limited - Galt, Ontario
Toronto Office, 609 Kent Building
AGENTS:
Messrs. Ross & Greig, 412 St. James St. Montreal, Que. Messrs. Walker's Limited, 259-261 Stanley St. Winnipeg, Man.
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Messrs. Robt. Hamilton & Co. Ltd., Bank of Ottawa Bldg., Vancouver, B.C.

PROCTOR VENEER DRYER

Dries enormous amount of veneer perfectly flat and pliable at minimum cost, without checks or splits

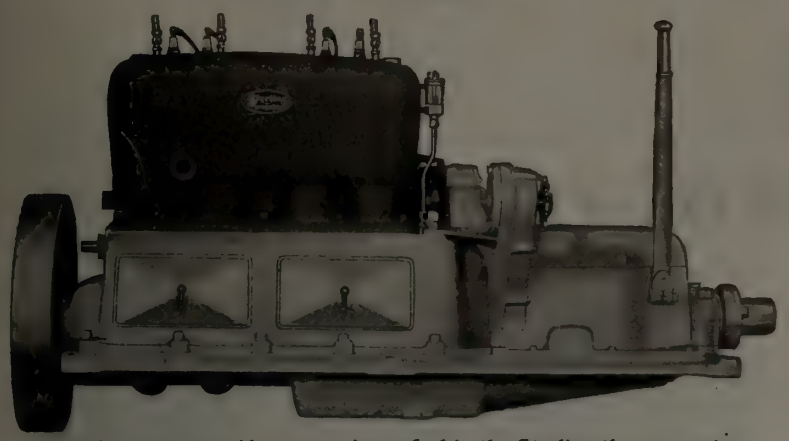
Send for catalog and list of users

The Philadelphia Textile Machinery Co., Philadelphia

Sterling
THE ENGINE of REFINEMENT
For the finest boats that float

Insure You Happiness—

by placing a Sterling in your boat. We have a model exactly suited to your requirements



Motor-boat owners of long experience find in the Sterling the one motor containing all the superior qualities they demand. Cast integral with every Sterling motor is a refinement, a reliability and an efficiency to be found in no other marine motor today.

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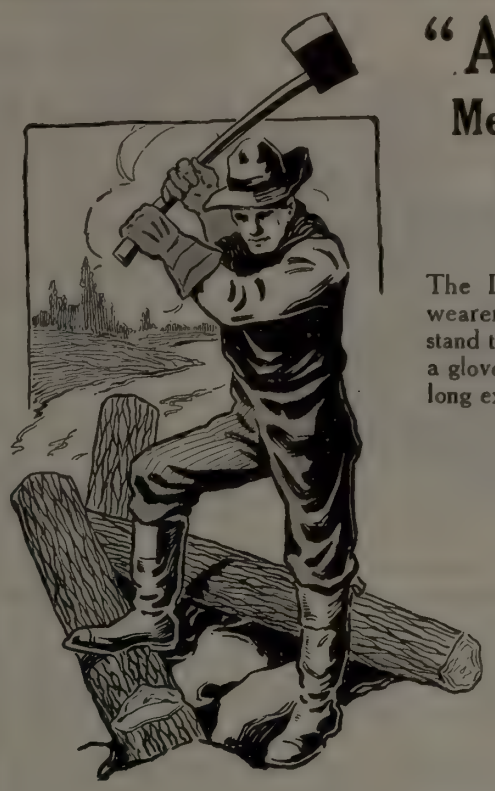
DISTRIBUTORS AND SERVICE STATIONS: Pyke Motor & Yacht Co., Montreal; Canadian Beaver Co., Toronto; Hutchinson Bros., Alexandria Bay; J. B. Conway, Kingston; A. W. Daball, Parry Sound; Gilbert Motor Boat Co., Brockville; Muskoka Lakes Supply Co., Port Sandfield; Lake of the Woods Boat Co., Winnipeg; Alberta Motor Boat Co., Edmonton; Consolidated Gas Engine Co., Ltd., Vancouver.



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Meets the Lumberman's Every Requirement

The Lumberman above all Glove wearers requires a glove that will stand the roughest kind of wear, also a glove that will resist rain, slush and long exposure.

ASBESTOL
REG. IN U.S PAT OFF.

EISENDRATH'S CELEBRATED HORSE HIDE

GLOVES and MITTENS

have been endorsed by thousands of Lumbermen to stand each and every one of these severe tests. What's more,—"ASBESTOL" can be washed with warm water and soap and will dry out soft and pliable.

Dealers!—Your jobber will supply you with "ASBESTOL" Gloves and Mittens. Ask him to send you Catalogue showing "ASBESTOL" in many different styles.

EISENDRATH GLOVE COMPANY

CHICAGO, ILL.

FOR SALE

One Used Lombard Steam Log Hauler

Where a haul to stream or mill is five miles or more this sturdy machine will pay its way in a short time. Substantially built. Able and willing to haul a tremendous weight over uneven ground.

We have a machine that has completed the hauling for one customer, which we offer for immediate shipment at a special price.

Write Us Today

The Jenckes Machine Co., Limited

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Montreal Office—E. T. Bank Building
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Warehouses carrying stocks—Cobalt, South Porcupine, and Vancouver.

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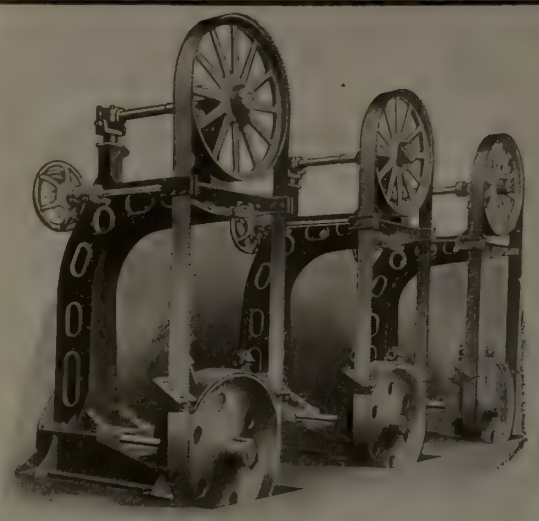


48" Slasher

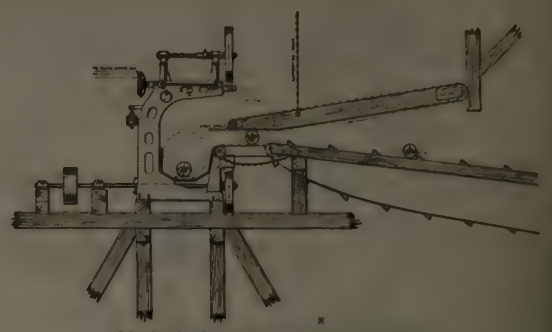
The Clark Band Saw Slasher for Cutting Pulpwood

Made for either 24" or 48" Wood

The Band Saw has 3/32" Kerf and Cuts SMOOTH.

Your saw has 3/8" to 1/2" Kerf and leaves end of wood torn and rough.

The Band Slasher takes only 1/3 as much power to drive as a Circular Saw Slasher.



Method of Feeding Logs into Slasher

Let us give you drawings and estimates for one to fit your plant

CLARK BROS CO., Olean, N. Y.

Garlock Packings

Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

Style No. 777

Style No. 150

The Garlock Packing Co.

Hamilton, Ontario

Branches: Calgary, Montreal

Branches: Toronto, Winnipeg

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

Pink's Lumbering Tools

The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

Long Distance Phone, No. 87

Send for Catalogue and Price List.

Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants.

The Thomas Pink Company, Limited

Manufacturers of Lumber Tools

PEMBROKE - - - - - ONTARIO

MADE IN CANADA

It's a Pink anyway you take it, and it's the best Peavey made

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa, Deputy Minister.
December 20th, 1912.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	26 00	27 00
1 x 6 common and dressing	27 00	29 00
1 x 8 common and dressing	27 00	29 00
1 x 10 common and dressing	31 00	32 00
1 x 12 common and dressing	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		27 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		28 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		22 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft.		17 00
1 x 6-in. x 9 to 16 ft.		20 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		22 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft.		16 00
2 x 4 to 12, 10 and 16 ft.		20 00
2 x 4 to 12-in., 12 and 14 ft.		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet: 8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain		31 50
Fir flooring, 1 x 4, edge grain		35 00
Fir flooring, 1 x 4, flat grain		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 25
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	40 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1st and 2nds, 4/4	44 00
Birch, No. 1 com. and bet., 4/4	35 00
Birch, 1st and 2nds, 6/4 and 8/4	46 00
Birch, 1st and 2nds, 10/4 and 12/4	60 00
Birch, 1st and 2nds, 16/4	62 00
Basswood, 1sts and 2nds, 4/4	42 00
Basswood, No. 1 com. and bet., 4/4	35 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	45 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet.	30 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft Elm, No. 1 com. and bet., 4/4	33 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4.	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1st and 2nds, 4/4	40 00
Hard Maple, common and better, 4/4	33 00
Hard maple, 12/4 & 16/4, 1sts and 2nds	50 00
Red oak, plain 1st and 2nds, 4/4	60 00
Red oak, plain, No. 1 com., 4/4	42 00
Red oak, plain No. 2 com. 4/4	32 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain 1sts and 2nds, 4/4	60 00
White oak, plain, No. 1 com., 4/4	42 00
White oak, plain, No. 2 com., 4/4	32 00
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	66 00
Red and White oak, plain, No. 1 com. 5/4 and 6/4	45 00
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00
Red and White oak, plain, 1sts and 2nds, 8/4	72 00
Red and White oak, plain, No. 1 com. 8/4	50 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00
White oak, ¼ cut No. 1 common	57 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$52 00	54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	30 00	33 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips	23 00	24 00
Pine, 1-in. x 5-in. s.c. strips	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips	24 00	25 00
Pine, 1-in. x 7-in. s.c. strips	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft.	26 00	27 00
Pine, 1-in. x 10-in. M.R.	28 00	29 00
Pine, s.c. sidings, 1¼ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	17 50	18 00
1"x 3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16'	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Quebec Spruce Deals		
12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00

Cuts and Better

4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00

No. 1 Cuts

1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00

No. 2 Cuts

1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in.	25 00
1-in. x 5-in.	25 00
1-in. x 6-in.	26 00
1-in. x 8-in.	27 00
1-in. x 10-in.	29 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00

No. 1 Barn

1 inch	31 00	45 00
1¼, 1½ and 2-in.	36 00	45 00
2½ and 3-in.		45 00
4 inch		50 00

No. 2 Barn

1 inch	28 00	36 00
1¼, 1½ and 2-in.	30 00	36 00
2½ and 3-in.		38 00

No. 3 Barn

1 inch	21 00	28 00
No. 1, 1, 1¼, 1½, 2-in.	20 00	25 00

Box

No. 1, 1, 1¼, 1½, 2-in.	22 00	25 00
No. 2, 1¼, 1½, 2-in.	19 00	23 00

Mill Culls

Mill run culls, 1-in.		19 00
1, 1½, 1¼ and 2-in.		20 00
No. 2	17 00	18 00

Lath

No. 1, 32-in. pine	1 80
No. 2, 48-in. pine	4 35
No. 1, 48-in. pine	4 85
No. 3, 48-in. pine	3 85
Hemlock Lath 48 in.	3 80

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	6 ft.	S. 1 S. and 1. E. -8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8	14 00	17 00	20 50	21 50
2 x 10	18 00	18 50	21 50	22 50
2 x 12	18 00	19 00	23 50	23 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	21 50
2 x 4, 10, 18, 20	23 50
2 x 6, 8 to 16	21 50
2 x 8, 8 to 16	21 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	29 50
2 x 10 and 2 x 12; 8-16 ft.	26 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	28 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	30 50

No. 1 Common Boards

4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50

Flooring

4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00

Shiplap—Finished

6 inch	22 50
8, 10 and 12 inch	23 50

Siding

6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00

Lath

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed)	4 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	27 10
3 x 8 in.; 8 to 16 ft.	24 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	27 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	29 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	20 50
2 x 4 in.; 12 and 14 ft.	21 50
2 x 4 in.; 10 and 16 ft.	22 50
2 x 4 in.; 18 and 24 ft.	23 50
2 x 4 in.; 22 and 24 ft.	24 50
2 x 4 in.; 26 to 32 ft.	26 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	23 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	25 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	26 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	28 00
2 x 14 in.; 10 to 16 ft.	28 00
2 x 14 in.; 18 and 20 ft.	30 00
2 x 14 in.; 22 and 24 ft.	31 00
2 x 14 in.; 26 to 32 ft.	33 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	24 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	25 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	26 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	27 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	27 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	27 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	28 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	28 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 00
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft.	23 00
No. 2 Shiplap, 6 in.	22 00
No. 2 Shiplap, 8, 10 and 12 in.	23 00

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 85

LATH

Fir lath, ⅜ x 1½ in. x 4 ft., bundled in 50's	4 50
Cedar lath ⅜ x 1½ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00

(Continued on page 60)

Men Minutes Money

The man who "wouldn't spend a cent" on an International Time Recorder discovered one day that he was paying for one because he didn't have it. When he did really install one it paid for itself.

HOW ABOUT YOU?

These are the Three Great Factors in Commercial Life—the International Time Recorder is their Watch Dog.

Just like your lumber and hardware, minutes cost you money. They represent your greatest investment and yet they are the one raw material that is not carefully and accurately measured.

Meter your time with an International Time Recorder. Get all the time you pay for—cut the Gordion knot in preparing your time sheet—promote co-operation and discipline and avoid disputes,

There are 260 styles of International Time Recorders—one is particularly suited to your business. Prices from $100.00 up.

Complete details on request.

The International Time Recording Company of Canada, Limited

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F. E. MUTTON, General Manager
28 Anderson St.
TORONTO
Toronto Phone—Col. 622.

MONTREAL
W. A. Wood, Jr., Sales Agent
Cartier Bldg., Cor. McGill and Notre Dame Sts.
Phone—Main 7025

CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	62 00
No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	37 - 39	24 - 26	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in...	98 00
Selects, 1 to 2 in.	88 00
Fine common, 1 in.	68 00 70 00
Fine common, 1¼ to 2 in.	72 00 74 00
No. 1 Cuts 1 in.	53 00
No. 1 Cuts 1¼ to 2 in.	60 00 64 00
No. 2 Cuts, 1 in.	40 00
No. 2 Cuts, 1¼ to 2 in.	48 00 50 00
Barn Boards, No. 1, 1 x 12	46 00 50 00
No. 1, 1 x 10	37 00 38 00
No. 1, 1 x 8	36 00 37 00
No. 2, 1 x 12	38 00 40 00
No. 2, 1 x 10	35 00
No. 2, 1 x 8	34 00
No. 3, 1 x 12	31 00 32 00
No. 3, 1 x 10	29 50 30 00
No. 3, 1 x 8	29 00
Canadian spruce boards	23 00 25 00
Spruce, 10 in. dimension	27 00 28 00
Spruce, 12 in. dimension	28 00 29 00
Spruce, 9 in.	25 00
Spruce 8 in. and under dimen.	27 00
10 and 12 in. random lengths, 10 ft. and up	26 00 27 50
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00 22 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00 22 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50 23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	22 00
1½-in. spruce laths	4 10 4 15
1¼-in. spruce laths	3 75

New Brunswick Cedar Shingles

Extras	3 50	3 00
Clears	3 10	3 15
Second clears	2 30	2 40
Clear whites	2 10	2 20
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.		3 75
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear		3 65

Special "C C" Steel Loading Chain

For Lumbermen's Use

Light and Exceedingly Strong

The Columbus Chain Company

Lebanon, Pa. Columbus, Ohio

Address Communications to Columbus, Ohio

Canadian Agent—

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FIRE BRICK

On a Quality Basis

Use as much care in its selection as you would in choosing the lumber that goes into your products.

No brick gives the best results for every purpose. The brick you would use for your refuse burner may not give you the best results for your Dutch Oven.

We Manufacture the Following Well Known Brands

"Elkco," "Elk Steel," "St Marys," "Keystone" and "Rotex"

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We Make a Specialty of

REFUSE BURNERS, BOILER SETTINGS, KILNS, DUTCH OVENS, ETC.

Catalog sent upon request.

Elk Fire Brick Co. of Canada, Limited

HIGH GRADE FIRE BRICK and CLAY

Sun Life Bldg., Hamilton, Canada

Meet Me at the TULLER—for Value, Service, Home Comforts.

NEW

Hotel Tuller

DETROIT, MICH.

Center of business on Grand Circus Park. Take Woodward car, get off at Adams Avenue

ABSOLUTELY FIREPROOF

200 Rooms, Private Bath, $1.50 Single, $2.50 Up Double.
200 Rooms, Private Bath, $2.00 Single, $3.00 Up Double.
100 Rooms, Private Bath, $2.50 Single, $4.00 Up Double.
100 Rooms, Private Bath, $3.00 to $5.00 Single, $4.50 Up Double.

TOTAL, 600 OUTSIDE ROOMS
All Absolutely Quiet

Two Floors—Agents' Sample Rooms. New Unique Cafes and Cabaret Excellente.

PRATT & WHITNEY CO.

OF CANADA, LIMITED

SMALL TOOLS

Taps — Dies — Reamers — Cutters — Drills

MADE IN CANADA

As good as money can buy—Guaranteed absolutely!

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SALES OFFICES:

MONTREAL Drummond Bldg. VANCOUVER WINNIPEG Bank of Hamilton Bldg.

Sanitary Steel Bunks

Double Deck Bunk No. 171

Black Japan Finish. 1½ inch angle-iron frame supported by strong steel braces. "Alaska" patent twisted link fabric attached to frame by oil-tempered helicals at each end, making very strong, resilient and comfortable bed. Height of ends, 60 inches; height of lower spring, 13 inches; height of upper spring, 52 inches; length, 76 inches. Sizes: 4-6, 4-0, 3-6, 3-0, 2-6. Shipping weight, 145 pounds.

Good sound sleep for your men will repay you many times over in increased vigor and work.

No chance for vermin in these steel frames. Can be erected or taken down in a few minutes. Packed flat for shipping. ***Last a lifetime.*** We guarantee every bed for 20 years. They are strong and much more comfortable than wooden bunks.

Mattress is strong, durable, light—filled with clean, curled wood fibre.

Special prices for lumbermen. Write us for further information.

The Parkhill Manufacturing Co., Limited

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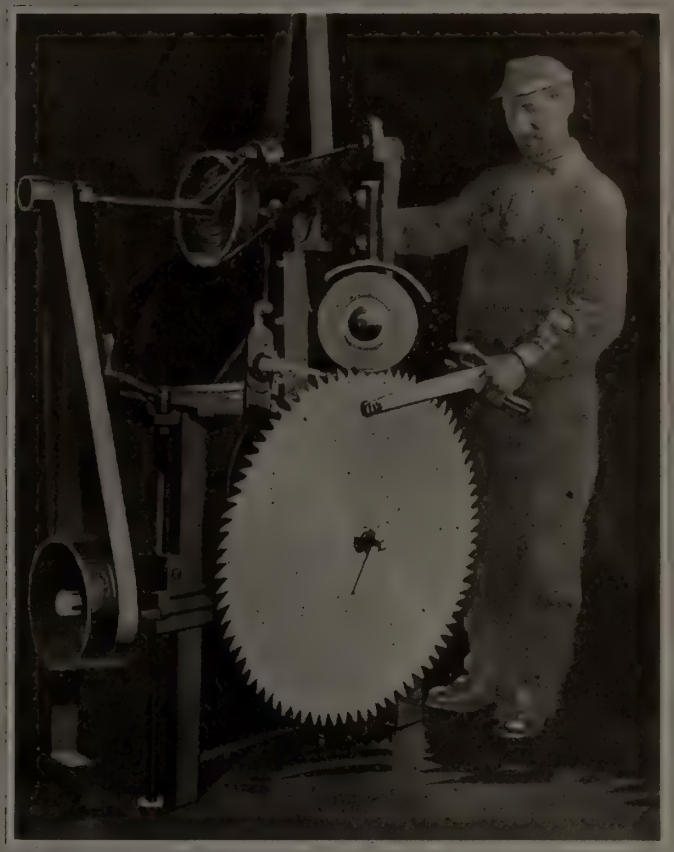

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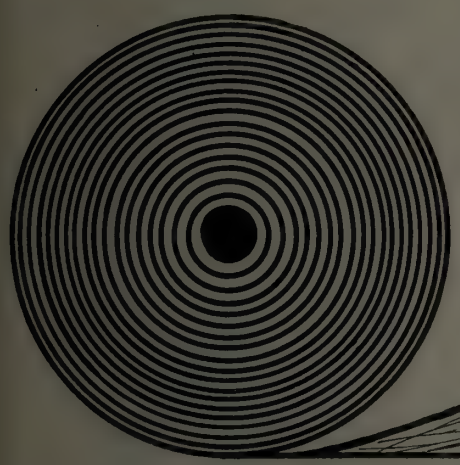

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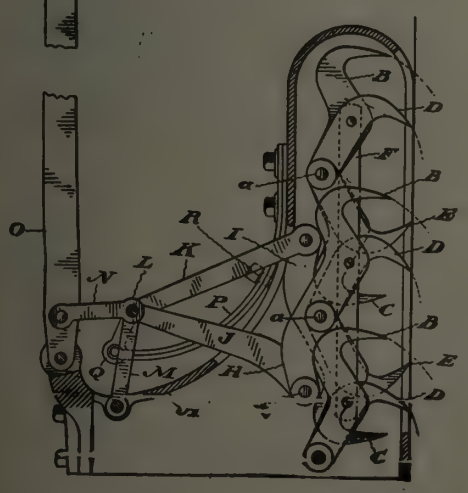

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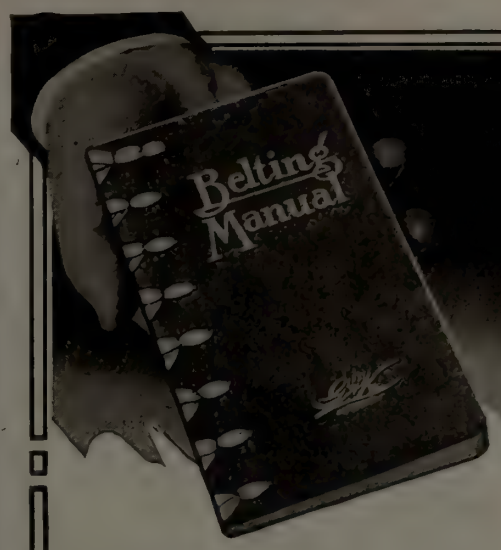

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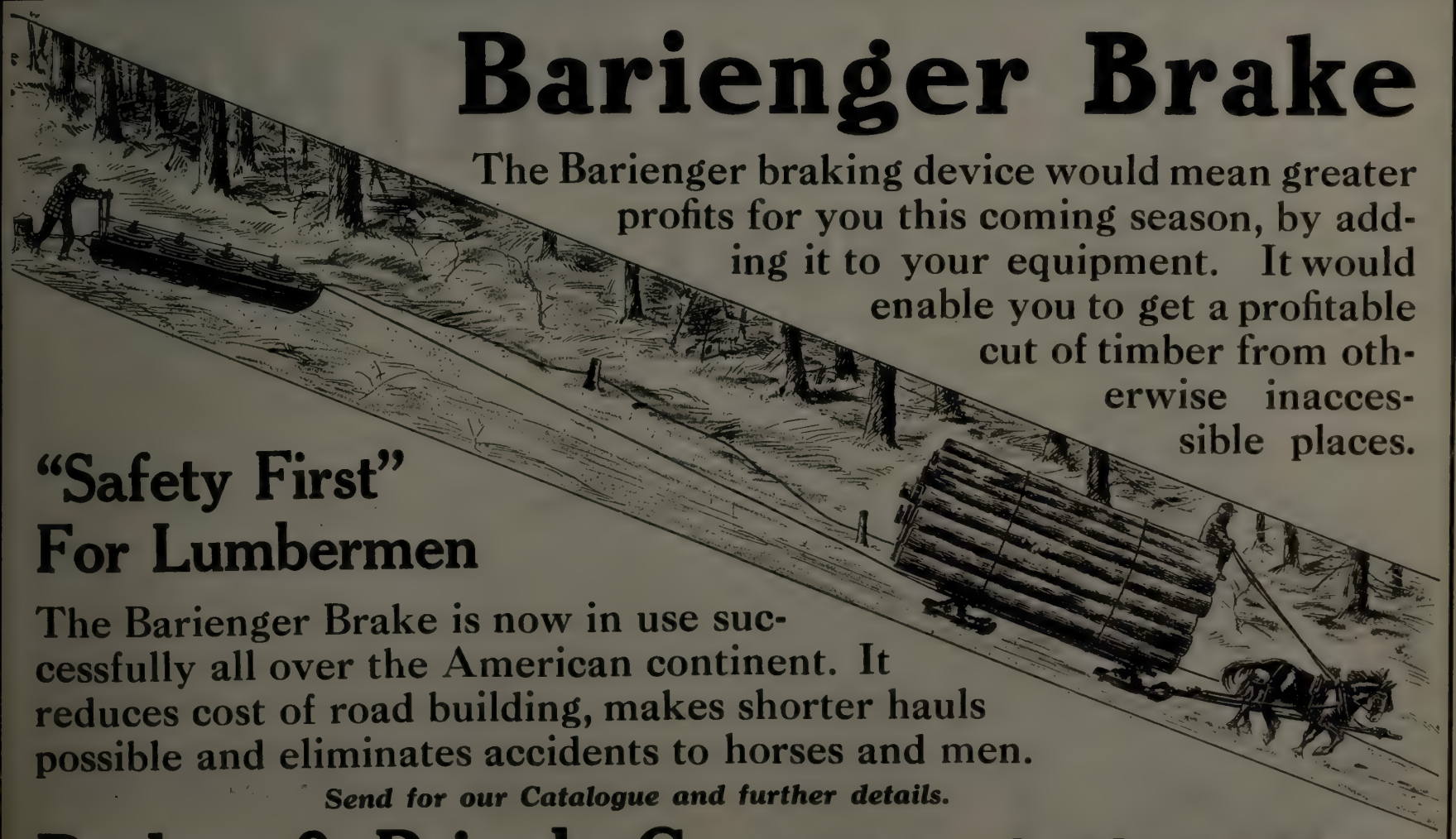

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SHINGLE & LATH MACHINERY
Dunbar Engine & Foundry Co.
Hamilton Company, William
Long Manufacturing Company, E.
Payette & Company, P.
Waterous Engine Works Company

SHOE PACKS
Gendron Shoepack Company, P. T.

SILENT CHAIN DRIVES
Canadian Link-Belt Company

SNOW PLOWS
Pink Company. Thos.

SODA PULP PLANTS
Becker & Co.

SOUTHERN PINE
Arkansas Land & Lumber Company
Arkansas Lumber Company
Arkansas Soft Pine Bureau
Cameron & Company
Chicago Lumber & Coal Company
Cotton Belt Lumber Company
Muir, Kirkpatrick & Sharpe
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Hobart & Company
Long Lumber Company
Mason, Gordon & Company
Muir, Kirkpatrick & Sharpe
Southern Lumber Company
Stout Lumber Company
Valley Lumber Company
Wilson Lumber Company
Wisconsin & Arkansas Lumber Co.
Wuichet, Louis

SPARK ARRESTERS
Canada Wire & Iron Goods Co.

SPRUCE
Auger & Son
Bartram Bros.
Bourgouin, H.
Brown Corporation
Donogh & Company, John
Federal Lumber Company
Fesserton Timber Company
Fraser Limited
Fraser-Bryson Lumber Company
Gillies Bros.
Grant & Compbell
Hart & McDonagh
Harquail Company, J. & D. A.
Laferte, J. A.
Long Lumber Company
Mason, Gordon & Company
Muir, Kirkpatrick & Sharpe
Murray & Gregory
New Ontario Colonization Company
Partington Pulp & Paper Co., Ed.
Quebec & St. Maurice Industrial Co.
River Ouelle Pulp & Lumber Co.
Spencer, C. A.
Terry & Gordon.

STEEL CHAIN
Canadian Link-Belt Company
Columbus Chain Company
Jeffrey Mfg. Company
McKinnon Chain Company
Waterous Engine Works Co.

STEAM PLANT ACCESSORIES
Waterous Engine Works Company

STEAM APPLIANCES
Darling Bros.

STEAM TRAPS
Canadian Morehead Mfg. Company
Cole Co., Geo. W.

STEEL BARRELS
Smart-Turner Machine Co.

STEEL DRUMS
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STOKERS
Jones Underfeed Stoker Company

TAPS and DIES
Pratt & Whitney Company
Waterous Engine Works Company

TIES
Austin & Nicholson
Fesserton Timber Company
Harris Tie & Timber Company
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Spears & Lauder
Terry & Gordon.
W. H. Miller Co., Ltd.

TIME RECORDERS
International Time Recording Co.

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Cant & Kemp
Farnworth & Jardine
Hillas & Company, W. N.
Smith & Tyrer Limited

TIMBER ESTIMATORS
Sewall, James W.
McInnis, A. D.

TIMBER CRUISERS
Campbell Lumber Company. L. E.

TIMBER LANDS
Lacey Co., Jas. D.

TRANSMISSION MACHINERY
Canadian Link-Belt Company
Jeffrey Manufacturing Company
Waterous Engine Works Company

TUGS
West & Peachey

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Hamilton Company, William
Smith Company, S. Morgan.

VENEERS
Canadian Western Lumber Company
Hoffman Brothers Company
Webster & Bro., James

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Perrin, William R.
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Yates Machine Co., P. B.

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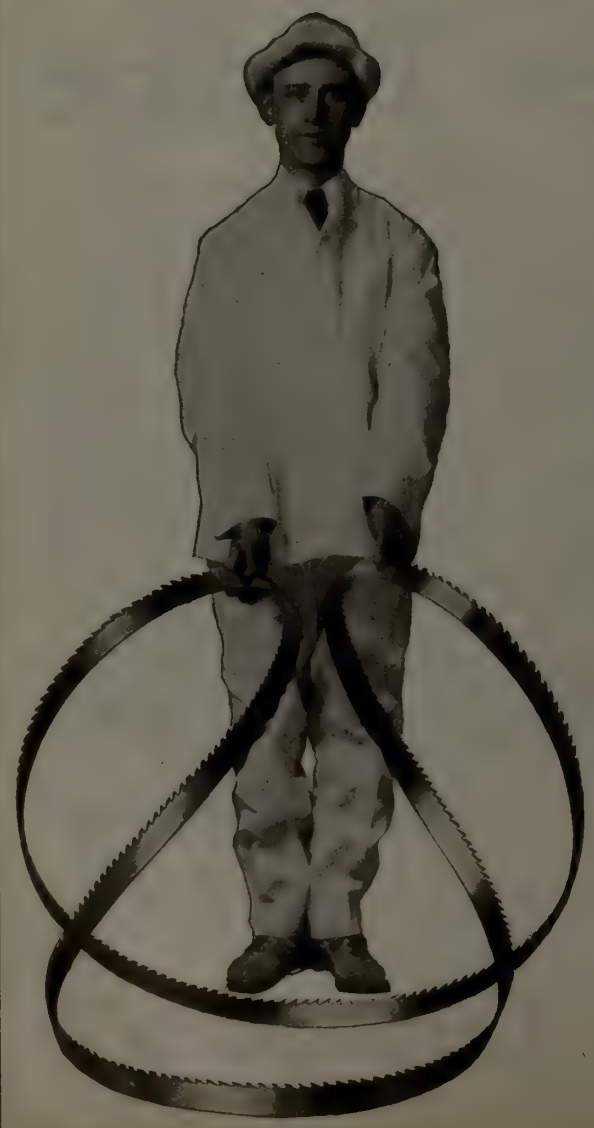
Austin & Nicholson
Becker & Co.
Miller Co., Ltd., W. H.
New Ontario Colonization Co.
River Ouelle Pulp & Lumber Co.



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BAND and RE-SAWS

We have achieved an enviable reputation for supplying SAWS which stand up to their work longer, with less re-fitting than any other SAWS in the world. If there is any doubt in your mind, we stand ready to prove it to you.

A Perfect Saw for Every Purpose

Send for our 248 page book on Saws. The most valuable and interesting Saw book ever published. Tells you just what you want to know about SAWS, MACHINE KNIVES and SAW FITTING TOOLS.

ASK FOR BOOKLET "CL"

E. C. ATKINS & COMPANY INC.

Makers of Sterling Saws

Factory—HAMILTON, ONT.

Vancouver Branch—109 Powell St.

J. J. TURNER & SONS

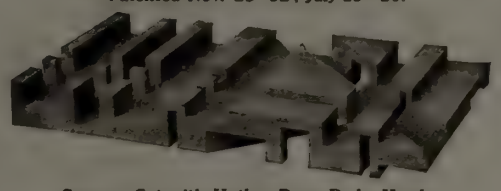
PETERBOROUGH, ONT.

Government Contractors and the largest Manufacturers and Dealers in Canada of

Lumbermen's Tents, Bed Ticks, Grey Blankets, Nose Bags, Waterproof Goods, Steel Ranges and General Camp Outfits.

Write for Catalogue. **Prompt shipments.**

Patented Nov. 29 '92; July 19 '10.



Grooves Cut with Huther Bros. Dado Heads

Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

Write for New Illustrated Catalog.

HUTHER BROS. SAW MFG. COMPANY, Inc.

1103 University Ave.
ROCHESTER, N. Y.

LOGGING LOCOMOTIVES

Locomotives on trunk line railroads have the advantage of the best facilities for inspection and repairs.

Logging locomotives face different conditions. They must work day after day in the hardest service, and often in localities where repairs cannot be made without great inconvenience. That is why we build our logging locomotives from interchangeable stock parts. With this system every part must fit every other locomotive of the same size and design, and long delays waiting for duplicate parts is avoided. Interchangeable parts kept on hand at our Works for prompt shipment.

MONTREAL LOCOMOTIVE WORKS, LIMITED,

DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

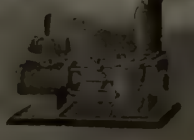
CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

DARLINGS STEAM APPLIANCES



DARLING BROTHERS
LIMITED
Engineers and Manufacturers
MONTREAL, CANADA

Branches: Toronto and Winnipeg
Agents: Halifax, St. John, Calgary, Vancouver

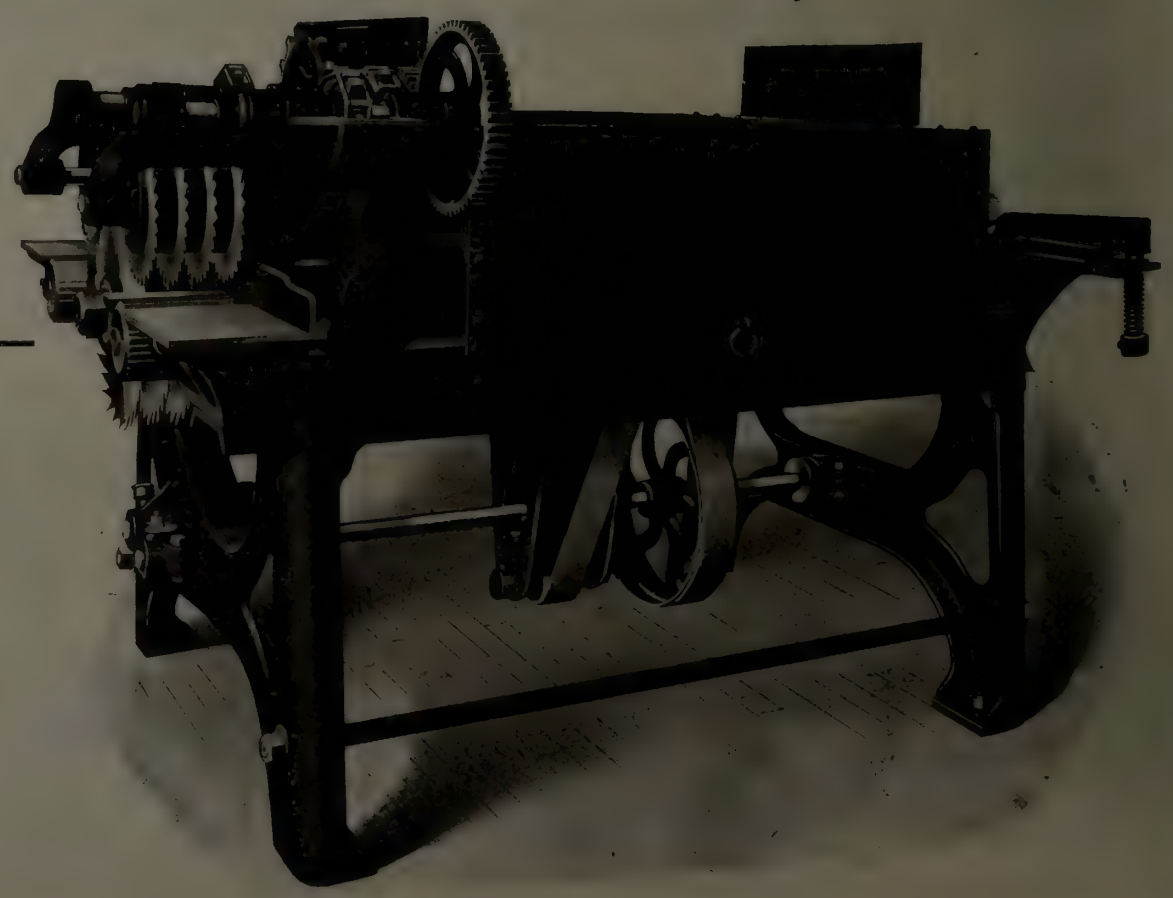
Lath Machine and Bolter

This machine is a combination of our No. 2 Bolter and No. 2 Lath Machine mounted in a single frame. The lath machine is made the opposite hand to our shingle machine. The illustration shows the bolter side of the combination. In mills where the floor space is limited and the output must be large this machine is an ideal combination. The details of construction found in our No. 2 Lath Mill and No. 2 Bolter apply to the combined machine.

When you overhaul your mill get in touch with us about new equipment.

The E. Long Manufacturing Company, Limited

Orillia - Ontario



Do These Mills Know a "Good Thing?" Certainly!

They're all using

WATEROUS

"NEW MODEL"

BAND MILLS

All Sold Since 1909

1—Emerson Lumber Co.	Eburne, B.C.
1—Rat Portage Lumber Co.	Kenora, Ont.
1—Mundy Lumber Co.	Three Valley, B.C.
1—Wm. Milne & Son	Sellwood, Ont.
1—Saginaw Lumber and Salt Co.	Thessalon, Ont.
1—Wm. Fleming	Australia
1—Rat Portage Lumber Co.	Vancouver, B.C.
1—J. R. Booth	Ottawa, Ont.
1—A. & F. Fraser	Pembroke, Ont.
2—Shepard & Morse	Ottawa, Ont.
1—Thessalon Lumber Co.	Thessalon, Ont.
2—T. A. Burrows	Grand View, Man.
1—Hope Lumber Co.	Thessalon, Ont.
1—J. D. McArthur Co.	Atikokan, Ont.
1—Campbell & Stearns	Gracefield, Que.
1—Crowe Lumber Co.	Brooklyn, N.S.
1—Rat Portage Lumber Co.	Winnipeg, Man.
1—Great West Lumber Co.	Greenbush, Sask.
2—Wayagamack Pulp & Paper Co.	Three Rivers, Que.
1—Riordan Paper Co.	Calumet, Que.
1—Gilmour & Hughson	Hull, Que.
1—Dom. Mahogany & Veneer Co	Montreal, Que.
1—Knight Bros., Limited	Burks Falls, Ont.
1—John Harrison & Sons	Algoma Mills, Ont.
1—Geo. Thompson Lumber Co.	Bigwood, Ont.
1—W. S. Loggie Co.	Inkerman, N.B.
1—C. Beck Manufacturing Co.	Penetang, Ont.
1—Donald Fraser & Son	Baker Brook, N.B.
2—Tourville Lumber Co.	Louiseville, Que.
1—Fraser Lumber Co.	Plaster Rock, N.B.
2—Pembroke Lumber Co.	Pembroke, Ont.
1—Dyment Mickle Lumber Co.	Fenelon Falls, Ont.
1—Donald Fraser & Son.	Fredericton, N.B.
1—Donald Fraser & Son	Glendyne, Que.
1—McGibbon Lumber Co.	Australia
1—Wm. Copping	Joliette, Que.
1—Blue River Lumber Co.	Blue River, Que.
1—M. L. Stearns & Son	L'Original, Ont.
1—Louison Lumber Co.	Jacquet River, N.B.
1—J. D. McArthur, Limited	Winnipeg, Man.
1—B. C. Howard & Co.	Sherbrooke, Que.
1—Nicola Valley Pine Lumber Co.	Canford, B.C.
2—Spanish Mills Co.	Spanish Mills, Ont.
1—Gres Falls Co.	Three Rivers, Que.
2—Geo. Gordon & Co., Limited	Cache Bay, Ont.
1—Spanish River Lumber Co.	Cutler, Ont.

And Here is Why:

Built in 8, 9 and 10 ft. sizes, there's a Waterous Bandmill for every kind of work.

The spring-cushioned, all knife edged tension device is the most sensitive in use.

Upper and lower guides swing about the exact centre of the saw blade.

The Upper Guide is raised and lowered by steam, and easy, accurate and swift adjustment unequalled by any other.

Wheel raising device and tilting device are roller bearing. Operating mechanism is entirely enclosed in columns. Sawdust and slivers cannot reach it.

Massive design of the bed and columns precludes vibration during cutting. This mill is absolutely steady doing the heaviest work.

Every part of the mill is designed to make mill-wrighting easy. Adjustments and inspections can be made without difficulty.

Waterous Bandmills are designed and built in a plant that has specialized in the manufacture of Canadian sawmill machinery for more than 50 years. It counts.

The Waterous Engine Works Co., Limited

Head Office and Works—BRANTFORD, Canada

Agency—H. B. Gilmour, VANCOUVER, B.C.
Branch—WINNIPEG, Man.

"FROST KING" METAL

$5,000,000.00
worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. **Price 30c per lb.**, Fort William and East; West of Fort William **35c per lb.**, delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

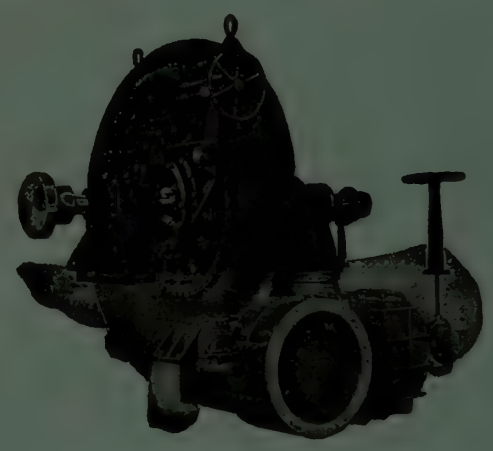
Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Smith Hydraulic Turbines

for driving the

Paper Mill and Pulp Grinder



This type of equipment specially designed for high head developments.

Our particular claim for these turbines is service, the kind of service that responds to the demand

Promptly and Efficiently

Write for Bulletin F

S. Morgan Smith Co., York, Pa.

H. B. VanEvery—CANADIAN REPRESENTATIVE
405 Power Bldg. - - - Montreal, Can.

Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.

Limited

General Mill Supplies MONTREAL

Tested to 20% Over Admiralty Proof.

Hingley's B. B. B. Chains

Stocked by all principal jobbers everywhere.

General Agents for Canada
Drummond McCall & Co. Limited
Montreal

Specialties: Boom Chains of all Descriptions, Rafting, Log Loading, Quarry, Mining, Crane and Sling Chains, All hand-made by expert workmen from Hingley's Netherton refined iron.

Agents for New Brunswick and Prince Edward Island
F. R. Whipple,
West St. John, N.B.

N. Hingley & Sons, Limited, Netherton Iron and Chain Works, Dudley, England

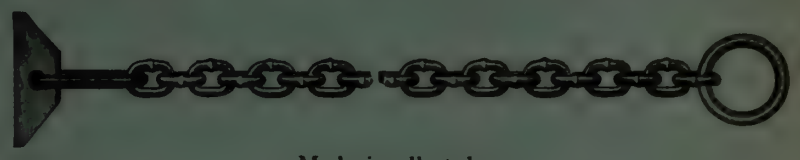
Vol. 36 Toronto, October 1, 1916 No. 19

Canada Lumberman & Wood Worker

Death and Taxes

Are no more sure than the connections made with Dart Union pipe couplings.

Dart Union Company, Limited
Toronto



Made in all styles

Electric-Welded Boom Chain

We also specialize

Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

Canadian Blowers and Exhausters

For forced draft with boilers, for ventilating, for shavings exhaust systems, or for hollow blast grates.

Made strong and substantial, with ring oiling bearings.

Canadian Blower & Forge Co., Limited
BERLIN, ONTARIO

GENUINE "TURBROS"

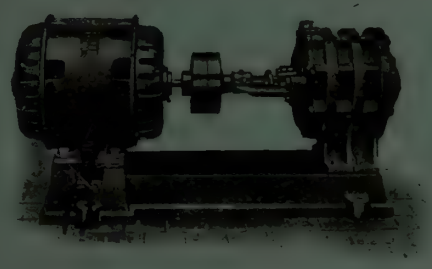
Balata Belting

Waterproof and Stretchless.

The best belt for sawmills.

Manufactured and guaranteed by

Turner Bros. Canada Limited
Montreal



We are building a complete line of

Pumping Machinery

and know that we can supply your particular requirements.

Let us show you.

The Smart-Turner Machine Co., Ltd.
HAMILTON CANADA

MORRISON Jet Pump or Water Lifter operates by water pressure.

J. M. T. Steam Specialties

J. M. T. Steam goods have been designed to meet present-day needs. They are made of high-grade materials only, and the workmanship is high class and thoroughly dependable.

Whether you need stop valves, safety valves, ejectors, injectors, or any other steam goods, you can select your requirements from the J. M. T. line with the full assurance that they will give highest efficiency.

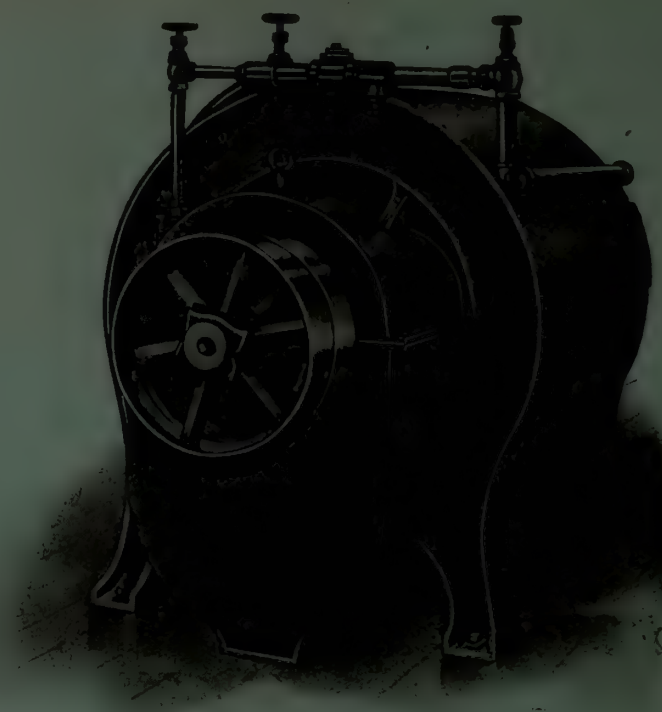
Prices, etc., sent on request.

The James Morrison Brass Mfg. Co., Ltd., 93-97 Adelaide Street West TORONTO

Alphabetical Index of Advertisers, Page 62 Classified Directory to Advertisements, Page 68

P. M. Rotary Diaphragm Screen

using Standard Slotted Plates same as a Flat Screen



For Sulphite, Sulphate, Ground Wood and Paper Stock

We also manufacture

Pulp Grinders

Paul Rotary Sulphur Burners

Pulp Stone Truing Tools

Sulphite Bronze Fittings, etc., etc.

"Record Improved" Quick Opening Gate Valve with Patented Clean Outs

Made of Cast Iron, Bronze and Acid Resisting Metal

Specifications and prices on request

Canadian Pulp Mill Machinery Co. Limited

18 Tansley Street, MONTREAL

Bartram Brothers

Limited

Ottawa, Canada

STOCK ON HAND UNSOLD AUGUST 31, 1916

White Pine, Good

1 x 4 and up x 6/9	2,469
6/4 x 4 and up x 6/9	296
1 x 4 and up x 10/16	4,291
1 x 7 and up x 10/16	5,825
2 x 4 and up x 10/16	687
3 x 4 and up x 10/16	2,790

White Pine Mill Run

1 x 4 x 10/16	45,871
1 x 5 x 10/16	35,934
1 x 4/5 x 10/16	97,724
1 x 6 x 10/16	81,067
1 x 8 x 10/16	127,593
1 x 9 x 10/16	1,879
1 x 10 x 10/16	3,211
1 x 12 x 10/16	11,163
1 x 7 and up x 10/16	140,334
5/4 x 4 x 10/16	4,651
5/4 x 5 x 10/16	2,165
5/4 x 6 x 10/16	3,371
5/4 x 7 x 10/16	7,771
6/4 x 4 and up x 10/16	40,122
2 x 4 and up x 10/16	210,268
2 x 6 and up x 10/16	3,150
2 x 8 and up x 10/16	10,879
3 x 4 and up x 10/16	118,859

White Pine Mill Culls

1 x 4 and up x 6/16	135,691
6/4 x 4 and up x 6/16	4,917
2 x 4 and up x 6/16	85,084
3 x 4 and up x 6/16	69,497

White Pine Dead Culls

1 x 4 and up x 6/16	252,103
3 x 4 and up x 6/16	9,920

Jack Pine C. & C. F.

1 x 4 and up 10/16	3,450
2 x 4 and up 10/16	1,440

Jack Pine Mill Run

1 x 4 x 10/16	35,721
1 x 5 x 10/16	36,290
1 x 4/5 x 10/16	904,679

Jack Pine Mill Run

1 x 6 x 10/16	76,357
1 x 7 x 10/16	24,286
1 x 8 x10/16	19,612
1 x 12 x 10/16	854
2 x 4 x 10/16	62,813
2 x 6 x 10/16	79,263
2 x 8 x 10/16	76,762
2 x 10 x 10/16	8,096
2 x 4 and up x 10/16	3,900
2 x 5/7 x 10/16	9,900
3 x 4/6 x 10/16	19,484
3 x 7 and up x 10/16	96,967

Jack Pine Mill Culls

1 x 4 and up x 6/16	83,541
5/4 x 4 and up x 6/16	230,035
2 x 4 and up x 6/16	73,669

Jack Pine Dead Culls

1 x 4 and up x 6/16	24,406
5/4 x 4 and up x 6/16	45,315

Spruce Mill Run

1 x 3 x 10/16	85,000
1 x 4 x 10/16	268,995
1 x 5 x 10/16	281,043
1 x 6 x 10/16	405,534
1 x 7 x 10/16	9,459
1 x 8 x 10/16	2,737
2 x 4 x 10/16	291,013
2 x 5 x 10/16	401,879
2 x 6 x 10/16	359,324
2 x 7 x 10/16	204,100
2 x 8 x 10/16	65,817
2 x 9 x 10/16	42,626
3 x 9 x 10/16	15,000

Spruce Culls

3 in. 5th Quality	80,000
3 in. 6th Quality	200,000

Lath Mill Run

1½ x 3/8 x 32 in. White Pine	433,350
1½ x 3/8 x 32 in. Jack Pine	784,750

H. J. TERRY A. E. GORDON

Terry & Gordon

Solicit your enquiries
for

British Columbia Douglas Fir

We are the Ontario Representatives of the
B. C. Mills Timber & Trading Co., of Vancouver, B. C.

Fir Timbers up to 90' Fir Flooring Fir Ceiling and Trim

T. & G. Quality Brand B. C. Red Cedar Shingles

Vancouver Branch:
852 CAMBIE ST.
F. W. Gordon, Mgr.

Montreal Branch:
23 LA PATRIE BUILDING
Leon Gagne, Jr., Mgr.

HEAD OFFICE:
704 Confederation Life Building, TORONTO

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

The Long Lumber Company
HAMILTON, ONT.

Hardwood

45,000	4/4 Mill Run Maple	1915 Cut
14,000	4/4 Com. & Bet. Elm	" "
14,000	4/4 No. 2 & 3 Com. Ash	" "

No. 2 Hemlock

1915 Cut Must Move

200,000	8/4 x 6 and up,	No. 2 Hemlock
250,000	8/4 x 4	No. 2 "

4 Cars 3 x BC Shingles in Transit

Get our prices on above and also on pine, spruce, etc.

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

HIGH GRADE

MUIR, KIRKPATRICK & SHARPE

HEAD OFFICE
1325-6-7-8 Traders Bank Bldg., Toronto

WESTERN OFFICE
1007 Dominion Bldg., Vancouver, B. C.

We Have a Very Large and Complete Stock of

WHITE PINE, RED PINE, JACK PINE, SPRUCE and LATH

on which we are quoting very interesting prices.

LET US HAVE YOUR ENQUIRIES

We have several million nice dry Spruce and Pine Laths on which we can give very prompt shipment.

SHINGLES

WE ARE OFFERING SPECIAL:

300 M 1 x 4 and wider Cull Spruce, Bone Dry.
200 M 1¾ x 4 and wider Cull Spruce, Bone Dry.
200 M 2 x 4 and wider Cull Spruce, Bone Dry.
400 M 1 x 4 to 1 x 10 Mill Run Spruce, Bone Dry.
100 M 1 x 4 and 5 Mill Run Spruce Flooring Dressed to ⅞ in.
100 M 1 x 4 and wider Mill Run Spruce Dressed one side to 15/16 in.
600 M pcs. 1½ x ⅜ x 4-0 No. 3 Spruce Lath.
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Our

Spruce and Pine Lumber, Laths and Pulpwood

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Large Mills, Woodworking Factories and Glass Works at ST. JOHN, N. B.
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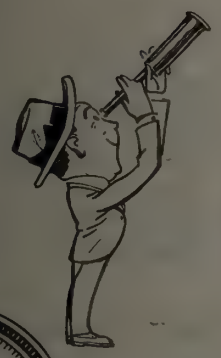
Take a Look

at the Lumber cut from

HORSESHOE LOGS

WHITE and NORWAY PINE



We have the best there is in raw material and our equipment for manufacturing is the latest in saw mill and woodworking machinery. A few of our specialties are: Boxes, Box Shooks, Wooden Pails and Tubs, Pine, Lath and Cedar Posts. Remember our planing mill facilities help your sales.

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2 x 4 —	10/16 feet	2 x 8 —	10/16 feet
2 x 5 —	" "	2 x 9 —	" "
2 x 6 —	" "	4 x 6 —	" "
2 x 7 —	" "	4 x 7 —	" "

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The
Harris Tie & Timber Co.
Ottawa - Canada

Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

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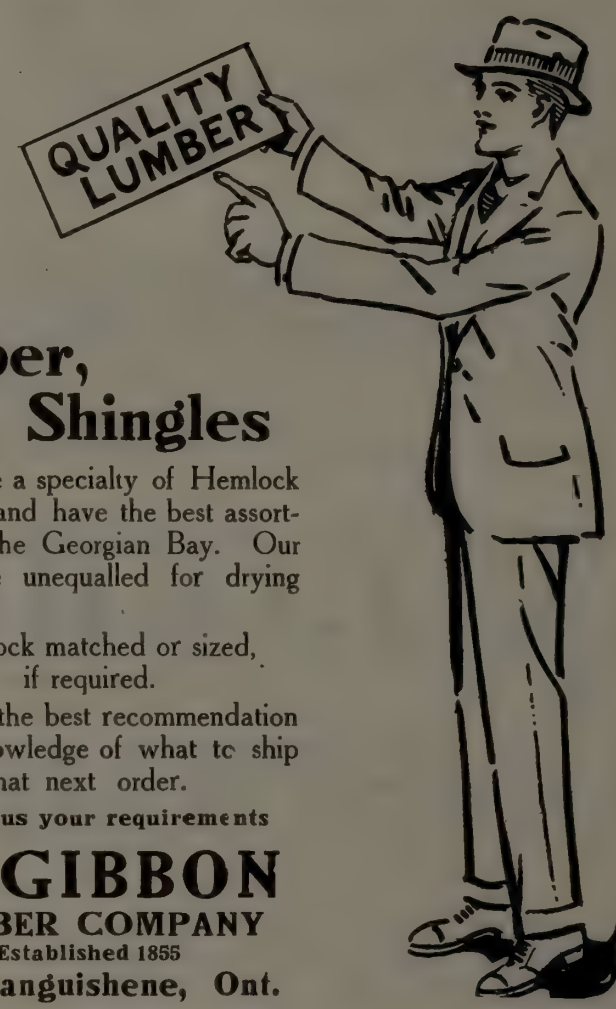

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All stock matched or sized, if required.

Trade is the best recommendation of our knowledge of what to ship you on that next order.

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We specialize on cutting to order all sizes of

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Spruce, Basswood, Ash, Hemlock and Pine

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Our Mills are located on Canada Eastern Branch and Transcontinental Branch of the Canadian Government Railway, and in the heart of the best forests in New Brunswick.

Our Head Office in St. John will answer all enquiries.

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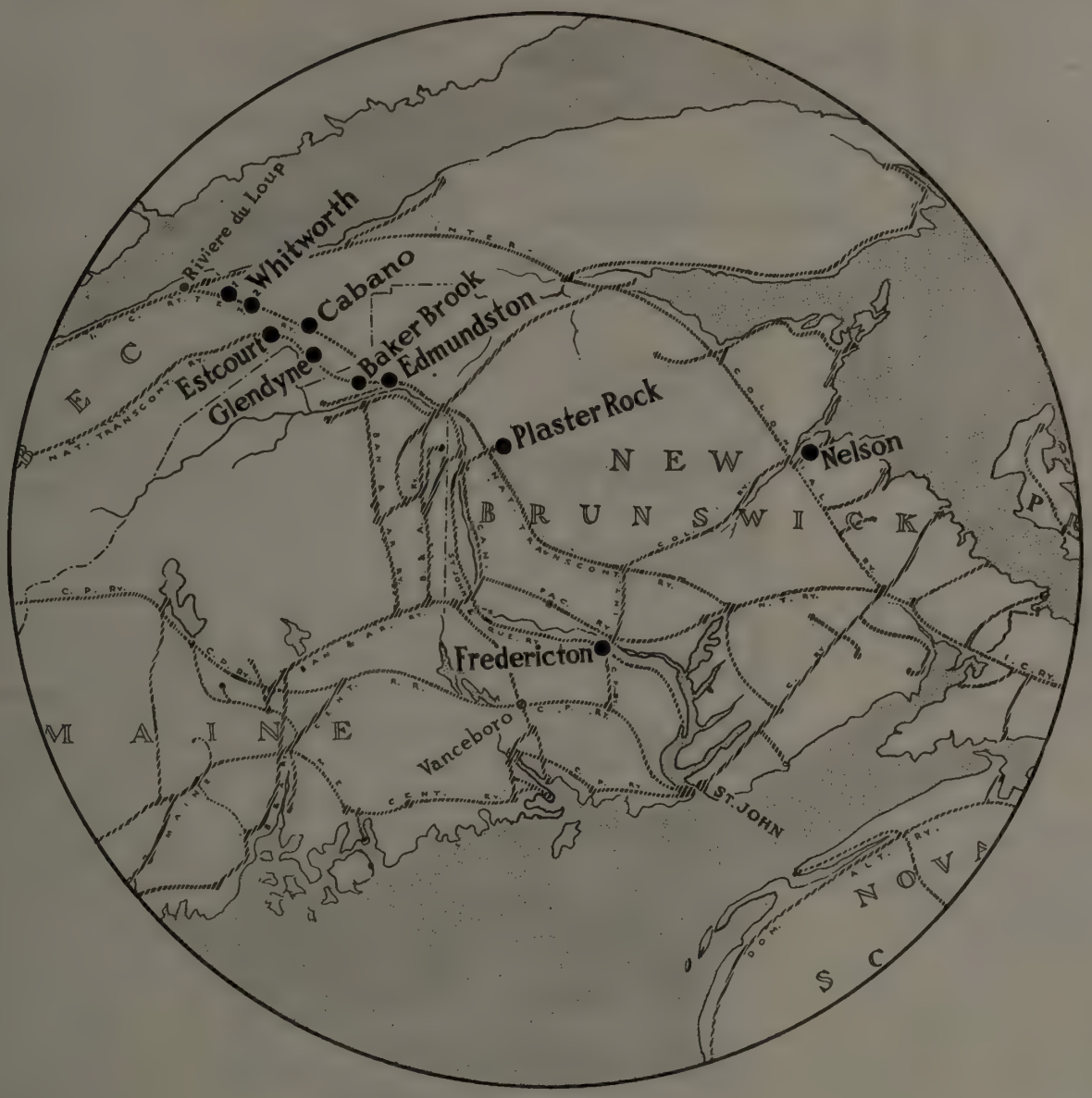

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Glendyne, Que.	"	"	N. T. R.
Escourt, Que.	"	"	N. T. R.
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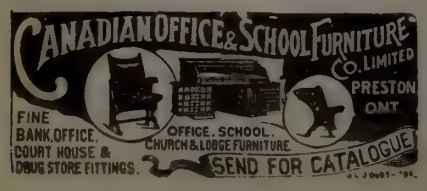
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28 M' 4/4 1st and 2nd Birch.
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Smart foot-power.

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36" American double surfacer.
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Ideal variety.
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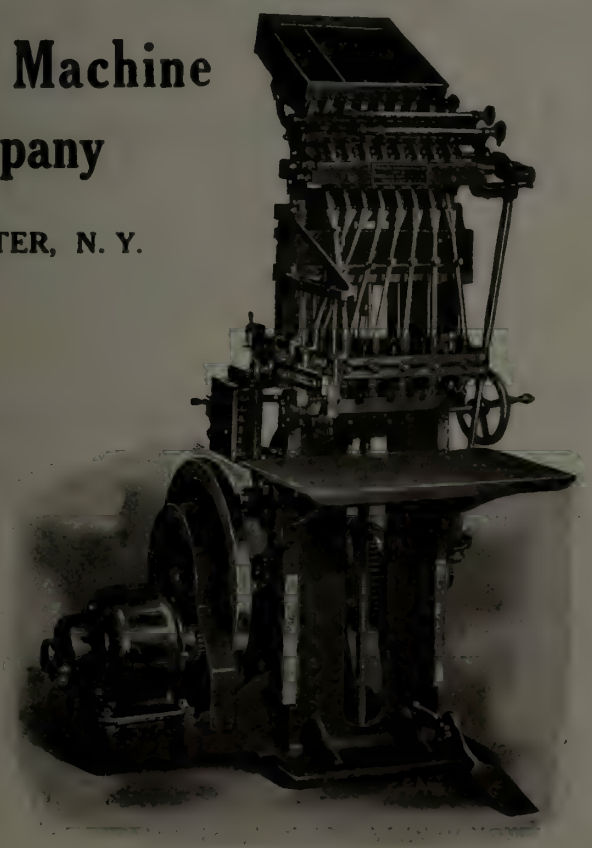

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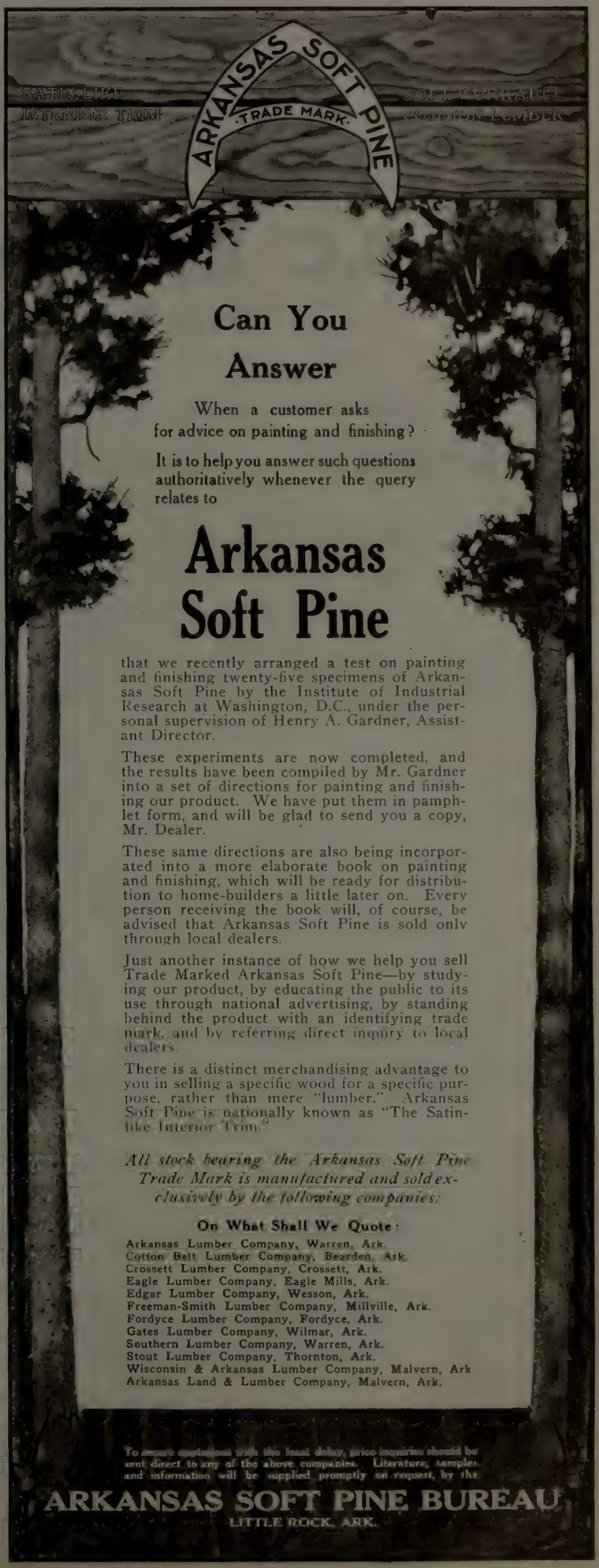

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When a customer asks for advice on painting and finishing?

It is to help you answer such questions authoritatively whenever the query relates to

Arkansas Soft Pine

that we recently arranged a test on painting and finishing twenty-five specimens of Arkansas Soft Pine by the Institute of Industrial Research at Washington, D.C., under the personal supervision of Henry A. Gardner, Assistant Director.

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These same directions are also being incorporated into a more elaborate book on painting and finishing, which will be ready for distribution to home-builders a little later on. Every person receiving the book will, of course, be advised that Arkansas Soft Pine is sold only through local dealers.

Just another instance of how we help you sell Trade Marked Arkansas Soft Pine—by studying our product, by educating the public to its use through national advertising, by standing behind the product with an identifying trade mark, and by referring direct inquiry to local dealers.

There is a distinct merchandising advantage to you in selling a specific wood for a specific purpose, rather than mere "lumber." Arkansas Soft Pine is nationally known as "The Satin-like Interior Trim."

All stock bearing the Arkansas Soft Pine Trade Mark is manufactured and sold exclusively by the following companies:

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Freeman-Smith Lumber Company, Millville, Ark.
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Gates Lumber Company, Wilmar, Ark.
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To secure quotations with the least delay, price inquiries should be sent direct to any of the above companies. Literature, samples and information will be supplied promptly on request, by the

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Notify the Retail Trade that they have begun operating their new mill at

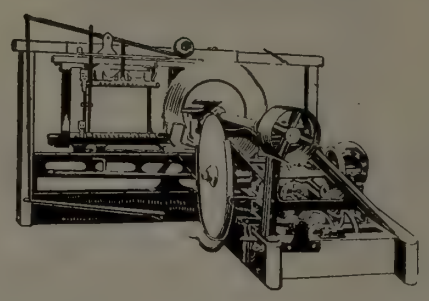
Fir, Cedar WESTHOLME British Columbia **Spruce, Hemlock**

B.C. Red Cedar Shingles

Heavy Timbers a Specialty With Us

WE PARTICULARLY SOLICIT ONTARIO TRADE

"Dunbar" Shingle Machine



The "Dunbar" Shingle Machine works smoothly and swiftly, producing shingles of uniform cut at a low cost.
Users of the "Dunbar" Shingle Machine testify to its strength and reliability.
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The "Dunbar" Shingle Machine is made in two models, "A," having Jointer Saw driven from counter shaft or line shaft, and "B," having Jointer Saw driven by a leatherboard friction, which makes it self-contained.
Write us in regard to your Shingle Mill requirements.
We also make Sappers, Cedar Cut Offs, Lath Machines, Car Wheels, and Castings of all kinds.
We will gladly supply you with information and prices.

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Special "CC" Steel Loading Chain

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Clear Fir Finish, rough and dressed.
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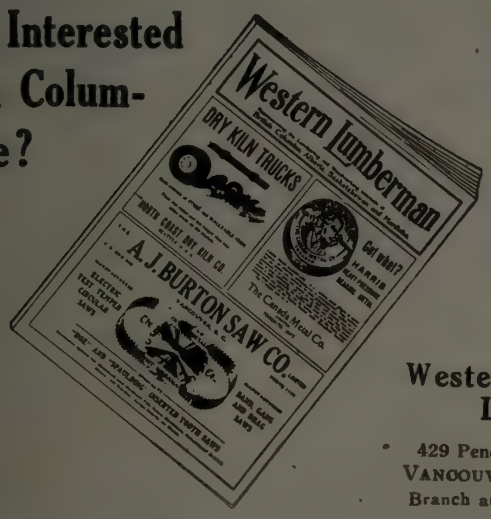

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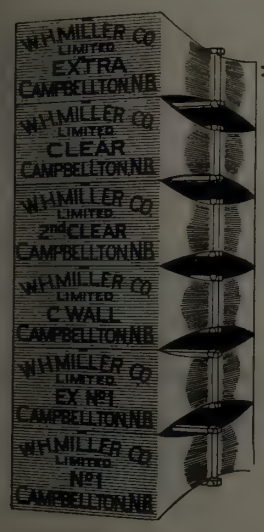
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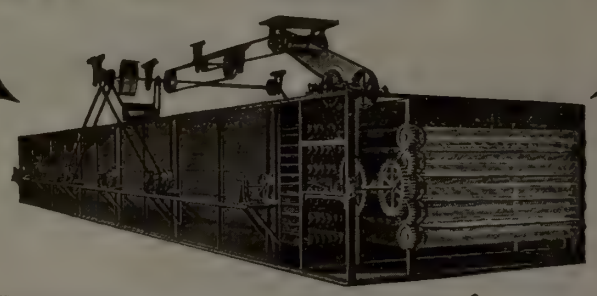

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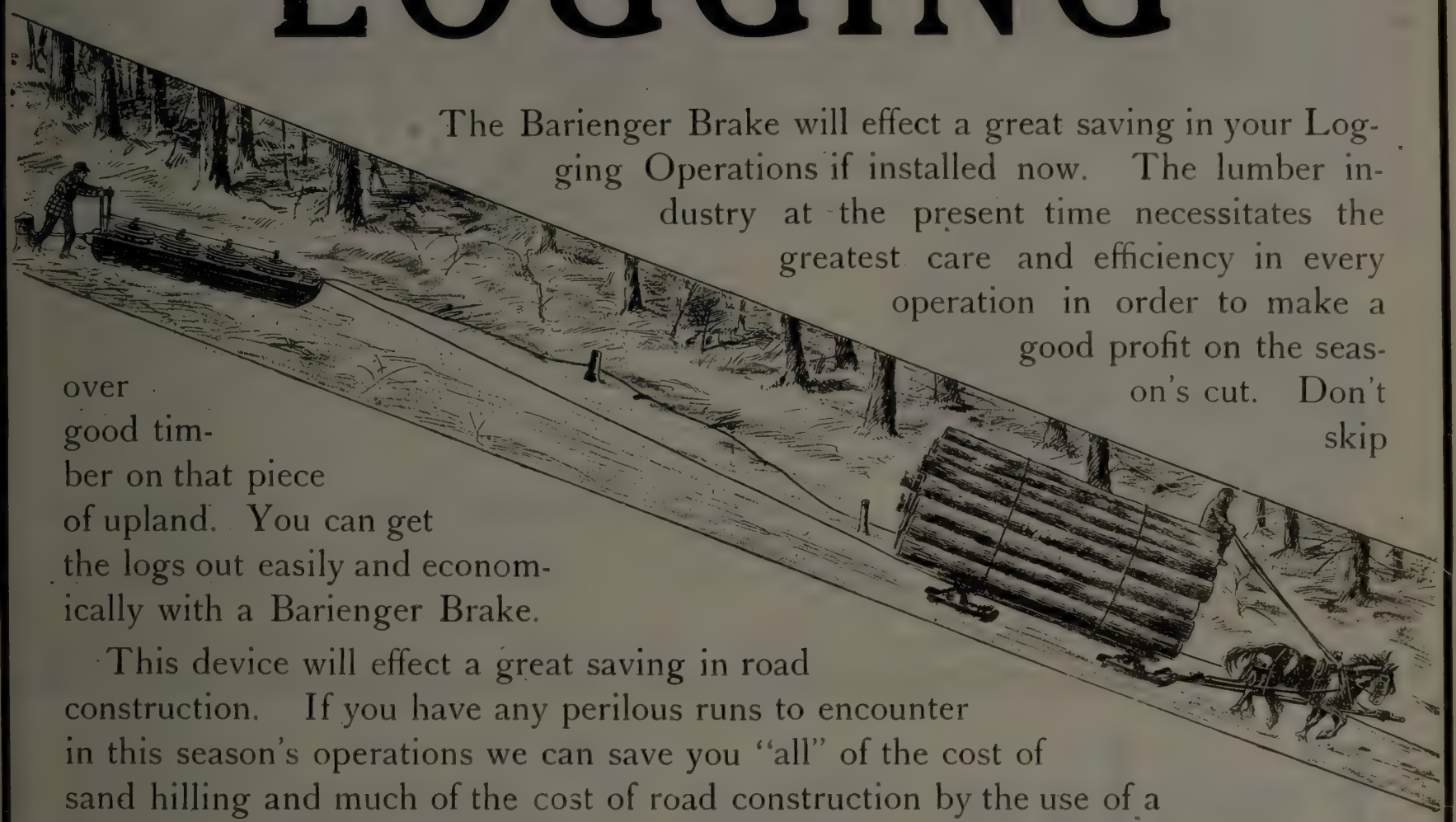

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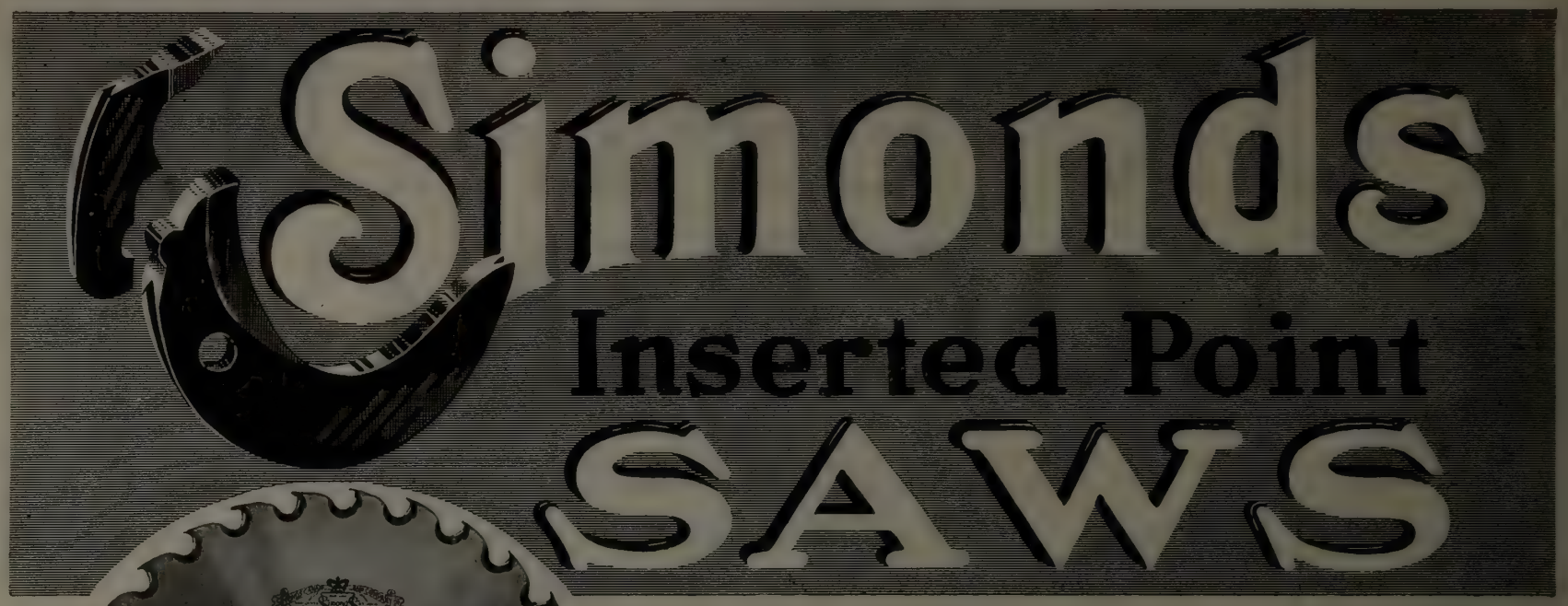

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MONTREAL TORONTO WINNIPEG

Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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Vol. 36 Toronto, October 1, 1916 No. 19

What is the Matter with Our Retailers?

The formation of a National Retail Lumbermen's Association in the United States is reported as having taken place recently at a meeting held in Chicago. This step is probably one of the most important that has been taken in connection with the lumber trade organization movement for many years, as it will, to a considerable extent, complete the circle of organization throughout the trade, which now has its National Manufacturers' Association, its National Wholesalers' Association, and its National Retailers' Association, as well as a large number of more restricted organizations handling the interests of particular sections of the trade and industry. These organizations, by co-operating in many of their efforts, are doing an incalculable good to the whole lumber business.

Why is it that in Canada we have so much difficulty in bringing about anything similar in the way of co-operation? With one or two notable exceptions, the history of lumber trade organization in Canada has been disappointing. Sometimes we are likely to think that the natural disposition of the people in the United States is more favorable to this sort of thing than it is in Canada, and probably there is some truth in this idea, but there is surely not sufficient in it to account for the failure of Canadians to co-operate when one considers the importance of the work and the benefits which it can produce.

We have in Western Canada a splendid association of retail lumbermen, which is making greater progress perhaps than any similar organization either in Canada or the United States. Outside of this, however, there are only one or two small local retail organizations whose influence is confined to a very small area. There is no reason why a number of good retail lumbermen's associations should not be in existence in Canada to-day, which would provide a nucleus for the formation of a national association similar to that which has been formed in the United States.

Such organizations would find a great deal of work to do that would produce good results from the very first. One of the chief purposes for which retail associations are formed is to show manufacturers and wholesalers the wisdom of selling to the retailer only and not seeking the trade of the consumer in the same territory as their retail customers cover. This is really a fundamental principle in the proper conduct of any line of retail business, and the organizations of retail associations have always been able to bring about good results along this line. In the United States, however, the activity of the retail associations has gone far beyond this, and the new organization of the retailers from all parts of the country gives an indication of the width of its scope by its first official acts.

The National Wholesale Association of Retail Lumbermen, immediately after its formal organization, went on record in favor of the trade-marking of all lumber products, to show in what mill they were produced, and the marking of the grade to ensure the consumer that he is obtaining the particular line and grade of lumber he calls for. In the past some retailers have made quite a good thing from time to time out of regrading their stocks, a practice which brought a good profit for the time being, but which destroyed the confidence of the consumer.

If the retailers insist upon manufacturers and wholesalers furnishing them with trade-marked and grade-stamped lumber, the manufacturers and wholesalers will have to give it to them. The first step in the direction of such a reform has already been taken by many of the large manufacturers and associations of manufacturers in the United States, so that the outlook for putting this particular reform into effect is very favorable.

The new National Association of Retail Lumbermen will also co-operate with the manufacturers in the exploitation of wood for those uses for which it is best suited. This will dovetail nicely with the campaign of the National Lumber Manufacturers' Association for advertising wood in a national way. In fact, the new organization finds upon its very inception that much of its field of work is already mapped out for it by the other large organizations, and that its appearance in the field is the logical completion of a movement which has the interests of all sections of the industry and trade at heart.

Retail lumbermen in Eastern Canada have dragged far behind in this field. While the United States' retailers have already formed local and national organizations, we can scarcely say that the retail association movement in Eastern Canada has been born. Either the Canadian retailer is neglecting a good thing or the movement is of no use. In the face of the results secured, both in the United States and Western Canada, it is not possible to assert that the movement is anything but a good one, and we are forced to the conclusion that Eastern Canadian retailers are neglecting their own interests by not organizing both local and national associations.

Lumber Prices will be Higher

If there is one fact that stands out more clearly than any other in connection with the lumber trade in Canada to-day it is the universally held opinion of manufacturers and wholesalers that lumber is going to be dearer before it is any cheaper. Our discussions with members of the trade of late have converted us very definitely to this point of view. This is not said without a great deal of study or without securing the views of a large number of men who are intimately connected with the industry and the trade in their various branches. It is not simply an opinion set forth by way of a prophesy, nor is it the expression of a wish that is father to the thought. It is based upon a conviction that has been steadily growing and that was carried to a practical demonstration by the opinions we were able to publish in the Annual Camp Number of the Canada Lumberman on September 1st. We felt pretty sure of the soundness of these views when that issue was published, but we waited a few weeks longer before declaring ourselves very definitely, in order to discuss the subject in still further detail with other lumbermen.

While our object in publishing the Camp Number was to place before readers as interesting and vivid an idea as we could of the logging end of the industry as it is carried on to-day, we found, before we had proceeded far with its preparation, that it was developing into an almost continued story of rising costs, increasing manufacturing difficulties, and rapidly diminishing supply of labor. While we have

dwelt upon these points to some extent in previous issues, we feel that the situation calls for keeping them continually before the lumbermen of Canada to-day.

For more than two years the disturbing and depressing effects of the war have been at work upon the lumber business. Building operations have been practically nil in Canada during that time. All industry has been going through a process of reorganization. We have had to face conditions for which we had nothing in all our past experiences that would serve us as a guide. The demand of many of the largest wood-consuming industries has fallen almost to zero. Others, it is true, have developed, and have done much to help in lessening the shock. Nevertheless, we have had two years, during which by far the greatest proportion of business developments have been such as to depress the lumber trade. It may be assumed quite reasonably that during that time we have passed through the worst of our troubles. There is no question that with such conditions as have prevailed the price of lumber may be assumed to have touched bottom. Even if the present conditions of scarcity of available stocks, increased cost of production, and possible improvement in the demand were absent, it would be reasonable to assume that lumber would not be any cheaper than it has been of late.

It is chiefly when we consider the present manufacturing situation that we are obliged to take the view that higher prices are assured. It would not be of any use to repeat a description of present trade conditions. We have already gone into them pretty thoroughly, and manufacturers and wholesalers are well acquainted with the details. Retailers, perhaps, in some cases have not yet seen the writing on the wall, but before next spring we will be greatly surprised if they are not also well acquainted with the peculiar situation that we believe can be counted upon to produce higher costing lumber, even though the demand should be only light.

To tell the truth, we do not at present see much that looks like an increased demand in the immediate future, but in these days, when the war situation is changing almost hourly and growing continually more favorable to the allies, one would be foolish to leave out of consideration the likelihood of peace being suddenly thrust on us almost without warning. With a return of peace, although we will have a period of disturbed industrial conditions to face, the lumber industry will be one of the first to recover, because of the fact that lumber is so universally useful as a reconstruction material and also as a raw material for many of the industries that will be stirred into activity by the return of mankind to the ways of peace.

Price Cutting Quite Unjustifiable To-Day

The man who fails to keep a stiff backbone nowadays, and who decides that he must get rid of some of his lumber in order to get his hands upon a little more money than has been coming his way, is doing himself and other lumbermen a great injury. Price-cutting is a very enticing proposition. We are all prone to believe in its efficacy, in exceptional cases at least. The great expansion of the departmental store business and of many other lines of business conducted on rather similar grounds has led the average man to believe that lower prices create demand, and to try to put this theory into practice without considering whether it is infallible and universally true. If one looks into the matter critically he will quickly learn that price-cutting creates a demand all right in certain well-defined cases, but that in others, which are equally well defined, all the price-cutting in the world will not create an atom of demand, but will, by unsettling the mind of the buyer, have the opposite effect, and make him wait for still further concessions. This is the case with lumber. The demand for lumber in Canada to-day is such that it would scarcely be possible to make the market take a single extra stick, even if one gave his stock away. The conditions do not exist which permit of the consumption of lumber stocks in normal quantities.

Price-cutting really is not so great a trouble in Canada to-day as it sometimes is, because the supply of lumber is not large, and those who have it have had a long time in which to become familiar with trade conditions such as they are at present. There are some, however, who are indulging in this practice, and we suppose that there will always be more or less of them. So far as the retailer is concerned, he should be getting full value to-day for everything that he moves out of his yard, for he will probably not be able to replace it at its former cost. One hears in many quarters to-day that the trade is not one in which price plays an important part, but that delivery is the main factor. This, of course, is largely from the wholesalers' and the manufacturers' point of view, but it must have its effect upon the retailer, and we believe that the retailer in Canada to-day ought to be trimming his sails for possible price squalls. The conditions are all pointing that way, and it will not need much in the way of a reduced output in the woods during the coming winter to stiffen up prices all around next year.

Therefore, we feel warranted in advising the price-cutter to mend his ways, for he is giving good lumber away. We also believe that we are well advised in telling the retailer and the man who uses lumber as a raw material that they may make up their minds now that any stock they buy to-day will be worth more than they are paying for it before many months have past.

If these views are well founded—and they are the views that we find practically every lumber manufacturer and wholesaler expressing to-day—would it not be a good thing for those who call upon the retailer and the consuming trade generally to act upon them uniformly? That is to say, why should not the man on the road and all those who have to do with the selling of lumber stocks make this their chief line of talk from now on? Once the lumber-buying fraternity in general are shown the actual state of affairs in existence to-day the big obstacle will have been removed. Unquestionably there are large amounts of money standing idle in the banks which are ear-marked for the purchase of lumber when the owners become convinced that no further price reductions can be obtained. The situation is exactly ripe for bringing out much of this money, and salesmen who continually talk this situation up to their customers will be helping to bring about all the sooner the return of a fairly active market.

Educating the Consumer—A Word from Great Britain

Not very long ago we had the pleasure of publishing in these columns some extracts from a letter written by Mr. Ernest W. Tickle, a well-known English hardwood merchant, to the chairman of the Lumbermen's Round Table at the International Convention of Rotary, at Cincinnati, O. Mr. Tickle's chief point was to call attention to the good times that are coming to the lumber trade after the war, and to urge lumbermen to get ready for them. The publicity given to his letter leads Mr. Tickle once more into print, this time in the columns of "The Timber Trades Journal," of London, Eng., and what he has to say makes one think that he has been infected by the enthusiasm germ that flourishes so vigorously at conventions of lumbermen in the United States. At any rate, his remarks are refreshingly pertinent, and, while they apply definitely to the trade in Great Britain, there is scarcely one of his points that cannot be applied equally well to the lumber trade in Canada.

"For many months past the thought has kept riñging in my mind," Mr. Tickle writes, "are we hardwood men doing all that we can to extend our trade Are we even going the right way to hold what little position hardwoods have on the British market? Or, are we not letting manufacturers of substitutive commodities oust us without so much as a murmur of protest, let alone a full voiced chorus of organized defiance or a single tactical stroke in opposition?

"Let us first of all consider one or two of the lines where we have let, or are letting, the steel trade appropriate our markets, firstly, in office appliances. Have your readers noticed the pertinacity with which so-called office system experts have been drilling their salesmen and, through their salesmen, the consumer, with the idea of the greater fire-resisting quality of a filing cabinet, or a stack of card

index drawers, made from steel, than of similar goods of oak, mahogany, or walnut—a point which, to say the least, is, at any rate, open to debate? Have they noticed the insidious advent of the steel carriage upon the railways of our country, and yet not a word of protest against this innovation, or in defence of the wooden carriages upon which the efficiency of our railways has been built? This invasion of the railway realm of hardwoods in America so enraged the lumber trade over there that publicity was given to the controversy in the public press all over that vast country, with the result that public enquiries were held into the merits of the rival constructions, and, although steel is gaining the supremacy on competitive grounds, the lumberman is still fighting his case on the broader and nobler basis of the safety of human life. Even considered one or two of the simple conveniences of domestic life, enamelled ware draining boards and pastry boards (ever thought of the glorious incongruity of an enamelled iron board), pastry rolling pins of china and glass, every one of these the legitimate field of hardwood? Think of the thousands of miles of galvanized wire now used in fencing, where once it was all wood, soft wood chiefly, of course, but even the soft woods are being ousted in this soulless age of ferro-concrete, by such atrocities as reinforced concrete fencing poles, telegraph poles, and railway sleepers. And yet hardly a single voice, let alone a stupendous roar of anger, and not a single suggestion of organized opposition have I heard.

"Our growing love of 'buying in the cheapest market' has brought these troubles upon us, just as it bred the German menace, which has produced the tragedy of the last two years, and, unless we fight our hardest, each in his own particular trade, peace, with its increased taxation and its aftermath of high-cost living, will batten this curse of 'cheapness' upon us, till we reach a stage of utter and horrible misery.

"But if we fight, and fight hard, for quality and service, this war, with its possibilities of the removal of Continental 'dumpings,' ought to give us our chance of re-establishing the old British reputaion of highest quality goods and workmanship. Don't let peace find the timber trade, and especially the hardwood branch of the trade, at its old policy of 'laissez faire.'

"It is no use merely talking about the existence of such evils in our trade, unless the critic feels he has a suggestion to offer worthy of careful consideration by his fellow-tradesmen, and, whilst I do not claim any degree of originality for the suggestions I want to make, I hope they may interest your subscribers and raise a correspondence in your columns which will result in benefit to our trade.

"Within the last few years business matters are being looked at from a point of view hitherto considered as heterodox, but in the analyzing process through which business thought has been passing it seems as if really fundamental truths are being crystallized, most of them so amazingly simple that you say, "That's nothing new; I knew it long before the days of so-called business science," and these fundamental verities are being grouped as the axioms on which is growing this new school of business thought.

"One of the earliest discoveries of these basis truths was that, no matter how many middlemen may enter into a transaction, **it is the ultimate consumer who keeps the factory going and regulates its policy.**

"Another is that the consumer does not even appreciate the ultimate extent of his requirements, the advance of civilization, with its increased comforts, and, above all, man's growing desire to achieve such comfort along the line of minimum effort is turning his luxuries of to-day into the necessities of to-morrow, and it is advertising this is moulding the lines in which his tastes advance.

"Our great-grandfathers, at the expense of greater physical effort, conducted business without the aid of the telephone, the taxicab, the cable, or the telegram. You accept these necessities of to-day without a thought as to the force that made them possible. What was it? Human necessity, in its desire to conduct its affairs in the least exhausting manner possible, brought about purely by **advertisement.** John Jones had it, and either achieved the same result by such helps with less endeavor or accomplished greater things with the same labor as the men who had not those advantages. That is advertisement in its broadest sense, and every good thing will ultimately come to the front by that line of advertising, as it is an established fact that 'the best advertisement in all the world is the wagging tongue of a satisfied customer.' But how much more quickly can consumption be increased by efficiently organized publicity on right lines and in the right direction!

"You ask, how does this apply to the timber trade? My contention is this: That a worse organized trade, or a trade which has a lower conception of the power of advertising, would be hard to find. And yet what great results are possible if we would only get busy along these lines.

"What has been achieved elsewhere? In America there are many organizations for the furtherance of the interests of a single wood, and in some cases for the development of a single use of a single wood. Walnut, oak, red gum, and many other woods have each their own association, and in regard to the first named, the American Walnut Association has achieved one of the most marvellous results imaginable. Only a very few years ago America was lamenting the fact that American walnut was 'cut out,' and, as some of our statesmen, referring to Russia as a 'spent force,' got a surprise ten months later, so Penrod and his son-in-law, Jurden, of Kansas City, and the Pickrel people of St. Louis, McCowen of Louisville, and a few others got together and formed the A. W. M. A., and to-day, to the confusion of the 'misanthropes,' have placed the 'cut out' in either the third or fourth place of honor in the furniture woods consumption list.

"Take the hardwood goods, which, perhaps, lie closer to my heart than anything else in the hardwood trade—maple flooring. The Maple Flooring Manufacturers' Association is daily advancing from victory to further triumphs by organized publicity, and, in conjunction with them, I might say I am planning in a small way a campaign to try and lighten the darkness of the architects round about my own home city. Let us, especially the younger men in the hardwood trade, who still have our way to make, get together (whether we be broker or wholesaler or retailer, or interior finish manufacturer, or furniture maker, or furniture seller), and see if we cannot form a live organization, working independenty and yet alongside of the existing associations, which are too busy looking after the technicalities of the trade, terms of credit, and such details to consider any extension of their work.

"Let us endeavor to find ways and means of progressive advertising among the ultimately consuming class, and at the same time establish a hardwood information bureau, to which the ignorant consumer may apply for light and leading in his groping for that which he wants, but does not yet know he really does want.

"The new school of thought is directing our attention to the fact that woman is the great deciding factor in the purchasing world, especially in all matters intimately connected with the home. Ought we not, therefore, to seriously consider how best to prove to a woman the immeasurable superiority of a home fitted with hardwood floors, and the added artistic touch to the world in which she rules supreme by the logical use of birch, oak, mahogany, or other hardwoods, treated in a natural and a beautiful manner, for the doors, skirtings, and general interior decoration of her home? 'Cherchez la femme,' but at the same time do not forget the influence of the architect who designs that home, whose suggestions so often are law in such cases, and whose ignorance on the question of the usage of wood in a truly artistic fashion is just as colossal as it is at once sad and amazing. Let us, therefore, go thoroughly into the question of reaching the 'ultimate consumer.' Let us realize that it is only by unified action that results may be accomplished. Let us sink personal interests, the general commonwealth of the hardwood trade will find our own personal pockets the richer, according to the way in which we have managed to maintain our hold on the trade there is to-day, our own personality will decide the share we obtain in the increased sales, but let us forget self a bit and work for the glory of our calling. If we can persuade woman she wants a hardwood home fitted and furnished with the most beautiful of nature's many gems—splendidly figured wood—then the demand will spread from the buyer to the seller and the manufacturer, and will pass through retailer, wholesaler, and broker to the shipper of the wood across the ocean, and ultimately to the owner of the stumpage so many thousands of miles away, and, in passing, will leave a coin or two in the hands of all the intermediary interests, to the benefit of British trade in general and of the hardwood community in particular. By such means I believe we could within a year or two double, if not treble, the consumption of hardwoods in these isles—but it can only be done by concerted force."

British Columbia Timber Returns for July

The timber returns for the month of July, issued under direction of the Minister of Lands of British Columbia, show the total scale of sawlogs for the province to be 140,561,435 feet board measure, in addition to 610,121 lineal feet of poles and piles, and 36,678 cords of shingle bolts, ties, posts, etc.

The sawlogs scaled in the various districts include Vancouver, 99,051,896 ft.; Island, 14,535,055 ft.; Cranbrook, 13,269,894 ft.; Vernon, 3,953,905 ft.; Prince Rupert, 3,371,003 ft.; Nelson, 3,086,346 ft., and Kamloops, 3,069,139 ft.

In the Nelson district 247,555 lineal ft. of poles were scaled; Vancouver, 162,503 lineal ft.; Prince Rupert, 53,786 lineal ft.; Island, 52,909 lineal ft.; Cranbrook, 41,820 lineal ft.; Vernon, 37,538 lineal ft., and Kamloops, 14,010 lineal ft.

Of the shingle bolts, railway ties, posts, etc., there were scaled in the Vancouver district 24,517 cords; Cranbrook, 5,548 cords; Island, 3,911 cords, and Nelson, 2,022 cords.

Provincial timber sales recorded during the month of July cover an estimated total of 14,155,000 feet B.M. sawlogs, 125,000 lineal ft. of poles, and 3,479 cords of shingle bolts, fence posts, and cordwood, to produce an estimated revenue of $18,811.

Oak is the most suitable wood for carving, on account of its durability and toughness, without being too hard. Chestnut, American walnut, mahogany, and teak are also desirable, while for fine work Italian walnut, lime, sycamore, apple, pear, or plum are generally chosen.

Lumber, Lath and Shingle Output, 1915

Production Reduced by One Hundred Million Feet, But Value per Thousand Feet Shows Advance—Lath Output Greater—Shingles Also Increased

The annual report of the production of lumber, lath and shingles in Canada, covering operations during the year 1915, has been prepared by the Forest Branch of the Department of the Interior, Ottawa, and will shortly be published in bulletin form. The report will say, in part, that statistics have been obtained from 3,239 mills operating in Canada during the calendar year 1915. Reports were received from 396 more mills in 1915 than in 1914. This increase was largely due to more complete returns from Quebec and British Columbia, made possible by the co-operation of the provincial forest officials of these provinces.

The total value of the lumber, lath and shingles produced in Canada in 1915 was $69,695,477, the separate items being: lumber, 3,842,676,000 feet, board measure, valued at $61,919,806; lath, 793,226,000, valued at $2,040,819; and shingles, 3,089,470,000, valued at $5,734,852.

Lumber Production—Total cut, 1914 and 1915, by provinces:

Province	Rank 1914	Rank 1915	No. of Firms Reporting 1914	No. of Firms Reporting 1915	Quantity 1914	Quantity 1915
					M Ft. B.M.	M Ft. B.M.
Total, all Provinces			**2,843**	**3,239**	**3,946,254**	**3,842,676**
Quebec	1	1	1,314	1,578	1,118,298	1,078,787
Ontario	2	2	718	656	1,044,131	1,035,341
British Columbia	3	3	172	238	936,612	669,816
New Brunswick	4	4	160	240	414,808	633,518
Nova Scotia	5	5	332	366	279,044	294,475
Saskatchewan	6	6	17	13	56,677	62,864
Manitoba	8	7	40	37	44,658	42,357
Alberta	7	8	47	43	45,236	17,975
Prince Edward Island	9	9	62	68	6,790	7,543

Province	Value of Lumber 1915	Per cent. increase or decrease in Cut over 1914	Per cent. Distribution of Cut 1914	Per cent. Distribution of Cut 1915	Average value per M. Ft. B.M. 1914	Average value per M. Ft. B.M. 1915
	$				$ cts.	$ cts.
Total, All Provinces	**61,919,806**	**2.6†**	**100.0**	**100.0**	**15 30**	**16 11**
Quebec	17,784,415	3.5†	28.3	28.1	15 60	16 49
Ontario	19,663,950	0.8†	26.5	26.9	18 89	18 99
British Columbia	8,414,227	28.5†	23.7	17.4	11 45	12 56
New Brunswick	9,902,202	52.7	10.5	16.5	15 37	15 63
Nova Scotia	4,366,165	5.5	7.1	7.7	14 01	14 83
Saskatchewan	880,353	10.9	1.4	1.6	14 87	14 00
Manitoba	549,430	5.2†	1.1	1.1	13 47	12 97
Alberta	244,487	60.3†	1.2	0.5	14 35	13 60
Prince Edward Island	114,577	11.1	0.2	0.2	14 42	15 19

†Decrease from 1914 to 1915.

The production decreased 2.6 per cent. from that of 1914 and 12.4 per cent. from that of 1912, the year in which the greatest cut was reported.

Lumber Cut, 1914 and 1915, by Kinds of Wood

Kind of Wood	Quantity 1914	Quantity 1915	Per cent of Increase or Decrease over 1914	Total Value of Lumber 1915	Per cent Distribution of Total Cut 1914	Per cent Distribution of Total Cut 1915	Average value per M. Ft. B.M. 1914	Average value per M. Ft. B.M. 1915
	M Ft. B.M.	M Ft. B.M.		$			$ cts.	$ cts.
Total	**3,946,254**	**3,842,676**	**2.6†**	**61,919,806**	**100.0**	**100.0**	**15 30**	**16 11**
Spruce	1,441,438	1,564,113	8.5	23,843,548	36.5	40.7	14 71	15 24
White pine	667,678	849,196	27.2	17,584,149	16.9	22.1	20 79	20 71
Douglas fir	601,643	453,534	24.6†	5,333,573	15.2	11.8	11 32	11 76
Hemlock	334,361	238,992	28.5†	3,271,612	8.5	6.2	14 16	13 69
Balsam fir	256,452	233,521	8.9†	3,327,839	6.5	6.1	14 25	14 25
Red pine	107,763	122,387	13.6	2,206,840	2.7	3.2	17 96	18 03
Birch	76,424	85,733	12.2	1,437,658	1.9	2.2	16 33	16 77
Cedar	118,738	67,366	43.3†	1,172,279	3.0	1.8	10 90	17 40
Maple	66,610	47,418	28.8†	848,091	1.7	1.2	19 27	17 89
Tamarack	71,791	36,192	49.6†	491,687	1.8	1.0	12 29	13 59
Yellow pine	34,616	35,166	1.5	457,758	0.9	0.9	13 39	13 02
Jack pine	44,000	31,283	28.9†	481,323	1.1	0.8	14 23	15 39
Basswood	38,013	24,382	35.9†	489,217	1.0	0.6	19 79	20 06
Elm	29,490	23,795	19.3†	454,497	0.7	0.6	20 69	19 10
Ash	9,941	9,647	3.0†	180,484	0.3	0.3	20 61	18 71
Poplar	21,621	9,324	56.9†	113,873	0.5	0.3	12 23	12 21
Beech	15,686	5,343	65.9†	88,000	0.4	0.1	15 96	16 47
Oak	5,854	3,166	45.9†	89,784	0.1	0.1	29 86	28 36
Yellow cypress	19	880	4,531.6	12,833	*	*	25 00	14 58
Chestnut	1,163	522	55.1†	12,043	*	*	22 31	23 07
Butternut	1,431	361	74.8†	12,372	*	*	17 69	34 27
Hickory	900	203	77.4	5,534	*	*	28 11	27 26
Cherry	535	123	77.0	3,826	*	*	28 48	31 11
Walnut	46	28	39.1	968	*	*	37 54	34 57
Tulip	23	1	95.7	18	*	*	17 91	18 00
Black gum	12	.....	.....	.....	*	....	14 00	.....
Red alder	6	.....	.....	.....	*	....	15 00	.....

*Less than one-tenth of 1 per cent.
†Decrease from 1914 to 1915.

Softwoods vs. Hardwoods

The following table shows the relative production of softwood, or the wood of evergreen or coniferous trees, and hardwood, or wood of the deciduous-leaved trees.

Kind of Wood	Quantity M Ft. B.M.	Per cent of Total	Kind of Wood	Quantity M Ft. B.M.	Per cent of Total
Total, All Woods	**3,842,676**	**100.0**	**Total, All Woods**	**3,842,676**	**100.0**
Total, Softwoods	3,632,630	94.5	Total, Hardwoods	210,046	5.5
Spruce	1,564,113	40.7	Birch	85,733	2.2
White pine	849,196	22.1	Maple	47,418	1.2
Douglas fir	453,534	11.8	Basswood	24,382	0.6
Hemlock	238,992	6.2	Elm	23,795	0.6
Balsam fir	233,521	6.1	Ash	9,647	0.3
Red pine	122,387	3.2	Poplar	9,324	0.3
Cedar	67,366	1.8	Beech	5,343	0.2
Tamarack	36,192	0.9	Oak	3,166	0.1
Yellow pine	35,166	0.9	Chestnut	522	*
Jack pine	31,283	0.8	Butternut	361	*
Yellow cypress	880	*	†All others	355	*

*Less than one-tenth of 1 per cent.
†Includes Hickory, Cherry, Walnut and Tulip.

The softwoods formed 94.5 per cent. of the total lumber produced in Canada in 1915, the remaining 5.5 per cent. being hardwoods. There has been practically no change in the relation between the production of these two kinds of woods for the past seven years. Neither has there been a change in the relative position of the four leading kinds of hardwoods in this time.

The four leading kinds of softwoods, with the exception of the year 1913, have retained the same relative position since 1909. In 1913 more Douglas fir was cut than white pine and the latter fell to third place.

Lumber Production by Provinces

The report contains tables showing the production of lumber in the various provinces. In the province of Quebec the production was 1,078,787,000 feet B.M., valued at $17,784,415; this is a slight decrease as compared with the production of 1914. The average value, however, was $16.49 per M feet, as against $15.60 in 1914. The Quebec production showed a considerable increase in the quantity of birch and ash and a slight increase in the quantity of white pine and hemlock, while in the other kinds there was a falling off. The production of the chief kinds was as follows:—Spruce, 599,811,000 feet B.M.; balsam fir, 170,794,000 feet B.M.; white pine, 157,256,000 feet B.M.; birch, 44,980,000 feet B.M.; hemlock, 38,064,000 feet B.M.; red pine, 17,895,000 feet B.M.; Jack pine, 12,006,000 feet B.M.; basswood, 11,890,000 feet B.M.; maple, 6,405,000 feet B.M.; ash, 6,156,000 feet B.M.; cedar, 4,493,000 feet B.M.

In Ontario the production is given as 1,035,341,000 feet B.M., a slight falling off as compared with 1914. The value of the Ontario product was $19,663,950, the average value being $18.99, as compared with $18.89 in 1914. The only important increases in Ontario production were in the cases of white pine and red pine. The white pine production was 623,119,000 feet B.M.; as compared with 488,312,000 feet B.M. in 1914. The red pine production was 102,776,000 feet B.M., as compared with 85,181,000 feet B.M. in 1914. All other kinds showed decreases. The production of the chief kinds of lumber in Ontario was as follows:—White pine, 623,119,000 feet B.M.; hemlock, 107,913,000 feet B.M.; red pine, 102,776,000 feet B.M.; spruce, 84,095,000 feet B.M.; maple, 35,311,000 feet B.M.; elm, 20,266,000 feet B.M.; birch, 15,374,000 feet B.M.; basswood, 12,452,000 feet B.M.; Jackpine, 10,579,000 feet B.M.

In British Columbia the production amounted to 669,816,000 feet B.M., as compared with 936,612,000 feet B.M., in 1914. The average value was $12.56 per M. feet as compared with $11.45 in 1914. Yellow pine and yellow cedar are the only kinds of wood of commercial importance showing an increase in production in 1915 in British Columbia. There was also an increase in the quantity of birch cut. The production of the chief kinds of B. C. woods was as follows:—Douglas fir, 453,415,000 feet B.M.; spruce, 56,360,000 feet B.M.; Western red cedar, 54,666,000 feet B.M.; yellow pine, 35,166,000 feet B.M.; larch, 28,023,000 feet B.M.; hemlock, 24,959,000 feet B.M.; white pine, 7,664,000 feet B.M.

The production in New Brunswick amounted to 633,518,000 feet B.M., as compared with 414,808,000 feet B.M., in 1914, the average value being $15.63, as compared with $15.37 in 1914. There was a considerable increase in the production of spruce, balsam fir, and white pine and in many of the minor species of woods. The production of

hemlock showed a notable decrease. The production of the leading kinds of woods in New Brunswick was as follows:—spruce, 519,699,000 feet B.M.; balsam fir, 45,659,000 feet B.M.; white pine, 35,507,000 feet B.M.; hemlock, 14,922,000 feet B.M.; birch, 8,356,000 feet B.M.; cedar, 5,531,000 feet B.M.; maple, 1,393,000 feet B.M.

In Nova Scotia the production amounted to 294,475,000 feet B.M., as compared with 279,044,000 feet B.M., in 1914, the average value being $14.83, as compared with $14.01 in 1914. The production of the chief kinds of woods was as follows:—spruce, 184,922,000 feet B.M.; hemlock, 52,872,000 feet B.M.; white pine, 25,591,000 feet B.M.; birch, 16,436,000 feet B.M.; balsam fir, 7,091,000 feet B.M.; maple 4,102,000 feet B.M.; Beech, 1,570,000 feet B.M.; red pine 1,101,000 feet B.M. In spite of the falling off in the cut of the majority of species in Nova Scotia, the increased quantity of spruce, white pine, Jackpine and maple was sufficient to increase the total production for the province 5.5 per cent. over 1914.

The production in Saskatchewan amounted to 62,854,000 feet B.M., as compared with 56,677,000 feet B.M., in 1914, the average value being $14.00 per thousand feet, as compared with $14.87 in 1914. The chief kind produced in Saskatchewan was spruce, the amount being 61,970,000 feet B.M., as compared with 55,682,000 feet B.M., in 1914.

In Manitoba the output was 42,357,000 feet B.M., as compared with 44,658,000 feet B.M., in 1914, the average value being $12.97 per M. feet, as compared with $13.47 in 1914. The production of the principal kinds of wood in Manitoba was as follows:—spruce, 39,386,000 feet B.M.; tamarac, 1,584,000 feet B.M.

In Alberta the output amounted to 17,975,000 feet B.M., as compared with 45,236,000 feet B.M., in 1914, the average value being $13.60 per M. feet, as compared with $14.35 in 1914. The production of the chief kinds of wood in Alberta was as follows:—Spruce 13,991,000 feet B.M.; Jackpine, 3,099,000 feet B.M.

In Prince Edward Island the output amounted to 7,543,000 feet B.M., as compared with 6,790,000 feet B.M., in 1914, the average value being $15.19 per M. feet, as compared with $14.42 in 1914. The production of the chief kinds of wood in Prince Edward Island was as follows:—Spruce, 3,879,000 feet B.M.; balsam fir, 2,340,000 feet B.M.

Output of Four Leading Species

The following tables show the production of spruce, white pine, Douglas fir and hemlock in Canada during 1915 and 1914 by provinces.

SPRUCE LUMBER, 1914 AND 1915, BY PROVINCES

Province	No. of Active Mills Reporting.	Quantity 1914	Quantity 1915	Per Cent Distribution 1915	Total Value 1915	Average Value Per M Ft. B.M. 1914	Average Value Per M Ft. B.M. 1915
		M Ft. B.M.	M Ft. B.M.				
Total, All Provinces ..	**2,216**	**1,441,488**	**1,564,113**	**100.0**	**$23,843,548**	**$14 71**	**$15 24**
Quebec	1,107	657,983	599,811	38.4	9,243,084	14 66	15 41
New Brunswick	236	315,505	519,699	33.2	8,137,717	15 41	15 66
Nova Scotia	333	169,192	184,922	11.8	2,701,004	14 06	14 61
Ontario	344	85,738	84,095	5.4	1,373,217	16 77	16 33
Saskatchewan	12	55,682	61,970	4.0	867,612	14 87	14 00
British Columbia	40	73,712	56,360	3.6	766,353	12 04	13 60
Manitoba	34	40,639	39,386	2.5	506,289	13 38	12 86
Alberta	40	39,895	13,991	0.9	189,304	14 34	13 53
Prince Edward Island	61	3,092	3,879	0.2	58,968	13 83	15 20

The wood of the different species of spruce is very similar. The white spruce is the most important commercial tree in Canada, heading the list in the production of both lumber and pulpwood. The wood is used extensively for cooperage, mine-props, ties, poles, posts and rails, and is also favored for masts and spars of vessels and the manufacture of aeroplanes. Owing to its wide distribution and abundance of the tree its lumber is gradually taking the place of pine for which it is a good substitute. The red spruce is used as lumber much in the same way as white spruce. It is sometimes preferred to the other spruces for interior finish. The more durable wood of the black spruce makes it most valued for mining timber and ties, but in the lumber market it is not ordinarily separated from the other spruces. The Sitka spruce being obtainable in greater dimensions, clear of defects, than any of the other spruces is valued for structural purposes and for masts and spars of large vessels. It is also in considerable demand for organ pipes and sounding boards for musical instruments. Generally speaking, its uses are similar to those of the other species.

WHITE PINE LUMBER, 1914 and 1915, BY PROVINCES

Province	No. of Active Mills Reporting.	Quantity 1914	Quantity 1915	Per Cent Distribution 1915	Total Value 1915	Average Value Per M Ft. B.M. 1914	Average Value Per M Ft. B.M. 1915
		M Ft. B.M.	M Ft. B.M.				
Total	**1,051**	**667,678**	**849,196**	**100.0**	**$17,584,149**	**$20 79**	**$20 71**
Ontario	401	488,312	623,119	73.4	12,700,225	20 80	20 38
Quebec	366	118,231	157,256	18.5	3,566,557	22 34	22 68
New Brunswick	117	28,924	35,507	4.2	658,278	17 45	18 54
Nova Scotia	133	17,265	25,591	3.0	539,012	16 08	21 06
British Columbia	23	14,765	7,664	0.9	118,881	14 32	15 51
Prince Edward Island	11	181	59	*	1,196	24 72	20 27

*Less than one-tenth of 1 per cent.

DOUGLAS FIR LUMBER, 1914 AND 1915, BY PROVINCES

Province	No. of Active Mills Reporting.	Quantity 1914	Quantity 1915	Per Cent Distribution 1915	Total Value 1915	Average Value Per M Ft. B.M. 1914	Average Value Per M Ft. B.M. 1915
		M Ft. B.M.	M Ft. B.M.				
Total	**131**	**601,643**	**453,534**	**100 0**	**$5,333,573**	**$11 32**	**$11 76**
British Columbia	129	601,412	453,415	100.0	5,332,108	11 32	11 76
Alberta	2	231	119	*	1,465	14 50	12 34

*Less than one-tenth of 1 per cent.

The Douglas fir is also called Douglas pine or spruce, Oregon pine or spruce and red or yellow fir. With the exception of the eastern white pine, and possibly the white spruce, there is no one species which produces more lumber annually in Canada than does this tree. The wood is largely used for building purposes. Its striking grain is making it increasingly popular for interior finish, flooring, panelling and doors. It is gradually replacing the southern hard pine in the markets of eastern Canada.

HEMLOCK LUMBER, 1914 AND 1915, BY PROVINCES

Province	No. of Mills Active Reporting.	Quantity 1914	Quantity 1915	Per Cent Distribution 1915	Total Value 1915	Average Value Per M Ft. B.M. 1914	Average Value Per M Ft. B.M. 1915
		M Ft. B.M.	M Ft. B.M.				
Total	**783**	**334,361**	**238,932**	**100 0**	**$3,271,612**	**$14 16**	**$13 69**
Ontario	61	185,453	107,913	45.2	1,560,783	15 13	14 46
Nova Scotia	191	59,815	52,872	22.1	698,716	13 51	13 22
Quebec	356	31,323	38,064	15.9	529,473	14 00	13 91
British Columbia	45	31,116	24,959	10.4	285,637	11 01	11 44
New Brunswick	104	26,189	14,922	6.3	192,965	12 38	12 93
Prince Edward Island	26	465	262	0.1	4,038	11 96	15 41

The wood of the eastern hemlock is used largely for rough construction, frames of buildings, boxes, crates, ties and poles. Occasionally it is used for pulp manufacture.

The wood of the western hemlock is much superior to that of the eastern species. It is sometimes sold under the name of Alaska pine to overcome the prejudice against the wood caused by the objectionable qualities of the eastern species. It is largely used in the manufacture of boxes and pulp in British Columbia.

Lath Output During 1915

The production of lath in 1915 amounted to 793,226,000, as compared with 625,010,000 during 1914, the average value per thousand being $2.57 as compared with $2.54 in 1914. The total value of the lath production was $2,040,819. Ontario led the other provinces with a production of 309,022,000 pieces. New Brunswick came second, with 288,951,000 pieces, and the production of the other provinces was far below these two. Spruce was the leading kind of wood from which lath were manufactured, the production being 320,412,000 pieces. White pine came second, with 245,390,000 pieces, and cedar third, with 105,254,000 pieces. The increase in the production of lath in Canada during 1915, as compared with 1914, was 26.8 per cent., as compared with a decrease of 15.1 per cent. in 1914 as compared with 1913. During the past six years there has been a steady increase in the average mill value per thousand of lath manufactured in Canada. In 1910 the average value per thousand was $2.28 and in 1915 $2.57.

Shingle Production in 1915

The output of shingles in Canada during 1915 amounted to 3,089,470,000 pieces, as compared with 1,843,554,000 pieces in 1914, the average value being $1.86 per thousand, as compared with $2 in 1914. The total value of the shingle production in 1915 was $5,734,852. British Columbia led in the production, her total being 1,894,642,000 pieces, as compared with 1,060,272,000 pieces during 1914. The production of the other chief shingle producing provinces was as follows:—Quebec, 574,797,000 pieces; New Brunswick, 458,987,000 pieces; Ontario, 93,497,000 pieces; Nova Scotia, 30,733,000 pieces.

The chief wood used for the production of shingles was cedar, the total being 2,795,441,000 pieces, as compared with 1,777,689,000 pieces in 1914. The average value per thousand of cedar shingles was $1.83, as compared with $2.01 in 1914. The other principal woods used for shingle production showed the following totals:—Spruce, 210,583,000 pieces; white pine, 41,021,000 pieces; Jackpine, 19,544,000 pieces; balsam fir, 15,444,000 pieces. All provinces of Canada, with the exception of Ontario, showed an increased shingle output during 1915. British Columbia produced considerably more than half the shingles made in Canada.

The Department of Lands, Forests and Mines for the Province of Ontario have issued a striking office calendar covering twelve months from July 1st, 1916, to July 1st, 1917. The calendar is attached to a striking poster entitled "The Call of the North," and is designed to attract settlers to the twenty million acres of fine agricultural lands in northern Ontario. Full particulars about these lands may be had by writing to H. A. Macdonell, Director of Colonization, Parliament Buildings, Toronto.

Retailers Complain of Division Court Costs

At a meeting of retail merchants in Ottawa on September 18th, Mr. H. Chevrier, a prominent retailer of Winnipeg, delivered an address upon the Ontario Division Court Act, drawing attention to the expense entailed in collecting small debts under the Act. A resolution was passed, to be presented to the executive of the Ontario Board of the Association, calling upon them to take such steps as may be necessary to have introduced into, and passed by, the Ontario Legislature, an Act simplifying the collection of small debts for the following reasons:

"1st. Because this act will enable us to collect accounts which are to-day considered too small to place in the hands of a solicitor.

"2nd. Because it will relieve us from the exploitation of so-called 'commercial adjusters' or 'collection agency companies,' and it will enable us to do our own collecting inexpensively and expeditiously.

"3rd. Because it will act as a deterent to professional solicitors for credit, who so often solicit without any intention of paying, as they count on the fact that the account being small they cannot be made to pay it."

Mr. Chevrier described the simplicity and effectiveness of the act in vogue in Manitoba for the collection of small debts, whereby the cost of collecting a $5 debt would be but 50 cents, compared with from $6 to $7 in Ontario. A magistrate was appointed in each necessary district to receive complaints of merchants and to issue summonses. The merchant could use his own employees as process servers, thus saving a cost necessary in Ontario. In 95 per cent. of the cases in Manitoba, before the summons became returnable, the debts were settled satisfactorily out of court.

Reports Good Prospects for Canadian Trade in France

Mr. Frank Pauze, of U. Pauze & Fils, Montreal, has returned to Canada with the other members of the government commission who visited England, France, and Italy for the purpose of promoting trade with Canada. The commision made extensive enquiries as to openings for exports, and also looked into the question of imports, especially those which will displace German and Austrian goods. Mr. Pauze sailed prior to the other members, who joined him in Paris. In addition to being a member of the commission, he represented the Canadian Timber Products Association, on whose behalf he made special investigations as to the opportunities for the sale of Canadian portable houses. Mr. Pauze also, as a member of the commission, directed his efforts to enquiries as to the openings for Canadian lumber, especially in France. "The demand is immense," he says, "but Canadians will, if they want the trade, have to adopt the right means. It is difficult to change trade channels, still I think the opportunity is there if we will only go about it in the proper way. I am of opinion that we have the lumber which will suit the market, even more so than the products of the United States, and I also think that we can compete in price. But the problems of transportation and kindred matters will want careful consideration."

The members of the commission were received everywhere with the utmost cordiality. On all hands they found a desire to increase the trade between Canada and the allied countries, the French people being particularly anxious to promote closer business relations.

The exhibition of portable houses in Paris proved of great value, and attracted wide attention.

Annual Concatenation of Hoo-Hoo

The twenty-fifth annual meeting of the Concatenated Order of Hoo-Hoo was held at Memphis, Tenn., from September 9th to 11th. For the first time in the history of the order, the snark of the universe was re-elected for a second year, in the person of Julius Seidel, of St. Louis, Mo., who has made an enviable record for himself during the past year. Mr. E. D. Tennant, of St. Louis, formerly of Winnipeg, Man., was re-elected secretary-treasurer. The twenty-eighth annual meeting will be held at New York on September 9th, 1917.

Snark Seidel, in his annual address, reviewed the remarkable progress of the order during the past year, and outlined many comprehensive plans for the work of the coming year. His address was full of optimism and confidence in the future progress of the order.

The report of the secretary-manager, Mr. E. D. Tennant, showed receipts of $19,342 during the year and a cash balance on hand of $1,229. During the year there had been 39 concatenations held, at which 338 candidates had been admitted. The statement also showed that 3,900 members had paid their 1916 dues, and 2,739 had paid their 1915 dues.

On Saturday night, September 9th, a concatenation was held, and a class of six kittens was initiated into the mysteries of the order. Subsequently a session on the roof was held, at which 154 old cats were present to enjoy themselves. A number of enjoyable automobile tours were taken during Sunday, September 10th, and the order convened again on Monday, September 11th, when a quantity of routine business was put through.

The report of the nominating committee, which was adopted, resulted in the following being elected to carry on the work of Hoo-Hoo for the ensuing year: Snark of the universe, Julius Seidel, St. Louis, Mo.; senior hoo-hoo, W. P. Lockwood, Seattle, Wash.; junior hoo-hoo, Charles J. Kammer, New York; bojum, Stacy C. Bennett, Chicago, Ill.; scrivenoter, W. Frazier Jones, Jacksonville, Fla.; jabberwock, Harry T. Kendall, Houston, Tex.; custocatian, J. G. Robson, New Westminster, Canada; arcanoper, J. F. Gresley, Omaha, Neb.; gurdon, Robert McArthur, San Francisco, Cal.

Surprising Figures of Ocean Freight Rates

An interesting discussion has been going on in several English newspapers in regard to the heavy ocean freight rates being paid by English importers of all kinds of goods. In the Cardiff Mail of recent date the following letter was published. It will be of considerable interest to Canadian timber exporters:

Sir,—The very suggestive figures contained in your edition of Saturday, and commented upon in your leading article, are by no means confined to the grain market. Probably every other foreign trade is similarly affected. The timber trade is certainly one of these. During the past month my firm at Cardiff has imported several cargoes of wood goods, three of which at least show very remarkable figures, as follows:

Place of shipment.	No. of standards carried.	Actual rate of freight per standard.	Pre war average rate of freight.
1. Canada	613	395/-	37/6
2. Sweden	721	230/-	25/-
3. Archangel	1,419	350/-	25/-

In addition to these inflated rates of freight, very unusual and onerous conditions were exacted as regards the discharge of the cargoes. The actual amounts receivable by the shippers of these wood goods, and also by the shipowners, are as follows:

Place of shipment.	No. of standards carried.	Shippers. receive.	Shopowners receive.
1. Canada	613	£ 2,846	£12,071
2. Sweden	721	8,364	8,290
3. Archangel	1,419	15,030	24,832

It must not be assumed that these heavy rates of freight fall upon the importer, although they materially increase his responsibilities. They are passed on to the consumers, viz., collieries, ironworks, railways, contractors, and timber merchants in various districts. This again means increased cost of production and vastly higher prices, which ultimately affect the whole community.

What can be done to limit these high freights? This is a problem at present unsolved. The shortage of tonnage, the enormous mass of material of all kinds awaiting transport, the needs of our own fleet, the absolute necessity of continued enlargement of our navy at any cost or sacrifice, the blockade of all German tonnage (the second largest mercantile fleet in the world). These are only part of the important factors in this great problem.

We can only hope that in some way the government will be able to reach a satisfactory solution. Hasty and ill-considered action would be fatal. England is dependent upon the world for many commodities. The whole of this freight question bristles with difficulties. It is part of the price that has to be paid for war.

But if our own difficulties are so considerable, they are wonderfully light compared with the difficulties of Germany. We get what we require, although the prices are high. The Central Powers, in their blockaded position, cannot do this, and are suffering thereby enormously, both physically and financially. We may be quite certain that our government is fully alive to all these matters, and will not miss any opportunity of affording necessary relief. I am not without hope that some satisfactory arrangement will be forthcoming so as at least to limit these unheard-of and extortionate charges.

I am, etc.,

J. C. Meggitt.

Canadian Paper Trade in Great Britain

The serious situation that has arisen in connection with the paper supply in Great Britain, says "P. M. G." in the Pall Mall Gazette, is complicated by the fact that Canada has an abundance of pulp and is eager and anxious to obtain facilities for its transport to the market where it is most urgently needed, and to which patriotic Canadians would most readily send it.

At the present moment the great market for Canadian pulp and paper is the United States. While Great Britain is importing pulp and paper from neutral countries Canada is compelled to sell elsewhere.

The Hon. P. Pelletier, Agent-General for Quebec, in the course of an interview with a representative of the Pall Mall Gazette, expressed the opinion that a strong appeal should be made to the government to encourage this trade between Canada and the Mother Country.

"There are," he said, "eighteen pulp mills in the Province of Quebec, but the bulk of the produce of these mills goes to the United States. It is practically the only market they have, although very many of them are very anxious, indeed, to do business with Great Britain.

"Although freights are higher in Great Britain than to the United States, that would not prevent a big development of the trade. It is

the shortage of tonnage that stands in the way. If the government could be induced to release some ships it would encourage the pulp maker in Canada and promote the establishment of a permanent trade, which would be of the greatest possible value in the future."

Within the past few months there has been a comparatively unimportant, but nevertheless extremely significant, incident in connection with the pulp and paper trade of Canada.

In the past the great fruit growing parts of the Empire outside Canada itself have invariably employed a special make of paper for the purpose of packing the fruit. Canada did not produce this particular paper.

The first enquiries came from Australia and South Africa, and the Canadian paper makers were promptly informed from London of this need in other parts of the Empire. Within a short time the demand was met, and there is now every prospect of a hitherto non-existing trade in this paper, which is used in enormous quantities, being built up between Canada and other parts of the Empire.

"There is also another aspect of the question," Mr. Pelletier explained. "If this trade were developed it would encourage the pulp makers of Canada to turn their mills into paper making mills, to the great advantage of Canada. The practice at present is for the American paper mills to get their pulp from Canada. If Canada, in addition to making pulp, converted it into paper, and supplied the Mother Country, the advantage to this country and to Canada would be very great. Such a trade once established would last forever."

The tonnage difficulty is, of course, of the utmost gravity, but among those who are most familiar with the problems involved it is confidently believed that an examination of this aspect of the question—due regard being paid to the future of the industry in Canada and the permanent advantages certain to accrue to Great Britain—by the Board of Trade would result in the liberation of a certain amount of tonnage for the purpose.

Canada is willing to sell, Great Britain is equally willing to buy, and it remains with the government to facilitate as far as the exigencies of war permit the mutually advantageous development.

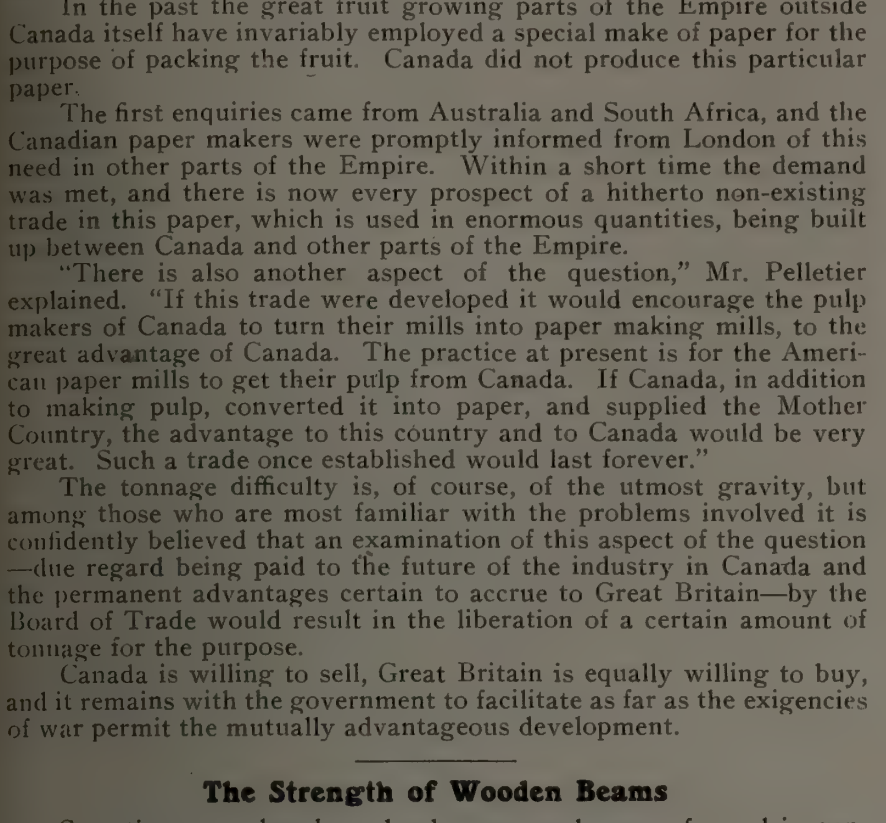
The Strength of Wooden Beams

Sometimes woodworkers, lumbermen, and users of wood in general want to know just how strong a board is, or a beam, whether made of white pine, oak, or other material.

To compute the strength is not always easy, and, anyway, we dislike mathematics very much. It is much easier to use a table or a chart.

I have, therefore, prepared this chart, which will cover any wood and any ordinary board or beam. For example, what is the safe strength of a white oak beam 2 in. wide by 4 in. deep and 5 ft. between supports?

For white oak, 1,000 pounds per square inch is the usual figure (see column B), which makes the problem very simple. For other materials consult column B, or if your beam is made of still different wood, use the corresponding stress per square inch. (See table below.)



Handy Chart for Finding Strength of Wooden Beams

The length, 5 ft., is 60 inches (column A). Run a line through the 60 and the 1,000 (column B), and note the intersection with column C.

Next connect the 2 (column D) with the 4 (column G), and note the intersection with column F.

Lastly, join the intersection (column C) with the intersection (column F), and the answer is found in column E. The beam will hold a little over 700 pounds, UNIFORMLY DISTRIBUTED—that is, the beam will hold a little over 140 pounds on every foot of its length.

After using the chart once or twice you will understand its use thoroughly, and will see how it can be used "backward" as well as forwards. Should you want to find the depth of beam necessary to hold a given load, for example, the depth can be found by reversing the above process somewhat. The process is so simple that I don't think I need explain it. Any lumberman or woodworker can "dope it out" in a short time without difficulty.

Here are the "safe strengths" of the principal woods used in various woodworking industries. The factor of safety used is "ten." That is, the actual breaking strength of specimens in tests was ten times as great as these figures. Of course, the safe strength should always be used, and that is why the larger actual, unsafe strengths are not given:

	lbs. per sq. in.
Ash	1,100
Beech	1,150
Cedar	1,000
Chestnut	1,000
Douglas fir	1,200
Elm	1,300
Hemlock	800
Hickory	1,200
Locust	2,000
Long leaf pine	1,300
Maple	1,000
Norway pine	800
Spruce	900
Tamarack	900
Walnut, black	900
Western hemlock	1,100
White oak	1,000
White pine	900
Yellow pine	1,100

N. G. Near.

Bankers Discuss Lumber Situation

The Canadian Bank of Commerce, which publishes a monthly circular dealing with business conditions throughout the country, has the following to say regarding the lumber situation and the manner in which it is being affected by labor shortage: "In many districts unusual difficulties will have to be faced this fall by the operators of logging camps. Provisions are high in price and men are scarce. Under these circumstances the output of logs all over the Dominion will be less than normal and operating costs will be very much higher. An uncertain factor is the trend of values after the war ceases. Opinion on this point is divided, but the majority of practical lumbermen expect that after the war there will be a steady demand for lumber at good prices. In the meantime it is obvious that the cost of logging during the coming season will cause the output to be very much smaller. In addition present stocks are low and are being steadily drawn upon, and this will tend to prevent any serious collapse of prices."

Newspaper Men Want Export of Pulpwood Stopped

There has recently developed in several parts of Canada a revival of the proposal to prohibit the export of all pulpwood. At present it is only pulpwood cut on Crown lands on which there is an embargo, and this embargo is in each case a provincial measure, adopted by all the provinces which own Crown lands. There are in addition, however, immense areas of land which are owned privately. Pulpwood from these lands can be exported without restriction. From time to time there has been talk of a move towards getting the Federal government to enact a law covering the whole Dominion in regard to the export of pulpwood. This talk has now been put in the form of a direct recommendation by a meeting of the Alberta and Eastern British Columbia Press Association, at a meeting held recently in Calgary.

According to a cable received from London, Sir Edward Morris, Premier of Newfoundland, has stated that some English companies propose to try the experiment of floating pit props across the ocean in rafts, as has been done in the Pacific. Representatives of the companies have sailed for Canada to charter tugs for this purpose.

A System of Accounts for Retailers

Fundamental Principles Clearly Explained—A Valuable Report Upon An All-Important Problem

Under the title of "A System of Accounts for Retail Merchants" a valuable report has been issued by the Federal Trade Commission of the United States. While the report deals with retailers as a general class, the information it contains is indispensable to any retail lumberman, and, with a few modifications to suit particular cases, the system can be adapted to any retail business. The report may be said to lay down the fundamental facts for the successful conduct of retail trade. We have never seen these facts put so clearly and forcefully, and we believe that all our retail readers will be benefited by reading and studying the report, which we reproduce, as follows:

There is a tendency among retail merchants to conduct their businesses without an adequate system for determining their costs. This condition carries with it various undesirable results. In the first place, the merchant is unable to price his goods intelligently and conduct his business upon sound business principles. In the second place, he is unable, when seeking credit, to produce a correct statement of his financial condition which would enable a banker to extend to him the full credit to which he is entitled. He thereby limits the possible expansion of his business.

There are several forces at work which compel the retail merchant, if successful, to keep books, and the better and more comprehensive his methods the greater chance he has of being successful.

The first of these forces is, of course, competition, which at times compels him to make close prices. The second, and one of vital importance, is the attitude of the banks regarding the granting of credit. Banks are paying more and more attention to the accounting methods used by the merchant to whom they extend credit. They are willing to give larger loans and very often more liberal terms to the merchant who keeps his books in a way that enables him to show the bank at any time just how his business is progressing. A merchant who can show progress will undoubtedly receive more consideration with the same amount of assets than one who cannot. Even if he is successful but cannot show it because of his bookkeeping methods the bank will not consider him a desirable credit risk.

Another very important point to which the bank gives consideration is whether the prospective borrower is making proper provisions for depreciation on stock, buildings, and fixtures, and his books should be so arranged as to show the amount of these provisions. No merchant can be said to be managing his business properly unless adequate provision is made for depreciation.

The system of accounts outlined in this bulletin has been devised to meet the requirements of retail merchants. The aim has been to devise the least involved system which will give the information essential to successful management. The best system of accounts for any business is one which furnishes the information required with the least effort.

The value derived from an adequate system of accounts is obvious. The greatest value is that of making comparisons and analyzing differences. But before any fruitful comparison can be made between figures of different periods or between figures of different stores it is absolutely necessary that the systems be uniform. With a uniform system of accounts in use, differences in items reflect differences in conditions, while without a uniform classification, differences in items may reflect only differences in accounting classification.

In order to maintain the simplicity of the system no departmentalization of the accounts is provided for, but any concern operating distinct departments can readily adjust the system to show the results obtained in each department.

A merchant in order to price his goods properly must know his overhead expenses. With a proper arrangement of his accounts the percentage of overhead may be readily obtained. Goods not priced high enough to cover this percentage are actually sold at a loss. The most convenient way of arriving at the proper percentage to add to the first cost of goods for overhead is to use the average ratio of operating expenses to net sales covering a past period. For instance, if a merchant's annual sales for the last fiscal year were $25,000 and the expense of conducting his business was $5,000, his overhead was 20 per cent. By adding the desired percentage of profit on sales to this overhead percentage and deducting from 100 gives the percentage of invoice cost to selling price. The invoice cost of an article divided by this percentage gives the selling price.

The rapidity of the turnover is a very important element in conducting a retail business. It is obvious that an increase in turnover goes hand in hand with an increase in profit. A slow turnover may be due to poorly selected stock, to overstocking, or to an inefficient selling organization. No effort should be spared to increase the turnover to its maximum. To ascertain the turnover divide the cost of goods sold during the year by the cost of the average stock carried.

Books of Account and Statements.

To operate the system of accounts here outlined requires but four books of account, namely, journal, general cash book, invoice book, and ledger. Sales tickets and credit tickets are used for recording sales and sales returns.

From these books certain statements, particularly a monthly summary of business, a profit and loss statement, and a balance sheet,

MONTHLY SUMMARY OF BUSINESS, 1916.

	Net Sales.			Buying expense.		Selling expense.			Delivery expense.		General expense.							Total Expense.	Per cent of Net Sales.
	Credit.	Cash.	Total.	Salaries and Wages of Buying Force.	Miscellaneous Buying Expense.	Salaries and Wages of Sales Force.	Advertising.	Miscellaneous Selling Expense.	Salaries and Wages of Delivery Force.	Miscellaneous Delivery Expense.	Management and Office Salaries.	Office Supplies and Expense.	Insurance on Stock and Store Equipment.	Taxes on Stock and Store Equipment.	Losses from Bad Debts.	Miscellaneous General Expense.	Rent.		
Jan.	$3,356.31	$1,301.65	$4,657.96	$25.00	$14.00	$177.33	$30.00	$3.75	$102.67	$8.08	$269.00	$22.03	$1.61	$2.50	$33.56	$26.79	$71.25	$787.57	16.9
Feb.																			
Mar.																			
Apr.																			
May.																			
June.																			
July.																			
Aug.																			
Sept.																			
Oct.																			
Nov.																			
Dec.																			
Total,																			
Per cent of Net Sales.																			

FORM A.

should be prepared at definite periods in order to present the results in comprehensive form.

The ordinary two-column journal can be used. The opening entry is an inventory of the assets and liabilities.

The totals of the charge sales as shown by the charge tickets should be entered into the journal, debiting accounts receivable, and crediting sales. The totals of the credit tickets are also entered in the journal, debiting sales with returns and sales allowances with price concessions and crediting accounts receivable.

Transactions which do not go through either the cash book or invoice book should also be journalized. These entries comprise such items as notes receivable and payable, allowances, or corrections of purchase invoice after entry in the invoice book, the various adjusting entries at the end of the month, and the closing entries at the end of the fiscal period.

Journal entries affecting trade customers' and trade creditors' accounts will also have to be posted respectively to accounts receivable account and accounts payable account.

General Cash Book.

This book is for recording all cash transactions. The left hand, or debit, side is for recording receipts, and columns should be headed as follows, in the order named: Date, name of account, description, ledger folio or LF, collections on accounts receiveable, cash sales, and general accounts. The right hand, or credit, side is for recording payments, and these columns should be headed: Date, name of account, description, check No., ledger folio or LF, discount on purchases, payments on account payable, and general accounts.

The total cash receipts of each day should be deposited daily in bank, and all payments should be made by check. The total of cash sales for the month should be checked against the total of cash sales tickets, and is then posted to the credit of "Sales," that of the "Collections on Accounts Receivable" to the credit of "Accounts Receivable Account," and that of "Payments on Accounts Payable" to the debit of "Accounts Payable Account." The total of the discount on purchases column is also posted to the debit of accounts payable.

All payments for expense items other than petty cash should be entered on the cash book as made and posted therefrom to the proper accounts. At the end of the month all expense bills for the month should be paid, so as to insure the expense being charged in the proper month.

Petty cash disbursements, such as car tickets, telegrams, and such minor items for which it is not expedient to draw checks, should be handled as follows:

A check should be drawn for an amount sufficient to cover petty disbursements for a definite period. At the end of the period the cashier should prepare his petty cash statement, which should be supported by vouchers, and a check drawn for the exact amount of the statement, thereby restoring the petty cash fund to the original amount. This check should be entered in the cash book in the regular way, charging the various expense accounts as shown by the petty cash statement.

The balance of the general cash book at all times should check with the balance as shown by the check book plus the amount advanced for petty cash.

In the check book keep checks and deposits footed separately. When the bank book is balanced, check up the bank list, then rearrange the checks in numerical order, and check with the stubs. If any checks are outstanding, note them on the stub and deduct from total of checks drawn; the check book balance will then agree with the bank book balance.

Invoice Book.

This book contains the record of the invoices or purchases of merchandise only, and should carry the following headings: Date of entry, date of invoice, number of invoice, from whom purchased, address, ledger folio or LF, and amount of invoice.

The postings are made direct from this book into the purchase ledger and the total at the end of the month carried to the debit of merchandise purchases and to the credit of accounts payable.

Where the business is departmentalized a more elaborate form of invoice book should be used, giving departmental subdivisions of purchases.

The use of sales and credit tickets for recording sales and sales returns has become almost universal.

A sales ticket must be made out for every sale and the daily total of these gives the sales for the day. The cash sales tickets are checked against the cash received and the charge tickets go to the bookkeeper. Credit tickets must be made out for credits to customers, and these likewise go to the bookkeeper.

Ledger.

The accounts in the ledger should be arranged in the following order:

1. General accounts.
2. Accounts with trade creditors,
3. Accounts with trade debtors,

allotting to each class such space in the ledger as may be necessary.

The general accounts should be arranged in logical order. (See arrangement of accounts.)

Accounts with trade creditors and with trade debtors should be arranged alphabetically, using preferably a loose leaf ledger.

Where the volume of business permits, it is advisable to use three ledgers, a general ledger, a purchase ledger, and a sales ledger, keeping controlling accounts of the purchase ledger and the sales ledger in the general ledger.

Where only one ledger is used it should be divided into three sections, corresponding with the above.

The balances of the purchase ledger and of the sales ledger, or of these sections of the ledger if only one book is used, must agree with the balances of the accounts payable account and of the accounts receivable account. The advantage of these controlling accounts is that the aggregate of accounts payable and of accounts receivable can be had at any time without listing the balances of the individual accounts.

Customers are charged with goods purchased direct from the charge tickets. These tickets are first listed, then turned over to the bookkeeper, who posts them to the debit of the proper accounts, listing the amounts he posts, then comparing his total with that of the first list, which must agree. Credit entries for allowances, reductions, cash discounts, or returned goods are made from credit tickets in exactly the same manner.

Posting to the ledger, therefore, must come from one of four sources—the cash book, the journal, the invoice book, or the sales and credit tickets.

Monthly Summary of Business.

This record, Form A, will be found very useful for monthly and yearly comparisons of expenses and ratios. It is arranged with columns for sales, both cash and credit and total, and for the various expenses of the business. The figures on this statement are taken from the ledger.

Each month the figures for that month should be added to the previous total, so that the record will give the totals from the first of the year to date as well as the monthly totals.

(To be continued.)

A Real Merchant

He was a real merchant, or this incident would have had a different ending.

A woman called at the yard he was managing and informed him that she wanted to have a hardwood floor laid in her dining-room, parlor, and bathroom, but that she had heard that oak flooring was worth from $65 to $75 a thousand feet, and, if that was true, she wasn't going to pay any such price.

The yard manager didn't say a word about the price of his flooring. He got her attention off of that point quickly by asking her for the dimensions of the rooms. He found the parlor was about 14 x 16 feet, the dining-room 12 x 14, and the bathroom 6 x 8 feet, and figured that about 550 feet of flooring would do the work.

"Madam," he said, "I can furnish you with a fine grade of oak flooring, enough to lay those three floors, for $35."

"You can!" the customer almost shouted. "Why, that's a whole lot less than I thought it would cost. Is the flooring all right?"

"Yes, it is all right. Come out here in our hardwood room and look at it."

He took her out, showed her the flooring, showed her a specimen about a yard square he had for exhibition purposes, which was nicely finished and polished, glistening brightly.

He booked the order right there, arranged to select a carpenter who was an expert at laying oak flooring, and sent the woman away feeling that she had saved a lot of money.

And he got $65 per thousand for the flooring he sold her.—Retail Lumberman.

How To File a Hand Saw

"How to File a Hand Saw," is the title of an exceptionally interesting booklet recently issued by the Simonds Mfg. Company, Fitchburg, Mass., and the Simonds Canada Saw Company, Limited, Montreal, P.Q. The information in the book is set forth briefly and clearly in five lessons. The first lesson is entitled "What is a Hand Saw?" and gives one a practical reply to this important question. The succeeding lessons are as follows:—"How do Hand Saws Cut?" "What is the Way to File a Saw?" "What Further Care Should be Given?" What are the Tests of a Good Hand Saw?" Under these headings very full information is given and it is put in such a manner that an amateur can easily understand it. Good illustrations are also included showing exactly what is of importance in connection with each lesson. Any further information desired will be gladly furnished by the company upon application.

Retailers of U. S. Organize Association

Many Cities Represented in National Body Formed at Chicago Congress—Ambitious Declaration of Principles Adopted

One of the most important steps in connection with the organization of lumber associations in the United States took place on September 11th, at Chicago, when the National Retail Lumber Dealers' Association was formed at a special congress held in that city. The organization, as established at the meeting, is composed of representative lumber dealers from fifteen of the principal cities in the United States.

The meeting was called by Edward Hines, president of the Edward Hines Lumber Company, Chicago, and there were in attendance ninety of the most prominent retail dealers in the country. The cities represented included Buffalo, Detroit, Green Bay (Wis.), Milwaukee, Pittsburgh, St. Paul, Cincinnati, Cleveland, Kansas City, Louisville, Minneapolis, St. Louis, Dayton, and Chicago. Fred J. Robinson, of Detroit, was elected president, Julius Seidel of St. Louis first vice-president, and E. A. Diebold of Pittsburgh second vice-president. Fifteen directors, one from each city represented, were also elected. The association will employ a secretary to handle the promotion and education work that is contemplated. It is proposed to organize branches of the association in every city that has a population of over 50,000.

Among the subjects discussed at the organization meeting were: The improvement of trade ethics, protection of the interests of retail lumber dealers, the exploitation of the use of wood for the purposes for which it is best suited, and the protection of the consuming public against the sale to it of grades inferior to those ordered. One of the first steps of the association was to go on record in favor of the trade-marking of all lumber products, so as to show in what mill they are produced, and the marking of the grade to insure the consumer that he is getting exactly what he asks for. The association will co-operate with the National Wholesale Lumber Dealers' Association with a view to promoting the interests of the lumber industry as a whole.

Declaration of Business Ethics

The declaration of business ethics and business methods agreed upon by the National Retail Lumber Dealers' Association covers a wide range of subjects, of the utmost importance, and while it is drawn up with special reference to conditions in the United States, nearly everything in it has a special significance to the trade in Canada, so that we expect it will be interesting to all our retail readers. The declaration is as follows:—

Sec. 1. The retail yard lumber dealers having made investments in necessary equipment and stock for the purpose of engaging in the business of supplying the needs of a particular community with lumber, the association believes they should be protected in their legitimate business of assembling lumber of various kinds and retailing the same to the public, and that the manufacturer should recognize retail lumber dealers as the proper agents for the distribution of his manufactured product.

This association, therefore, earnestly protests against the retail yard lumber dealers being compelled to compete with those manufacturers and wholesalers whose lumber they purchase, and declare that it is the duty of retail yard lumber dealers to take all lawful measures to ascertain the names of the manufacturers and wholesalers of lumber who solicit or accept orders which legitimately belong to the retail lumber dealers and who injure the retail lumber business by selling, directly or indirectly, to the contracting and consuming trade.

Dishonest Practices

Sec. 2. Evils now exist in the lumber industry arising from the dishonest practice of mixing grades, giving short measure or misrepresenting the character and quality of lumber, which is chiefly done by wholesalers and in a lesser degree by manufacturers. The association urges all retail yard lumber dealers to condemn such practices and to take all lawful steps to ascertain who make it a practice to mix grades, give short measure or misrepresent the character and quality of the lumber they offer for sale, in order that the retail lumber yard dealers may protect themselves and protect the public whom they serve against such dishonest practices.

The membership of the association of lumber manufacturers affiliated with the National Lumber Manufacturers' Association is made up of manufacturers of various kinds of woods, who stand for uniform grades, for full and honest count, for fair and equitable adjustment of disputes, and the highest business ethics, and who guarantee, so far as possible, the character of the lumber they sell; and the members of this association declare it to be their experience that more satisfactory relations will be brought about by confining purchases to such manufacturers, rather than dealing with manufacturers and wholesalers who are guilty of the foregoing dishonest practices.

Sec. 3. This association heartily endorses and will support the efforts of all associations of lumber manufacturers which are devising ways and means for the branding of the product of their members and thereby assuring, within a reasonable variation, the integrity of the grade, as well as making possible the identification of the stock, with consequent protection to the retail dealer and the consuming public.

Trade Mark

Sec. 4. This association recommends that a national trade-mark be adopted for the use of the members of the association.

Advertising Lumber

Sec. 5. The retail lumber dealers recognize that their interest lies in the sale of lumber and they are directly benefited by the advertising campaigns which are being conducted by the National Lumber Manufacturers' Association, and by the several associations of lumber manufacturers affiliated with the National Lumber Manufacturers' Association, for the promotion of the use of lumber. This association, therefore, most heartily endorses all efforts directed to the promotion of the use of lumber and commends those manufacturers who are aiding such promotion by the financial support which they are giving to the National Lumber Manufacturers' Association.

This association approves the efforts of the National Lumber Manufacturers' Association in advertising the good qualities of lumber and believes that such work should be supplemented by aggressive local campaigns in the various cities whereby the sale of lumber may be promoted and its good and useful qualities fully expounded to the public and its use increased.

This association recommends to the manufacturers of lumber that they place upon their office stationery and advertising matter the information that they are members of or affiliated with the National Lumber Manufacturers' Association; and recommends that the members of the National Retail Lumber Dealers' Association place upon their office stationery and advertising matter the information that they are members of the National Retail Lumber Dealers' Association.

Restrictions in the Use of Lumber

Sec. 6. This association pledges its support to the members of the association of lumber manufacturers to do what it consistently and legally can to aid them in combating all unjust and illegal efforts which may be made to restrict unreasonably the use of lumber in any district or community.

Shipments from Retail Yards

Sec. 7. Believing strongly in ethical business methods in fair and legitimate competition, this association declares it to be its judgment that yard lumber dealers who ship materials to contractors or consumers located outside of their own territory are not pursuing ethical business methods and are not engaged in fair and legitimate competition.

Resolutions

Whereas, great damage to the lumber industry has resulted by reason of the shipment from manufacturing points of material either poorly manufactured or of inferior wood or not up to specification or grade; and

Whereas, such business methods have greatly injured the reputation of lumber as a building material and have caused much loss of business by the consequent use of substitutes; and

Whereas, the members of this body, standing close to the consumer in the lumber trade, are determined upon giving to the consumer at all times material fully up to specifications; therefore be it

Resolved, that we herewith approve the efforts now being made by the various associations of lumber manufacturers to improve and elevate the lumber business by more careful manufacture and grading and that we in particular commend the movement hereafter to brand all stock showing its kind and grade; and be it further

Resolved, that we condemn as subversive of the best interests of the public and the trade the practice which has grown up of the shipping of unsold cars in transit, resulting as it does in the tying up at all times of a large amount of rolling stock and the continual forcing upon the market and the consumer of great quantities of material of inferior quality and manufacture and in the shipping of cars in transit the original shipper and point of shipment being generally concealed, thus making it impossible for the buyer to know what class of stock he is getting or by whom manufactured; and be it further

Resolved, that the true interest of the public and the consumer will be best subserved by refusal hereafter to purchase any material so offreed upon cars in transit.

The One Price Idea in Retailing

A Plan That Can Be Worked Out With Benefit to Merchant and Customer

The manager of a large retail company, who put into practice a "one-price" idea and found it a great success, refers to it in a letter to his customers and prospective customers in the following manner:

"We have a special service department in our general office, made up of building experts, architects, and draughtsmen, whose duty it is to design buildings especially adapted for use in our territory, with material lists using the best grades in construction for the purpose which cost the user the least money.

"If our customers cannot find in our plan book just what they require but can give us a suggestion of their ideas, our service department will plan until our customers get just what they wish. If a customer is thinking of building and sees a picture anywhere of a home that suits him, but which does not appear in our plan book, or if the arrangement or size in the building he has picked out is not just what he wants, our service department will work out this idea for him in detail and submit it.

"Many times you see a home that you think would be just what you would like to have, yet it looks so attractive that you feel the cost would be more than you would care to put into a building. This may not prove true if you avail yourself of the service our company is able to give you, which is free of charge and for you to use for this purpose.

"We have better farming experts in our organization who gladly work out problems for the arrangement and design of farm buildings. We want you to come to us for honest counsel as to the best materials to be used for such purposes.

"To illustrate my meaning more clearly I will ask, 'If you were to buy a diamond, would you not go to a man in whom you had implicit confidence both as to his honesty and ability to judge diamond quality and value? Yet when it comes to buying lumber most people come to a lumber yard with grade marks on their bills—a business that we know requires just as expert judges to determine grades as the diamond business. This may seem a pretty broad statement, but I think I can prove it to you.

"There are three sources of lumber supply for our district.

"The spread in price from the lowest to the highest is something like $41! Each grade is a different price. Each grade is good for a certain purpose. They may look alike, but one will be worth nearly twice as much as another. Surely great care must be taken by the BUYER!

"A manufacturer of lumber in one district cuts four or more different kinds of trees into merchantable lumber, from which expert lumber graders find twenty-one or more different grades of lumber.

"In another district a manufacturer cuts five or more different kinds of trees, from which expert graders find twenty-four or more grades.

"In a third district a manufacturer cuts four different kinds of trees, from which expert graders find eighteen grades of lumber.

"A grade of lumber is determined by experts in value according to the use to which it is to be put. The expert grader must have expert knowledge of the uses of different kinds of wood, the different grades of wood, and every known use of wood, in order to determine the value of the different grades.

"The commercial difference in value between the lowest and highest of these twenty-one grades manufactured to-day is $41 per thousand. The difference in value between the lowest and highest of the twenty-four grades to-day is $38, and the difference in value between the lowest and highest of the eighteen grades to-day is $35.

"This means that we have 63 grades of lumber from which to supply our various yards, with a range in value of over $40 from the highest to the lowest.

"Let me go a little further in this line of thought. I said that lumber grades were determined by expert graders in value according to the use to which the lumber is to be put. The product of different kinds of trees using the same wording for grading cannot be commercially used for the same purpose because of the peculiar qualities of the various woods. This will give you an idea as to the complexity of grades. Think of the difference in value of $41 per thousand between the high and low grades and the different uses to which they can be put and the different grades from the different districts that can be used for the same purpose. Am I not correct when I say that in buying lumber you should be just as particular where you buy it as you would if you were buying a diamond or some other article where expert judgment was needed to determine actual values? This is another reason why our company adopted as a policy 'One Right Price to Everybody,' and the best material for a given purpose for the least money.

"I found in my experience when traveling that different communities called for different materials to be used for exactly the same purpose. This proves that no one in particular told the user what was the best material for his purpose, and that custom only prevailed. They are using the same material to-day, and the reason they are using it to-day is simply because the men who are doing the building in each of these cities to-day served as an apprentice under the carpenter and contractor who was doing it this way twenty years ago. He in turn served his apprenticeship under the carpenter who did the same thing twenty years before, and so on.

"Old-time lumbermen themselves did not teach the user the best material to use for the different purposes for the least money. They worked along the lines of least resistance. Our local managers are taught to be salesmen, and not order-takers, and to sell our customers the right material for their different uses. When they do this conscientiously and honestly, our customers come to us for advice, and profit by doing so.

"No matter what price is quoted, there is always some grade that can be supplied that will fit the price made. The customer doesn't buy what he really intended to buy. He invariably loses by dickering.

"Users of lumber have been in the habit of getting a lumber bill made out for a prospective building. Usually this is done without plans. It is impossibe for any man to draw up an accurate material list without plans. The user then goes from dealer to dealer to get this bill 'figured.' He only knows the comparative value by prices given him in a lump sum by these different dealers. I think I have made plain how one-sided this kind of a proposition is, since there are so many different sources of supply, with so many kinds of trees, with an endless number of grades requiring experts to distinguish them apart and with so great a difference in value between the grades. Why cannot a dealer sell a bill of lumber for the price you wish to pay for it and take his assortment of grades from his different sources of supply that will fill the bill as sold by him at a handsome profit?"

A Severe Report Upon U. S. Lumber Industry

The United States Forest Service has completed a summary report of its study of the lumber industry, which, according to advance information contains a severe but constructive criticism of lumbermen and their methods. The report, it is understood, takes the position that the lumbermen generally have not known how to run their own business. It shows that the lumbermen have been operating in a haphazard way for years. Not knowing what it cost them to manufacture lumber, it is said, they did not know at what price to sell it. The result has been, according to authorities, that there has been little lumber sold in the United States since 1907 at a profit.

It is shown in the report, according to people qualified to state, that there have been some exceptions to the general rule, particularly in the case of the cypress manufacturers and the Northern pine lumbermen, more especially the former. By reason of organization, scientific methods and extensive advertising, it is said to be shown in the report, they have demonstrated that they know more about their business than other lumbermen generally know about their respective lines of business. Cypress and Northern pine have been selling at prices sufficient to cover expenses and provide a profit, it is said by government experts.

The price of stumpage has gone so high that it is said to be demonstrated in the report that there is little chance for the business of many lumber concerns to get on a profitable basis.

New Invention May Save Shingle Industry

According to information in the hands of the West Coast Lumbermen's Association, an Iowa pharmacist, after seventeen months experimenting, has produced a liquid which makes wooden shingles absolutely fireproof. In a test of the new fireproofing liquid, made at the University of Iowa by the inventor, a block of wood one-half inch thick was saturated with the fireproofing and then placed in running water for twenty-four hours. After that it was thoroughly dried again and held for one hour over a Bunsen burner, which had a temperature of between 700 and 1,000 degrees Fahrenheit, that being a much greater heat, it is said, than is developed in a conflagration. The wood was not burned and only charred very slightly at the point of the flame. The new compound is reported to be sufficiently low in cost to make it practical in connection with shingle manufacture, and when a shingle is saturated the moisture drys out, leaving an insoluble mineral fireproofing substance in the fibre cells of the wood, which cannot be washed out with water and is said absolutely to prevent combustion.

Vessels Not Completed But Already Chartered

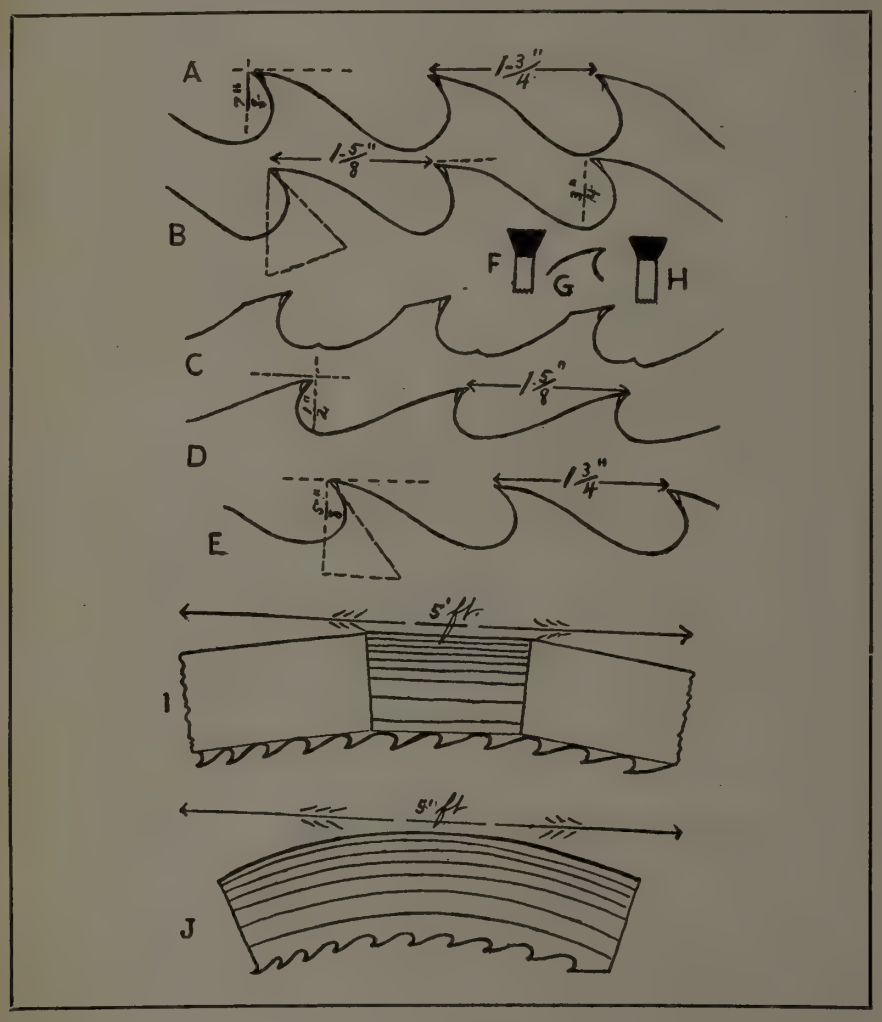
The great scarcity of tonnage on the Pacific Coast is clearly illustrated by the fact that the wooden auxiliary schooners now under construction at the Wallace ship yards at North Vancouver, for H. W. Brown and Company, of Vancouver, have already been chartered to carry lumber from Vancouver to Australia. One schooner has been chartered to carry lumber from Hastings mill to Sydney at 120s, loading in March or April. Another has been chartered to carry lumber to Sydney at 120s or to Melbourne at 130s, loading in December or January.

The Band Mill and Saw

When the bandmill and carriage track are in correct alignment the saw should be carefully inspected to see that everything is in good shape. Tension in the saw is supposed to be of the greatest importance, but in fifteen years' experience in filing saws for fast mills that cut both hard and soft woods tension is shown to be only one of the things that must be looked after carefully. There are as many ways of running tension as there are filers, but the following method will allow the bandsaw to stand up to the greatest rate of feed and at the same time prevent cracks.

Extreme tension is as bad as low tension and to find out how deep to go in the case of 12-inch saws see that the saw is perfectly levelled and tension from edge with a 45-foot circle gauge, making the curve fit snugly when the gauge is held square with the saw on pressing it down. Then roll or stretch the entire saw lightly on both edges to release the strain on the extreme edges as this treatment will push back the strain line an inch and prevent cracking.

Then run the saw for a few days until either the centre, quarters or edges develop bright lines or spots from "riding." These spots can be easily detected by holding the saw at such an angle as to allow the light to shine directly upon the blade. If riding develops after putting in tension with a 45-foot circle gauge go deeper with either a 40 or 36-foot circle gauge and if bright spots still appear after running use a 32-circle gauge. If bright spots still develop more than 1 inch from the edges the band wheels need refacing or grinding perfectly flat. When the bright lines disappear from the centre and quarters and only show 1 inch from the edges the correct tension for the mill has been secured.



Badly worn wheels require more tension than flat ones. In fact, the centre or quarters of a saw should never come in contact with the face of the bandwheels, for when the saw is fitted by the method recommended the saw is air cushioned and sustains the strain only on the edges, making it impossible for the saw to snake or cut bad lumber.

The shape of the saw teeth and the swage have a great deal to do with the proper running of the saw. The sawdust must be expelled when it is cut out of the timber and to do this the gullets must be as round as possible. Sketch A shows a very successfully shaped saw tooth for hardwoods and mixed woods. B is similar to A but with only 1⅝-inch space, which is especially good for all species of pine. C shows a tooth ruined by the filer grinding back into the swaged-point harder than grinding down on the back of the tooth. D is an ideal tooth for the resaw. E will give especially good service when the resaw is sawing oak. F is a good pine swage point. G shows a type of side cutter. H is the best swage point for hardwood. I illustrates a method of crowning a saw back that should be avoided. J shows the proper manner of crowning a band saw. Avoid extreme crown in the saw, as just enough is needed to overcome the slight stretch of the cutting edge. For a 12-inch 14 gauge bandsaw about 1/32-inch for every five feet is enough for most mills.—R. C. Leibe, in The American Lumberman.

First Aid Principles

Compiled by Dr. W. N. Lipscomb, Field Bepresentative, American Red Cross

1. The best way to treat any injury is to prevent it.
2. The best test of any man is his ability to meet any emergency—remember this in accident cases.
3. First aid work merely means applied common-sense based on a little extra knowledge.
4. The fate of an injured man depends upon the individual into whose hands he first falls.
5. The man afraid to apply first aid, knowing how, is a coward; the man who calls it "hot air" is dangerously ignorant; the man who does the right thing at the right time is the real man.
6. The blind rush to a hospital without first attempting relief is insanity—patients have died on the way from loss of blood and shock.
7. Seventy-eight out of every hundred cases of infection or "blood-poisoning" begin in the hand—remember this when you get an injury there.
8. Do not drill a black finger-nail with a knife—it may cause a whitlow or bone-felon.
9. The little wounds are dangerous—often more so than the large ones—give them immediate and careful attention.
10. Do not "wash out" any wound with water—it merely drives the "germs" deeper in.
11. A man spent 368 days in a hospital in the State of Washington because he let another man pick a splinter out of his hand with a pocket-knife—will you be the next to contract such a case of general "blood-poisoning"?
12. If you have nothing surgically clean to put on a wound, leave it exposed to the open air—it is safer.
13. Keep your hands, clothes and handkerchiefs out of a wound—it is dangerous to so tamper with them.
14. Keep cotton out of wounds and burns—do not force a surgeon to "pick the goose alive."
15. A man's eye is a delicate piece of machinery—keep sharp tools out and avoid the dirty ones.
16. In treating fractures (broken bones) anywhere, first cut away clothing—there is often a wound present.
17. Many a simple fracture has become compound from hasty or rough handling; a man who has a fracture is likely to have an open wound through the protruding of sharp end of bone if mishandled.
18. Properly splint or immobilize a patient's limb when broken, before moving him. It may save many months in the hospital and a possible bad result.
19. Never move a man with a broken limb before you see that it is placed in well padded and comfortable splints.
20. If in doubt whether break exists anywhere, fix as such—this treatment cannot do harm; it may help greatly.
21. Prevent a man from walking on a sprained ankle—one or more bones in the foot may be broken.
22. Elevating injured arms and legs in case of accident means increased comfort for the patient, especially in even of crushed injuries.
23. The coat makes a good sling—hold injured arm horizontally across chest—fold coat over arm and secure the corner near the neck with a pin or nail. Also pin behind to steady arm against shoulder.
24. In making an emergency stretcher, first try it out with an uninjured patient—it may prevent serious consequences.
25. Walk slowly with patient feet foremost on a stretcher—why needlessly shake him up.
26. In applying a tourniquet or "twister" be sure to loosen gently about every twenty minutes—this is an absolute rule for comfort and safety.
27. The tourniquet is "a good servant, but a bad master"—be sure that you apply it correctly, and use something broad, not wire or rope.
28. Keep an injured man's head low, loosen clothing, look for external injuries, keep him warm, but yourself cool, handle as little and as gently as possible.
29. Lowering a patient's head in a case of fainting is the first and main essential in treatment.
30. To deal with an epileptic fit—prevent person from falling, place a stick or handkerchief between teeth, then observe "watchful waiting."

Oak Flooring and Floor Laying Troubles

By W. L. Claffey*

Oak flooring troubles originate from many causes. Oak flooring is made in a scientific way, and the different processes from the rough oak lumber to the finished flooring are subjected to the most careful inspection and scientific tests. The object of this article is to cite actual cases that have come under our observation through an expert inspector whose sole duty is to investigate complaints on oak flooring. This inspector is employed by manufacturers, and has qualified as an expert on oak flooring.

Not long ago he was called upon to examine an oak floor that had bad crevices every eight inches. He went to the cellar and found that the sub-floor ran parallel to the oak flooring. The boards in the sub-floor were eight inches in width. The sub-floor shrank, as most sub-floors do, with the result that it made the crevices appear in the oak flooring. The floor layer that laid the floors remarked that he never laid oak floors before, and thought that he was laying them the proper way. The contractor was forced to take up the oak floors at quite an expense, and new floors were laid the proper way, or at right angles to the sub-floor.

Oak floors were laid in a large apartment building while the doors and windows were not yet in place. The flooring was in bundles for about two weeks spread about the different rooms, and rain and snow drifted in on the bundles. The result was that many pieces absorbed moisture near the ends, and when the floors were laid, bad looking crevices appeared. No attempt was made on the part of the contractors or owners to heat the building. The time was in December. The owner claimed that he was unable to get the heating system installed, and did not know that it made much difference whether a building should be heated or not for oak floor laying. The superintendent of the job, representing the architect, made no report to the architect on this condition. Some of the floors had to be torn up and replaced with new floors at quite an expense to the owner.

Floor Layer Used Sledge Hammer.

Another case was brought to light where a floor layer used a heavy sledge hammer in driving up pieces. He drove the pieces up so tight that the floor had the appearance of waves. The superintendent of the job informed the floor layer that he was driving it too tight at the time, but the warning was not heeded. The result was that the whole floor had to be torn up and replaced.

A few months ago a beautiful oak floor was badly damaged by improper nailing. The nails were driven at an angle of about 90 degrees, which made it almost impossible to drive the piece up snug. Many bad crevices appeared. When the owner was advised that nails should be driven at an angle of about 50 degrees and when it was demonstrated to him in some of the rooms that had not been laid how the strips drove up after nailing at this angle, he compelled the contractor to tear up the floors in three rooms. They were replaced at the expense of the contractor. The contractor, we found out later, was a novice at the floor-laying game—in fact, it was his first venture.

Oak floors were being laid in another case, and the floor layer complained to the owner that the pieces would not fit up snug. Our inspector went to the job and fonud that the flooring layer was not driving the nails below the tongue. Most of these nails extended one-fourth inch above the tongue, and the result was that it held the next piece out. As soon as the nails were countersunk or driven down further the pieces fitted up perfectly. The case brought out the fact that this was about the second job the floor layer ever had. The owner now is suing the contractor for new floors.

Ballroom Had to Be Relaid.

About ten months ago a ballroom was laid with oak flooring amid the worst possible conditions. The owner issued instructions that the floor should be finished by Christmas, in order to have a ball that was widely advertised. The contractor, who was an experienced flooring man, informed the owner that he would not under any circumstances lay the flooring, owing to the plaster being green and damp, together with the sub-floor covered with wet cement. The owner then took the matter into his own hands, and cancelled the flooring contract with this contractor and engaged another one and had the floors laid, with the result that in two weeks' time the floor started to buckle up, making it unfit for a dance floor. The owner then went back to the first contractor and gave him full authority to go ahead and make a good job, regardless of the time of opening up. The entire floor had to be torn up and replaced at an enormous expense to the owner.

Another case brought out the fact that oak flooring was laid even before the plaster work was started. Thin building paper was placed over the oak floors, and the plaster work was finished. In a very short time the oak flooring started to bulge up in revolt, caused by the moisture absorbed from the wet plaster. The eight floors in the house had to be torn up and replaced. In this particular case the architect was entirely to blame, as he issued instructions to the contractors to have the oak floors laid first and plaster work afterwards.

Last winter a beautiful oak floor was badly damaged in a large, expensive residence, chiefly caused by the dealer, who stored the oak flooring in an open shed, exposed to the elements. All the ends absorbed moisture fully one-sixteenth of an inch. When this flooring was taken to the jobs is naturally left large crevices, starting at the ends down to about twelve inches. When all the facts of the case were presented to the architect, he placed the blame upon the dealer for the improper housing of oak flooring.

Floor layers, before they start on an oak flooring laying job should invariably make a rule to do some examining work before proceeding. First, examine the condition of the plaster and the sub-floor, to ascertain if they are thoroughly dry. Second, examine the oak flooring to find out if it has absorbed any moisture at the lumber yard or in transit. Third, if in winter, see that the temperature of the rooms is about 70 degrees, and that they have been that warm for a week or ten days with the oak flooring in bundles in the different rooms. If this is done it will eliminate a great many of the flooring troubles and save unnecessary expenses.

* Secretary of the Oak Flooring Manufacturers' Association. Reproduced from the Southern Lumberman.

The Value of Lumber in Home Building

The modern system of merchandising building materials is to lay emphasis on what the materials will produce—the complete structure—instead of on the materials themselves. In selling material for specific purposes, it is, or should be, the purpose of the dealer to point out results rather than to lay stress on the quality of the material as it appears in the unfinished stage. In lumber—to which this article pertains—the dealer may tell the prospective buyer that a certain kind of material will make good interior finish, but to prove it he uses samples that have been finished to appear as they will when they are in place in the building. A number of associations of manufacturers have come to the aid of the dealer by furnishing free samples of their woods finished with various stains for the purpose of illustrating what the wood will look like when the building is completed. This is what interests the builder more than anything else. He is buying a home—not the material that will make a home. And for the average home, if not for the most pretentious mansion, wood is the most satisfactory material, for both out and inside.

The Ohio Association of Retail Lumber Dealers is promoting this idea by the circulation of a pamphlet written by a Cleveland lumberman, and the statements contained in this pamphlet should be made talking points by every dealer in building material, for lumber is the chief article in the stock of this class of merchants. Some of these points follow.

Wood is the most available material at all times and in all places. It is always ready, and can be secured upon a moment's notice, for a complete stock can be found in every community. Wooden structures can be moved, repaired, or rebuilt more easily and more cheaply than structures of any other material. It is easily worked with common tools. It is a non-conductor of heat and electricity, as compared with metal, and a non-conductor of moisture, as compared with ordinary concrete and brick. It has varied and beautiful figure which no other material will ever compete with, for furniture, house trimming, and general decorative purposes, and it is the cheapest material for home building on the market.

Perhaps one of the best arguments in favor of wood for home building is the fact that from time to time the color scheme of the home can be easily changed. Ideas and styles change, and wood homes can be easily changed to meet these requirements.

It has been argued that wood does not give the appearance nor the service demanded by those who desire permanency. The answer to that argument is found in the hundreds of wood homes built one or two hundred, or more, years ago, which, properly cared for, have withstood the ravages of time and are to-day among the best types of architectural beauty to be found in this country.

As a part of this argument it is claimed that homes of wood are invitations to fire destruction, and it is all based on the statement that wood will burn, while the other materials urged for home building will not. This is a hopeless argument when the effort is made to prove that wood homes are a fire menace. Statistics of the large cities, where the fire hazard is greatest, do not develop the fact that there is sufficient danger of loss by fire in frame dwellings to substantiate the statement, or to influence the home builder to the choice of other materials.

If statistics proved any such thing the fire insurance companies would have long ago taken cognizance of it. As it is, the insurance rates on detached homes of frame construction are as low as on structures of any other material similarly located. Interested parties have of late been working with city officials to limit the use of wood, and particularly the use of wood shingles, in the building of residences, but, though they have been successful in a number of instances, they have not been able to succeed through the presentation of competent evidence to support their cause. Even in business and factory buildings it is recognized that factory construction, properly cared for, is not inferior as a fire hazard, to construction of other materials.—Mississippi Valley Lumberman.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch. each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

BASSWOOD AND PINE WANTED.—No. 2 Common and Mill Cull Basswood, 1 in. cull pine, Winter cut preferred. Apply M. Brennen & Sons, Hamilton, Ont. 16-21

Wanted

200 cars Sawdust.
2,000 cords Hardwood or slabs.
Box 460, Canada Lumberman, Toronto, Ont. 19-19

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Lumber Wanted

We are in the market for a quantity of Birch, Soft Elm, Hard Maple and Basswood, dry stock, for immediate shipment. Will be pleased to receive full particulars as to quantity, grade, and lowest prices. Apply, The London Lumber Co., Ltd., London, Ont. 18-21

For Sale–Lumber

For Sale

Three carloads of 1 in. No. 2 and 3 Common Maple. The Bradley Company, Hamilton, Ont. 18-19

Cedar Ties

Wanted a buyer to contract for 10,000 No. 1 and 2 Cedar Ties, for next spring delivery. Box 447, Canada Lumberman, Toronto, Ont. 18-19

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO C. GOODFELLOW,
Montreal, Que.

For Sale

1 car 1 x 4 in. and wider, 37 in. long.
1 car 1 x 4 in. and wider, 31 in. long.
1 car 1 x 4 in. and wider, 22 and 25 in. long.

Dry Quartered White Oak, Clear 1 face 2 ends and 2 edges, 2 years old, nicely figured, Ohio stock. Write us for delivered prices.

PROBST LUMBER COMPANY,
18-21 Cincinnati, Ohio.

For Sale

We have the following stock for immediate delivery:—

50,000 ft. 3 x 6 Hardwood Hearts, mostly Maple.
25,000 ft. 4 x 4 Hardwood Hearts, mostly Maple.
200,000 ft. 1 in. Hardwood crating, principally Maple and Birch.
100,000 ft. 1 in. Birch, No. 2 Common and Better.

The Pedwell Hardwood Lumber Company,
18-t.f. Toronto, Ont.

For Sale–Machinery

FOR SALE

1—Wicks Gang.
1—Ideal Engine, 13 in. x 12 in.
1—Plain Engine, 16 in. x 24 in.
1—Plain Engine, 5 in. x 7 in.
1—Boiler, 72 in. x 16 in.
1—Boiler, 54 in. x 12 in.
2—Upright boilers.
1—Cookston water heater.
Several steam pumps.

CHAS. PEDWELL,
16-t.f. McVicar, Ont.

FOR SALE

We have the following second hand machines to offer, ask us about others not listed, if you are interested.

1 Egan 30 in. 2 drum sander.
1 McGregor Gourlay 30 in. 2 drum boss sander
1 Jackson Cochrane 36 in. 3 drum sander
1 Egan 42 in. 3 drum sander
1 Cowan 42 in. 3 drum sander
1 Cowan 48 in. 3 drum sander
1 C. M. C. 8 in. 4 side sticker
2 Ballantyne 12 in. 4 side stickers
1 Egan 36 in. single surfacer
1 Harper 26 in. single surfacer
1 Cowan No. 220 24 x 10 single surfacer
1 McGregor Gourlay QY 15 in. planer and matcher
1 McGregor Gourlay QY 9 in. planer and matcher
1 Jackson Cochrane 54 in. band resaw, 5 in. blade
1 Jackson Cochrane No. 165 rip saw

P. B. Yates Machine Co., Limited
Hamilton, Ont.
19-19

FOR SALE

1—American Wood Working Machinery Company Tennoning Machine.
1—Dennis Tilting Table, wood drill, capacity 36 inches.
1—No. 2 Gardiner Double Disc Grinder, with Press.
1—Pettongill Machinery Company Automobile Body Hammer.
1—American Wood Working Machinery Wood top 36 in. x 56 in. Rip Saw.
1—Badger State Machinery Company No. 5 Tilting Table, cut-off saw.
1—Brown-Boggs 30 in. Foot Power Sheet Metal Shear.
1—16 in. Porter Joining Planer.
1—Fay & Egan Company Surfacing Planer, 24 in. knives.
1—Fay & Egan Double Spindle Wood Shaper.
1—Boring and Mortising Machine.
Some of the above machinery has never had a belt, but others have been used about sixty days; all are in splendid condition.
1—Power Hack Saw.
Numerous Chucks and other Tools.
1—Bertram Waving and Undercutting Machine for 18 in. lathe, suitable for 18-pound H.E. or Shrapnel Shells.
1—Rochester High Power Riveting Hammer.

For prices and terms write to

Tate Electrics Limited
34 Dalhousie Street - TORONTO
19-19

For Sale
Woodworking Machinery

1 Jackson-Cochrane 54-in. Resaw; 1 Cowan 42-in. Sander; 1 Jackson-Cochrane 36-in. Sander; 1 Egan 36-in. single Surfacer; 1 McGregor-Gourlay 2-drum 30-in. Boss Sander; 1 Egan 30-in. 2-drum Sander; 1 C. M. C. 8-in. 4-side Sticker; 1 No. 108 Berlin 30-in. double Surfacer; 1 Ballantyne 12-in. Sticker.

P. B. YATES MACHINE CO., LIMITED,
17-19 Hamilton, Ont.

Wanted–Machinery

LOGGING SLEIGHS WANTED—20 or 25 sets of heavy logging sleighs, second hand preferred. J. & W. Duncan, 1801 Ontario Street East, Montreal. 19-19

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

POSITION WANTED by Saw Mill Foreman, can millwright or saw; understands handling men; twenty years' experience in portable and stationary sawmills. Married man. Apply Box 656, Haleybury, Ont. 19-19

MARRIED MAN, THIRTY YEARS OLD, ten years' experience in office work as Accountant, speaking both languages, desires to change, best of references. For particulars write to P. O. Box No. 69, Three Rivers, Que. 16-24

FIRST CLASS SAWMAKING FILER—Wants piece work contract. Shingle or Long lumber mill filing; will take Kendall gang or lath machines by thousand. Open for any proposition November 1st. Arrange now for next season. Apply Box 439, Canada Lumberman, Toronto, Ont. 19-19

OPEN FOR ENGAGEMENT from October the first. Qualification, a practical knowledge of grades in hard and soft wood lumber. Have acted in the capacity of Superintendent and Manager for large lumber operation with satisfaction. Satisfactory references on application. Box 287. Phone 146, Huntsville, Ont. 19-20

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

MAN WANTED for general lumber office work, must know French and English and knowledge of shorthand and typewriter, unless strictly sober need not apply. Trois Pistoles Pulp & Lumber Co., Riviere Trois Pistoles, P.Q. 19-19

A few good saw mill men wanted, good board and lodging, steady work until snow flies.

JOHN B. SMITH & SONS,
17-19 Callander, Ont.

Business Chances

Timber Tract and Mill

Valuable Timber Tract, British Columbia; nearly 10,900 acres; 60,000,000 feet of timber; on railroad. Local market for mine props. First class mill, 30,000 feet daily capacity. Very attractive proposition. George W. Grant, P. O. 1676, Calgary, Alta. 18-21

For Sale

Planing Mill and Lumber Yard in Town of Sudbury, Ont. Electric power, 40 h.p. motor, planer and matcher, surfacer, rip-saw and dado saws, sticker, circular resaw, cross-cut saw, turning lathe, mortiser, tenoner, borer, sander, sash and door clamp, shaving baler, automatic knife grinder, fan and blowing system, knives, etc. Mill now running, dressed lumber buildings, barn. No better location in town. Splendid rail facilities, and no doubt the best thriving town in Ontario.
Address, Box 457, Canada Lumberman, Toronto, Ont. 18-t.f.

Miscellaneous

Timber Limit For Sale

Thirty-six square mile limit, North Shore, License allows cutting all kinds of timber. Contains Hemlock, Birch, Spruce, Pine, Cedar Ties and Poles, Pulpwood and Hardwood. Railroad runs through part of berth. Cheap operation. Splendid opportunity for small mill. Apply Box 423, Canada Lumberman, Toronto, Ont. 13-t.f.

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont.

Tenders for Pulpwood and Pine Limit

Tenders will be received by the undersigned up to and including the 1st day of December next for the right to cut pulpwood and pine timber on a certain area situated on the Pic River and other territory adjacent thereto, in the District of Thunder Bay.

Tenderers shall state the amount per cord on pulpwood, and per thousand feet, board measure, on pine, that they are prepared to pay as a bonus in addition to dues of 40 cents per cord for spruce, and 20 cents per cord for other pulpwoods, and $2.00 per thousand feet, board measure for pine, or such other rates as may from time to time be fixed by the Lieutenant-Governor-in-Council, for the right to operate a pulp mill and a paper mill on or near the area referred to.

Such tenderers shall be required to erect a mill or mills on or near the territory and to manufacture the wood into pulp and paper in the Province of Ontario—the paper mill to be erected when directed by the Minister of Lands, Forests and Mines.

Parties making tender will be required to deposit with their tender a marked cheque, payable to the Honourable the Treasurer of the Province of Ontario, for twenty-five thousand dollars ($25,000), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said $25,000 will be applied on account of bonus dues as they accrue, but the regulation dues, as mentioned above, will require to be paid in the usual manner as returns of cutting of wood and timber are received.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.
Toronto, August 28th, 1916.

N.B.—No unauthorized publication of this notice will be paid for. 18-22

British Timber and the War

We have been visiting several of the Canadian and other camps where home-grown timber is being felled and converted, and must certainly say that the work, generally speaking, is being carried out in a practical and business-like manner. What surprised us most at every felling station was the quality of timber being dealt with, much of that at Windsor, the Scotch fir in particular, being quite as large and of equally good quality to any that has been sent from abroad, a fact that was freely commented on by several managers of woodlands with whom we were in company. Some very fine timber is being cut from the hillsides above Gwydyr Castle, in Wales, the larch especially being remarkably clean, of great length, and the timber first-class in quality. Whole plantations are here being swept away, and the visitor after the war will find a sadly changed landscape away amongst these Welsh hills that he loved so well. But the exigencies of the war know no bounds. In the New Forest the Portuguese tree-fellers, some 26 in number, are doing useful work, and the rapidity with which the trees are felled and prepared for use is simply marvellous. They seem to be an industrious lot, working from dawn to dark, and evidently subsisting on what the English tree-feller would consider as meagre fare.—Timber News.

Black Walnut Again Popular for Furniture

The demand for black walnut for the manufacture of gun stocks, billiard cues and other articles requiring this scarce product has stimulated a return to the demand for walnut for furniture.

The return of black walnut as a popular furniture material will arouse an enthusiastic interest at least on the part of those who are in middle life and who can recall the dignity and beauty of this durable forest wood cut and carved into bed, bureau, table and dresser.

Just why it lost out in popularity, except for scarcity, it is difficult to understand. Possessing a natural wood color, it is susceptible to treatment that easily develops a beauty unsurpassed even by mahogany, which demands artificial coloring in bringing out its rich effect. And as for oak, natural, or artificially colored, it cannot be compared with black walnut for beauty, durability or any other qualities that make a piece of furniture which satisfies.

Fortunately for the lovers of black walnut—and they are as numerous as those who have enjoyed the beauty of it in their homes—it is said the American supply is far from exhausted; and on the other hand, unfortunately there is such a demand for it in the manufacture of small arms as must unquestionably boost the price of it. Enough black walnut is consumed in making a single gun stock to make a couple of chair legs.

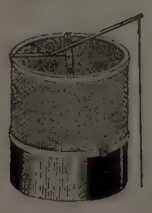
Many a strong, dignified, beautiful and substantial piece of walnut furniture has been consigned to the garret within the last twenty years, and often to make way for a piece of cheap mahogany that could not compare with it. Housewives will naturally begin to realize their error, now that black walnut is coming again into vogue and there will no doubt be a ransacking of garrets to haul out and revitalize what of it has not gone to the junk dealer and the second hand furniture man.

Tea that is all genuine leaf and produces the greatest quantity of flavoury satisfying infusion

"SALADA"

Send for samples and prices.
SALADA TEA CO. TORONTO

Spark Arresters



Wire Cloth for Refuse Burners

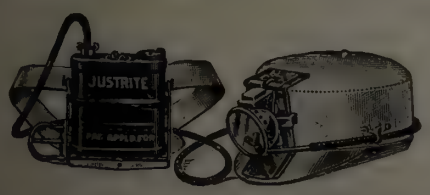
Our spark arrester is substantially built and will last for years. Don't wait until a fire has visited your property, equip your mill at once.

Prices on application

Canada Wire & Iron Goods Co. Limited
HAMILTON, ONT.

CANADIAN HEADQUARTERS FOR

GUNS, TRAPS Animal Bait, Nets, Canoes, Stoves, Shoe Packs, Flashlights, Compasses, Rubber Boots and Camp Supplies at lowest prices. 32 page catalog FREE.



We carry in stock the largest assortment of animal traps in Canada; this insures prompt shipment.

No. 44 Justrite Headlight gives a penetrating light and will not blow out. It burns ten hours on one change of carbide. It has a lens for diffused light for camp purposes and a special long distance lens for hunting. Weight 2½ lbs. PRICE COMPLETE WITH CAP DELIVERED TO YOU $4.50. In ordering give size of cap desired. Other Acetylene Lamps, Lanterns and Searchlights $1.00 to $8.50.

We buy more Raw Furs from the trapper for cash than any other fur firms in Canada—Our up to the minute raw fur quotations FREE.

RAW FURS

HALLAM'S TRAPPERS' GUIDE—96 pages, French or English, Mailed FREE.

John Hallam Limited

921 Hallam Building
TORONTO

Union Lumber Co.
Limited

1915 CUT—MILNET (Sellwood Jct.)

40,000 feet 2 x 10—10/16 Norway.
500,000 feet 1 x 4 and up 6/16 No. 1 Mill Cull.
1 Car ⅜ x 1½—4 ft.—No. 2 Red Pine Lath.
1 Car ⅜ x 1½—4 ft. —No. 3 Red Pine Lath.
5 Cars ⅜ x 1½—32 in. Mill Run White Pine Lath.
5 Cars ⅜ x 1½—32 in. Mill Run Red Pine Lath.

Red and White Pine Timbers

12 x 12—5/20 - 5/22 - 5/24 - 13/26 - 1/28 - 1/30 - 3/16.
10 x 12—10/26 - 6/24 - 5/28 - 3/20 - 3/16.
10 x 10—2/26.
8 x 10—1/24 - 2/22 - 5/26.

Write, wire or phone for prices.

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

They Saved 25% in Fuel and 50% in Repairs

SO WRITES Mr. Wm. H. Turner, secretary and treasurer of **The Easton Furniture Company**, of Easton, Md., after giving the "Morehead" system a thorough trial.

Until you are draining the condensation from your kilns and returning it—every drop—to the boilers at the **original temperature**—

—you are wasting heat units that **cost** you DOLLARS to produce.

STOP THAT WASTE!

Rejuvenate your entire steam plant by making the inexpensive "Morehead" system a part of it.

Save **fuel** by bringing the pure condensation directly back to the boilers HOT!

Save **repairs** by eliminating forever the necessity for the wasteful and constantly out-of-order steam pump. The simple, easily installed "Morehead" system will much more than pay for itself the first year of use.

Write for the proof to-day.

The "Morehead" book shows actual photographs of some interesting installations. Don't you want your copy at once?

Canadian Morehead Mfg. Company
WOODSTOCK, ONTARIO

Review of Current Trade Conditions

Ontario

The Ontario lumber trade has been fairly encouraging during the past fortnight. Apparently the retail trade throughout the country districts and also in the small towns is finding quite a fair demand, and as most of them have very small stocks on hand, the improvement is felt also by the wholesale trade and the manufacturers. One prominent wholesale firm report that they are getting plenty of orders—in fact, considerably more than they can handle, on account of the scarcity of cars and of labor for shipment at the mills. This firm, however, tell us that they are managing to make delivery on a fair number of orders, and that if retailers will exercise a moderate amount of patience they will be able to keep them fairly well stocked up. The actual demand at present, according to this firm and others from whom we have received reports, is just about normal for this time of year. One firm, in fact, advises us that it is receiving more orders than it would expect to receive in an ordinary year during the early fall months, and that apparently the war situation is not preventing farmers and others who require lumber from spending some of their money upon it. This is not an extraordinary situation, because it is simply a reflection of the fact that Ontario farmers have been doing very well of late years, particularly during the past year and a half to two years, and in the great majority of cases now have quite sufficient money to spend some of it upon buildings without feeling the pinch. "Every place we go to in the course of our visits to the trade they seem to be waiting for us now, and not sorry to have us call upon them. A short time ago we were not really very welcome in many of the places we called." This is the way another wholesale firm sums up the situation. Retailers, however, are not showing any inclination to lay in stocks by way of speculation. They have contracted the habit of buying simply what they know they can sell, and are continuing this practice at present. It is not unlikely, however, that by next spring, at the latest, the increasing cost of production for lumber will have its effect upon this situation also, and that some wise retailers will lay in more extensive stocks than usual, in anticipation of considerable price advances. The chief demand at present is for pine for various finishing-up purposes in connection with buildings started earlier in the year. There is a fair demand for shingles, and prices are about steady.

Eastern Canada

Some improvement is noted in the export business from St. John, N.B., both for trans-Atlantic and American markets. Fair quantities of deals, scantlings and boards are being disposed of to the Allies, presumably for trench uses. Shipments of this nature recently amounted to about 7,000,000 feet in one week. There is very little trade with England at present for the purposes of home consumption. Stocks of English deals are rather heavy and the trade is quiet.

The production of stock by portable mills in New Brunswick during the coming winter is likely to be heavier than was expected a short time ago. Portable mills now figure that they can sell their season's cut of deals at from $18 to $19. The high cost of operation in the woods, however, will necessarily keep down the volume of production from this source.

Local trade at St. John is quiet. A fair amount of repair work is in progress, but very few large buildings are going up. Low grade stocks are quiet and spruce boards are firmer. Shingles are practically off the market.

The lumber market in New England is very firm. Spruce dimension has advanced to $28 and random shows an advancing tendency. In fact the price of random has stiffened to the extent of about $1 per thousand of late. Pine box lumber is very firm and shows an advance of at least $1 per thousand, probably nearer $2. There is a strong demand for spruce lumber at Boston and a good demand for pine box lumber. Intermediate grades of pine such as common are also showing a tendency to advance.

The outlook in connection with the building trade at Boston is exceptionally good. Great activity is expected this fall and further price advances are predicted. The hardwood market at Boston continues firm and fairly active throughout the list. Maple is meeting with particularly good demand and prices are stiffening. Much the same may be said of plain oak and ash. Stocks of dry ash and maple at mill points are light. Current quotations on 1st and 2nds inch include the following:—basswood $44, maple $41 to $43, plain oak $63 to $65, quartered oak $89 to $91, red birch $57 to $59, sap birch $47 to $49, white ash $56 to $60. There is a better feeling for hemlock at Boston and higher prices are being asked in some cases. Fairly dry clipped boards 10, 12, 14 and 16 feet long are bringing $22. There is a good demand for hemlock plank, but hemlock dimension is quiet.

Shingles at Boston are fairly active and somewhat firmer. White cedar extras are in fair demand at $3.50 to $3.60 and clears at $3.20 to $3.30. Red cedars are bringing $4 for the best. Lath are in better demand and 1⅝-in. are bringing $4.25.

United States

The car shortage in the United States has become more pronounced during the past fortnight than it was previously and complaints are now made from practically all parts of the country. The lumber industry is suffering along with all other lines of business. Southern pine manufacturers report an increased demand, with orders in excess of production by 19.72 per cent., and in excess of shipments by 10.46 per cent. Many of the southern mills report more orders coming to hand than they can take care of. An especially strong demand is reported for heavy construction timbers at good prices. It is reported that the British Government is in the market for seven million feet of yellow pine in 6 x 6 up to 35 cubic average. No definite reports have been received, however, as to the placing of business. The export trade in yellow pine continues to suffer on account of the lack of vessels for shipment. Otherwise there would be a very heavy export movement.

Manufacturers in the Pacific Northwest are disappointed to some extent in regard to the volume of yard stock buying. There is an increased enquiry, however, for car material and for railroad construction material and many mills are receiving more actual cutting orders than for some time past. The latest weekly market review of the West Coast Lumbermen's Association shows some curtailment in production, 110 mills reporting a production of 68,254,296 feet for the week ending September 16th, which is 11,250,407 feet, or 15.27 per cent. below normal. The rail trade shows shipments exceeding orders to the extent of 2,375,000 feet, or 5.19 per cent.

The local market at Chicago shows no important change, but the improvement recently reported is well held. This applies chiefly to hardwoods. A slight increase is being asked for yellow pine by some in the trade, but others do not think the business at present justifies it, as local yards have large yellow pine stocks. Hemlock is moving well. The white pine business at Chicago has been quiet of late and confined chiefly to low grade stuff for the box factories. Enquiries for upper grades are numerous, but stocks are hard to find. There is not much activity in northern pine at Buffalo, but the trade is about normal for this season. There is no buying in advance in large quantity, nor is any expected until after the election in November. The lower grades are in good demand on account of the large volume of building in progress. A good volume of business is reported in northern pine from North Tonawanda, with orders on the increase and an indication of price advances. Receipts are large.

The hardwood situation is improving steadily. The August sales report of the Hardwood Manufacturers' Association shows a greatly increased movement as compared with July. Prices for most of the woods are reported stronger. Factories in northern territory are stocking up heavily. Birch and maple are strong and low grade birch and basswood are being cleaned up.

Great Britain

The latest information available from Great Britain indicates that the fall in values of wood goods previously reported has come to an end and there is a general feeling that an all-round improvement may be counted upon. A fairly active trade is looked for during the autumn, though, of course, the greatest volume of trade will be that in connection with government work. There has been considerable activity on the spot market at London of late and holders of stock are firm in their ideas of values, partly on account of the scarcity of offerings. Dock stocks at London are below normal, but a fair quantity of wood is on hand in importers' and merchants' yards. The best demand continues to be for the large dimensions, especially good quality deals. Scantlings, on the other hand, are easier. Prices recently have shown extensive fluctuations and anyone selling at present figures seems to be taking a loss.

At Liverpool, the trade continues rather quiet, but better things are to be hoped for during the fall. Freight room is rapidly becoming more difficult to secure and it is expected that rates will soon be up again to their former high levels. Arrivals have recently been

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

almost nil. The success of the Allies in gradually pushing the enemy back is leading some of the trade to figure upon the demand that can be expected for lumber to be used in rebuilding northern France and Belgium. Operators are already commencing to make the necessary preparations for this business.

Several parcels of Quebec birch planks and boards recently arrived for Robert Cox & Company. Prices are firm and a fair enquiry is reported. Stocks of St. John and Halifax birch planks are light.

There is no change of importance to note from Manchester. Prices are firmer, but very little c.i.f. or f.o.b. business is reported. The freight market shows an upward tendency. At Glasgow, the trade has been quiet of late. Spruce is reported as one of the weak spots, especially in the narrower sizes, of which imports have been heavy. For 9-in. and wider stock, however, prices are steady. The movement of Quebec pine 'ex quay" has been on a fair scale, but most of it is going into store. Birch is quiet both in logs and planks.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Foreign Trade Improving

St. John, N.B., Sept. 21.—(Special to the Canada Lumberman.)—During the last two weeks the market has shown quite an improvement, in so far as foreign and American business is concerned. The allies are again in the market, making purchases of deals, scantlings, and boards, supposedly for trench warfare. Some six to seven million feet have been shipped during the last two weeks from this port. The buyers at St. John claim that the English houses are not coming on the market for any material for home consumption. The stocks of English deals are heavy, and trade none too good; so it is in reality to the allies that sellers here are looking for a market.

A considerable change has taken place in preparing for next winter's portable mill operations. A while ago it was said there would practically be no operating for winter business for 1916-17 as far as portable mills were concerned. Now they claim they can sell at $18 to $19 per M for their cut of deals, and are going in quite heavily. Of course, the cut will be light, as labor is going to be scarce and high in cost, and this, with the high price of food of all kinds, will deter many from doing anything at all.

The usual cut will be planned for on the St. John and tributaries, but how it is going to be pulled from the yards, even if cut, is the serious end of the business. Choppers are asking $35 to $0 per month, Teamsters, etc., are asking high wages, and feed for horses is also extremely high; so the price of logs must, of necessity, be greater in some respects than before. Some localities may not be affected as others.

Locally the trade is quiet. While there is a large amount of repair work, very few large buildings of any kind are being put up throughout this section. All low-grade stocks are hard to move. Spruce boards are firmer than they were, owing to demand abroad.

The market is practically bare of shingles, and will remain so for some time to come, as logs are about sawed out.

Montreal Trade Experiencing a Fair Demand

Montreal, September 25th; (Special to the Canada Lumberman): There is a fair demand for box lumber, especially for birch, but outside of this trade is dull. It is expected that some very large orders for shell boxes will be placed next month. At present the majority of firms holding contracts are behind with their deliveries. Companies making furniture are busy.

Trade has been seriously interfered with by an embargo on C. P. R. terminals and by the scarcity of labor. Great difficulty has occurred in securing cars from various points, this adding to the unfortunate position whereby certain mills are unable to give prompt shipment owing to the labor shortage.

The anticipated short cut has already resulted in prices stiffening generally. Unless there is a radical change, it is certain that quotations will have a substantial rise. In addition to the smaller cut, the serious advance in the cost of provisions and labor will have to be taken into account in fixing values. Besides, the men will probably not be as efficient as before. They will be more independent, and knowing the difficulty of obtaining men may lessen their output. Taking all these factors into consideration, one lumberman expresses the opinion that the cost of getting lumber will be 100 per cent. greater than last year.

The shipments to the United Kingdom continue to be on a small scale. Space is not only limited, due to government demands, but there is a difficulty in obtaining cars. Traffic is congested in Montreal, and there is great delay in securing supplies. Freight rates are almost stationary. Reports from the other side state that the market shows little improvement, and some shippers have, in consequence, refrained from sending lumber. A large order for British Government account has been received.

A keen demand for all the sulphite produced has resulted in prices again advancing. Advices from England state that the market there is very buoyant, with buyers for all that is in sight. Canadian exports to the United States have lately shown a large increase. The Abitibi Power and Paper Company have decided to enlarge their sulphite plant to 125 tons per day and their newsprint mill to 400 tons per day. Ground wood is still an excellent market, while newsprint is in strong request, with prices very stiff.

Better Feeling in Spruce Deal Trade at Liverpool

Alfred Dobell & Co., Liverpool, Eng., report, under date of Sept. 1st, that there is a distinctly better feeling in the spruce deal trade and more inclination to buy, but so far prices obtainable are still so much below cost that several cargoes have been landed on account of shippers. Douglas fir continues to arrive in small quantities, per liners. There has been more enquiry for clear squares in special dimensions; otherwise the demand has been normal. Stocks are very light, and buyers show no disposition to commit themselves for forward delivery.

Liverpool Market Report

Smith & Tyrer, Ltd., Liverpool, Eng., report, under date of Sept. 1st, as follows: Although there has been a little more activity during the past month, buyers have not yet regained confidence in the market, and require some temptation in price to induce them to buy. Hardwoods.—There is only a restricted business. Spruce Deals.—The chief feature has been the number of cargoes yarded by the shippers rather than accept current unprofitable prices. A little better feeling has developed, but there is still a large number of cargoes offering, although the majority consists of cargoes of small volume. Freights have steadied, and are likely to move upward. Hemlock is difficult to place. Birch has shown rather more activity. Pine is firmly held. Pacific Coast Woods.—There is not much doing, owing to the lack of space at reasonable rates.

Barbados Market Reports

S. P. Musson, Son & Company, Bridgetown, Barbados, report under date of September 1st as follows:—Lumberstuffs—White pine—During the past fortnight there have been no arrivals, but the market is fairly well supplied. There is a good enquiry, however, and later shipments will sell to advantage. Spruce—We can recommend shipments, as shingles of good quality are wanted. In cedar laying shingles recent shipments have temporarily filled requirements, but there is sime inquiry for later shipments. Shooks and wood hoops—No receipts.

Canada's Lumber Exports Increasing

Canada's exports of forest products during the twelve months ending June, 1916, and previous years were valued as follows:

1916, $53,259,354; 1915, $43,288,935; 1914, $43,241,666; 1913, $43,518,571.

Details of the exports of wood and manufactures of wood during the twelve months ending June, 1916, and June, 1915, are as follows:

	Twelve months ended June,			
		1916.		
Articles exported.	1915.	Total.	To Un'd K'gd'm.	To U.S.
Logs	$1,059,798	$ 1,079,125	$ 52,084	$ 1,026,701
Lumber—Deals, pine	1,076,276	1,425,522	1,363,445	31,707
Spruce and other	7,131,854	9,534,477	8,497,831	337,606
Laths, palings, and pickets	2,055,498	2,409,535	11,712	2,386,937
Planks and boards	19,196,527	25,086,657	2,230,654	21,196,880
Shingles	3,231,365	3,658,130	.....	3,631,611
Timber, square	489,360	460,499	429,764	30,735
Wood blocks for pulp	6,463,125	6,102,170	.....	6,102,170
Wood pulp	9,257,036	12,220,988	672,673	10,793,647
Wood and manufac. of—Total	$53,289,843	$66,559,366	$15,717,159	$47,082,837

Imports of wood and manufactures of wood into Canada for the twelve months ending June, 1916, and June, 1915, were as follows: From the United States, $8,918,054; from the United Kingdom, $171,650; total, $9,321,197; 1915 total, $11,041,252.

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The Use of Cost Figures in Estimating

By Charles Cloukey.

It would seem at first thought that the only correct figuring basis for any factory would be secured by a compilation of cost figures gathered in that factory. And it is a fact that this condition becomes more practical the oftener each kind of work is repeated. Careful comparisons of similar work, taken through the cost accounts, leads me to believe that the use of a single example for a figuring basis is a very risky thing to do, for it is a common occurrence to find quite a wide difference in the cost of similar articles and quantities.

Before taking up some of the reasons why we cannot always use our cost figures in estimating, let us look at a few of the conditions and circumstances which are apt to modify any one example of work put through the mill. In considering the cost of mill work, let us remember that our totals are made up of three principal divisions, each of which is so complex in character that we can very seldom say, "This cost figure is absolutely correct." The three items are labor, material, and overhead expense.

First, considering labor, we find rather a ragged division between labor and overhead, the rule being to charge up to the job all the labor of skilled mechanics, and perhaps the labor of bringing in lumber from the yard and the labor of crating and packing. You will notice that I say "perhaps," for some concerns coming under my personal notice have carried the handling of lumber from the yard and the crating in the overhead.

Another item of dispute is that of billing and detailing. Some concerns will put this work all in the overhead, but this practice is obviously wrong, as we may see by comparing the work of billing out $100 worth of cases and $100 worth of moldings. The billing time on the mouldings should not exceed thirty minutes, while the case work might easily require a whole day to bill and detail.

The reason I call attention to this is that when the billing, detailing and superitendence are carried in the overhead and spread on all work as a percentage, the mouldings will show less profit and the case work more than they have really earned. In other words, the estimator will have to use his judgment here to equalize the error in overhead.

After determining which workmen are to be figured on the productive list, the next and most difficult problem in all cost accounting work is to get correct reports of time charged to the various jobs. This statement is made advisedly, and the extreme difficulty in procuring reliable records of workmen's time has induced more than one factory to change their methods time after time, and some of them to abandon cost-keeping except as a matter of individual tests. This may sound foolish to most factory experts, but after we have shown that the mill's selling price cannot often be determined by its cost sheets, it will appear that only the data known to be correct is of any real value as a guide to pricing or as a spur to better methods of manufacture.

If we want to know how much it costs the odd-work mill to make stock doors in lots of 50 or 100, it is comparatively easy to keep time on this one item and have confidence in its accuracy. We can repeat this item until we have sufficient check, and can say that our cost per door is so-and-so-much, manufactured in convenient lots. We can apply this information to any lot of doors we figure which approximates the circumstances of manufacture already recorded. It is equally easy to determine the cost of sash in different styles and quantities, without burdening the mill with a blanket cost on everything done.

A critic might say that in recording costs on specific items only no record will be made of the waste time which necessarily comes in between jobs, but this can be estimated at one time as well as another. The misleading part of this feature in a general cost system is that an hour of lost time may be accumulated on a job which normally should require but thirty minutes of actual work.

The writer remembers the circumstances of three batches of outside frames going through the mill at the same time, one of which amounted to about $1,500, another about half that much, and the third about $200. When the cost of the three was figured up separately, the first two showed a very satisfactory profit, while the third showed a loss of over $200, or more than the original estimate.

A careful investigation failed to show where the trouble was, but the fact still remains that there was a fair profit on the three jobs, taken together. So we can say with a considerable amount of reason that it would be folly to double the estimate on the small bill of frames, in view of the fact that an analysis of the material and probable time of manufacture was not out of line with the other two jobs.

To sum up the situation of labor cost, I believe that a careful and reliable figure may be obtained on any class of article by taking only representative jobs and keeping cost on them separately; and by separately I mean to take cost data only on one job of a kind at a time. Then repeat enough times during the year to establish an average.

That the estimating of material on a given piece of work has its uncertainties is verified in the fact that the requirements for duplicate work should be the same, but very frequently are not.

Of course, if the practice of figuring from the cutting bills is followed and a level per cent. added for waste, it will be possible to duplicate the cost figures on material in case the market stays even. But if the record is made by the man who brings the lumber in from the yard, duplicate jobs may show quite a wide discrepancy and still be correct.

Let us consider the matter of a large order for trim which will require anywhere from two to six cars of lumber. If there is much work going on in the mill at the same time, using the same kind of lumber, there is sure to be a confusion of charges and credits. Personally, I prefer the percentage addition for waste.

Another chance for error in material costs is the omission of the cost of manufactured articles required, such as glass, hardware, paints, and varnishes, sash pulleys, and the like. Sometimes these items are added in all right, but the item of their freight is overlooked. This is often of considerable importance, as in the case of plate glass. Boxing and crating material is another item to be accounted for, either in the overhead or in each individual job, and it is my opinion that it should be in the latter.

Whether the costs are kept the year round or whether they are worked out as special items as here advocated, the overhead charges will have to be determined in the same manner; and, as intimated in the fore part of this article, the items going to make up overhead charges are more or less uncertain and mixed.

One will find in every mill quite a considerable amount of productive work done by non-productive labor, which is charged to overhead and therefore makes the labor cost too low. This is more apt to occur in small jobs where common labor helps out in times of stress, or in large jobs where the billing and detailing are put into the overhead. In regard to the latter practice, it will appear that if the greater part of a mill's business for a year should be made up of case and fixture work, and the billing, detailing, and superintendence figured in the overhead, the percentage established by that year's business would be too high for a year in which the bulk of the work was straight sash, doors, frames, and trim.

The items of checking, crating, freight, drayage, priming, putty, nails, and any other expense which comes upon a part of the work in considerable amount and upon other parts not at all, give very misleading results when carried in the overhead account.

It would appear that the foregoing has more to do with cost-keeping and its pitfalls than with the pricing of materials to be sold, but it is necessary to know just how much our figures are worth before we tie up to them. Another thing which every estimator knows is, that if the cost of production runs too high and the estimates are made according to the cost sheets, the mill will soon run out of business. If the mill's cost of production is low and the estimates based on the figures, the mill will soon be overstocked with work and will have to raise prices in self-defence.

The annual or semi-annual inventory is the only competent check on any cost system, and then it requires the attention of a careful analyst to place the modifying circumstances where they belong.

The application of cost data to figuring estimates is useful in two ways: First, it gives the mill a decided tendency to show a profit in all its departments. In the second place, it gives a comparison with market quotations, which often enables the special-work mill to buy and sell stock stuff at a profit which it could not make without a loss, and so land the balance of the work which is really profitable.

The writer has found it a most satisfactory practice, in estimating, to take up special methods of work with the superintendent or department foremen when figuring a certain piece of work, and determine upon some short-cut or improved method before making the price. Notes to this effect are placed on the figuring sheets, so that the circumstance may not be forgotten in case the contract is secured. And in this way previous costs may be reduced.

In conclusion, let us not forget that good judgment must be used in connection with all ready-made figures. All cupboards are not worth $5 a running foot K. D., or $7.50 set up. Doors and sash thicker than 1⅜ in. are higher-priced at the same discount. Moldings thicker than ⅞ in. are higher-priced at the same discount, and it is worth more per foot to sand some little panel mould than it is a flat detail of base 9½ in. wide. Are you pricing accordingly, or are you applying the same discount to everything similar that you figure from a list?

If your cost sheets and inventories show that you are not making a decent profit, and your volume of work shows that your prices are about what your competition is forcing you to take, then there should be some reforms in your mill or your mill's management.—The Woodworker, Indianapolis.

At a meeting of the Montreal Chambre de Commerce, on September 21, Mr. L. A. Mongenais outlined a scheme for the establishment of a large wood distillation plant at Lake Labelle, P.Q. The object is to obtain various chemical products, the abundance of our wood supplies affording great opportunities for such an industry.

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SAWS

Sawmill Belting—Its Requisites and Its Care

By B. F. Hall

Of all machinery, sawmill and planing-mill machinery is the hardest to equip satisfactorily with belting.

Master machinists and belt experts can afford to consider themselves well posted on belting equipment when they have learned just what heft and width belts to work in the different places in a sawmill to give the best results.

Too often in building and equipping a sawmill there is very little attention paid to the belting. There are several reasons for this. The belting is, ofttimes, or I might more correctly say nearly always, the last of the equipment bought, and former purchases, for a large sawmill, have been so great, with expenses of building and equipping the mill, in many cases from one and a half to twice as much as was appropriated for it, that this, many times, causes the purchaser to buy cheap belting. He forgets that in doing so he is nearly always buying trouble. If this purchaser would stop and consider the fact that his company has spent thousands of dollars in buying and installing the best machinery, in their opinion, that money would buy, he would see the folly of equipping this expensive machinery and costly installation with cheap belting, knowing the fact that the belting is the very thing that ought to be the best money could buy, because the belting is that most important part of the entire equipment, though nearly always purchased last, that transmits the power and keeps the expensive machinery in operation.

Cheap Belting Does Not Pay.

There is always someone willing to sell belting a little cheaper, but a long and careful study has taught me that cheap belting equipment, to start with, costs too much in the long run. Competition has fairly well regulated the price of belting, and real cheap belting, to start with, has, in all my experience, proved to be the most expensive, in the sawmill in course of time.

To a great extent successful operation of a sawmill depends on the belting. A large operator recently told me that he could not afford to buy a certain belt, although the first cost was very low, because that belt, he said, stretched so much that the time lost and labor cost of taking the excessive stretch out of the belt would several times pay for the belt. I advised him that the best is the cheapest. He bought a good belt, and his trouble at that particular place stopped.

When the cost of fuel is a consideration (which I am glad to say is seldom ever the case at sawmills) the user cannot, from a financial standpoint, afford to use anything but belting for transmission of power. In fact, counting installation, maintenance, efficiency, cost of operation, etc., belting is the cheapest of all ways of transmitting power in a sawmill, and certainly by far the most satisfactory.

Proper Mechanical Conditions.

Regardless of the kind of belting used, whether it is the best or the cheapest grades, or regardless of what material it is constructed, such belting must be operated under proper mechanical conditions if the best results are obtained. When I say "under proper mechanical conditions," of course I eliminate speed. Some belts in sawmills have to be driven at so great a velocity that there are no mechanical authorities who will admit that it is possible to obtain the best results from a belt traveling at so great a velocity. The requirements of belts in sawmills is greater than any other work that belting is made to do.

In referring to different drives, I will only name some of the hardest ones in sawmills, because these are the ones that cause the trouble. As all men who are acquainted with sawmills know, there are some slow and fairly easy drives in sawmills.

High mechanical authorities say that 4,500 feet a minute is the high limit placed on the travel of a double leather belt 22 inches wide and wider, to obtain the best results, considering the life and power received from the belt.

A circular saw with a 24-inch diameter pulley, making 900 revolutions a minute, and driven by a belt, requires the belt to travel 5,618 feet every minute. With the same number of revolutions this belt, traveling over a 30-inch diameter wheel is traveling 7,068 feet every minute. Just think of it—this is faster than the travel of the fastest passenger train on record. I name this to point out the fact that everything must be exactly right if a belt is expected to give even fair results moving at the above mentioned velocity. Such belts are usually worked over crowned pulleys. The crowns on these pulleys should line with each other, as well as the pulleys to be lined with each other. If the crowns on the pulleys do not line, the belt will divide with the crown on the larger diameter wheel and will be out of line on the smaller diameter wheel.

Where an idler is used, it should be a flat-faced pulley, because a crowned idler will lead the belt to one extreme or the other, and if the crowns on the drive and driven wheels do not line with the crown in the idler—if a crowned idler is used—it works a hardship on the belt.

The underneath side of a belt should be the pulling side and the top side the slack side. If an idler is used on a belt it should run on the belt fairly close to the driven wheel, and, of course, on the top side of the slack side of the belt.

Driven wheels are usually the smaller in diameter, and the belt does not wrap the driven wheel, when the driver is a larger wheel, as much as it does the larger wheel.

By placing the idler, as above described, it will help to wrap the belt around the smaller diameter wheel, and by so doing the belt will give up more power. However, care and judgment must be exercised to not get the idler too close to the wheel receiving the power, for if it is, it will cause the belt to make an unnecessary short, sudden turn, which is liable to damage the belt.

It is a mistake to use short belts, at any place in a sawmill, where it is possible to avoid the use of short ones. This is sometimes done because a long belt costs more than a short one of the same heft and ply. However, it is a waste of money to use short belts when possible to use long ones, because a belt 60 feet long, traveling 5,000 or 6,000 feet a minute, will wear longer than two belts each 30 feet, the same width and ply, doing the same work and traveling at the same velocity as the belt 60 feet long.

Belts Require Elasticity.

Belts require elasticity. When they do not give some they break, and when they have no elasticity they will not give up as much power as when they stretch a little. Experience has taught me that it is not the best plan to buy a belt that is stretched, by the manufacturer of it, to such an extent that when the belt is put in service it does not stretch enough that the slack has to be taken out of it. This is especially true where long belts, over small diameter wheels, are used. When a belt does not have to be shortened, after hard service, it indicates that the manufacturer of the belt has stretched the material the belt is made of to such an extent that he has separated the fibres in that material so much that the work does not affect it further. The belt has no elasticity, consequently it does not transmit the power, neither does it last as long as it would if slightly elastic.

Belts transmit more power and last longer when they are not too tight—just tight enough so they will not slip under their maximum load is better than to have the belt as tight as it can possibly be made.

There are only a few things that cause belts to slip. When they are wet, greasy, and dirty, too slack, or overloaded they will slip. These conditions can be remedied.

Machine oils and greases for machinery rot any belting, for these oils and greases are of a mineral substance, and any mineral oils or greases will rot any belting. They can be and should be kept off of all kinds of belting, except iron chain belting.

Rubber, leather, and other belting lasts from 25 to 125 per cent longer if mineral oils and greases are kept off of them.

When a belt is slack enough that it slips it should be made shorter. This is not a big job, and frequently saves the loss of a good belt, because when belts, of any make, slip on the pulleys, this burns the belt and causes it to break. When a belt is overloaded it has the same effect, in burning the belt, as when it is too slack, except when the belt that is overloaded is kept too tight, to prevent it from slipping, that the very life is pulled out of the belt because it is worked so tight to try to compel too narrow a belt to do a wider belt's work. Besides this, too tight a belt is very hard on shafting and hangers. This can be and should be remedied by using pulleys with faces sufficiently wide and belts wide enough to furnish sufficient power to do the work without slipping. There is a right and wrong way, and users should not expect an 8-inch or 10-inch belt to do a 14-inch or 18-inch belt's work, as is frequently done. However, when belts travel at high speed great care has to be exercised that the belts are not too wide. When belts travel slow—say, up to 2,000 feet a minute—it does not differ so much as to their width so they are wide enough that they will do the work, but when the velocity of a belt is very high the belt can easily be too wide for the work required of it.

Relation of Velocity to Power.

The faster a belt travels the more power that belt will transmit. Due to increased speed of subsidiary belts, the combined power of these subsidiary belts frequently give up more power than the one or more belts from the engine or engines to the line shaft, although the engine belts have to start and keep going all the subsidiary belts. This is caused from the fact that the velocity of the engine belt, or belts, is not near so great as that of some subsidiary belts. The power increases directly in proportion to the increased velocity of the belt. Frequently this is not considered, and such belts as circular saw and edger belts, that nearly always work under high speed, are, I believe, more often too wide than times that they are not wide enough.

The real power that a belt will transmit is determined by the length, width, velocity of the belt and the diameter and relative diameters of the wheels that the belt travels around. Using the old conservative rule for figuring horse power of leather belting, which, due to the irregular load on sawmill belts is, I believe, the best rule. A good double-ply leather belt 20-inch wide, traveling 5,618 feet per minute, is capable of transmitting 272 horse power, and a belt the same heft and width, traveling 7,608 feet per minute, will transmit 342 horse power.

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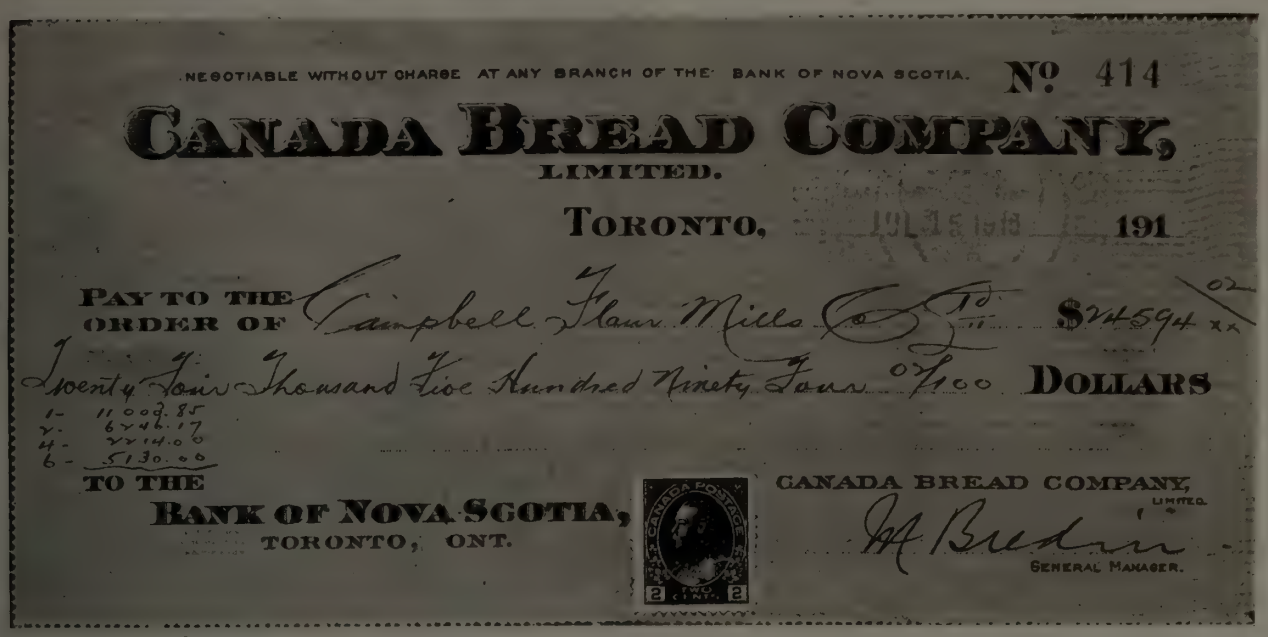

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Belts too wide for the work required of them nearly always show it, when the belts are at work, by the edges of the belt riding up off the face of the pulley. I have seen belts ride up 5/8-inch on both edges off on the face of the pulley. When this is the case the belt is transmitting more power than the machine requires, and a narrow belt should be used. Belts giving up more power than the maximum amount of power required to do the work do not last as long as belts that are not overloaded, but that only develop the amount of power required to do the work when working under heaviest load.

Very frequently belts are said to be defective and condemned just because they are too narrow or too wide, and more frequently because they are too wide to do the work required of them.

The life of circular saw, edger, gang edger and other high speed belts is short, due to the speed they travel. However, the life of these belts can be lengthened and money in the long run saved if the operator will use long, instead of short, belts.

Band saw belts last longer than circular saw belts because they work over larger diameter wheels and do not travel nearly as fast as circular saw belts. Three years ago a friend of mine asked me to go over his two sawmills and advise him what width and heft belts to use to get best results. In doing so I found three belts that ought to have been wider than he was using, and eight belts that were too wide for the work they were doing. In replacing these belts he changed the widths, and has had no further trouble.

When single-ply leather belts are used the grain side should run to the pulley and the points of the laps should travel with the wind. Double or triple-ply leather belts are so constructed that the user has to run the grain side to the pulley, but care should be exercised that the points of the laps should not travel against the wind. The idea that the flesh side of a single-ply leather belt is less liable to slip than the grain side is all a fake.

Smooth Surface Next Pulley.

The smoothest solid surface of a belt against smooth-faced cast iron pulley is harder to make slip than if one has a rough surface. Avoid using a wide single-ply belt, because if the belt is traveling even at a moderate rate of speed and has a normal load on it, wide single-ply belting is very liable to become wavy on the edges. Nearly always this is not the fault of the belt, but it is because the user is trying to make too light a ply belt do the work where a heavier ply should be used.

Drive belts, from engines to line shafts, are frequently not wide enough or heavy enough. These belts do not travel so fast, and usually go around larger diameter pulleys than the higher speed belts in sawmills.

Hog belts in sawmills are not so troublesome if they are long belts of the right width and heft, otherwise they are troublesome.

Circular saw belts, edger belts, gang edger belts, gang saw belts, hog belts, and all such hard places are the most important belts in a sawmill, and will give very little trouble if long instead of short belts of the right width and heft are used.

It pays well to get someone who knows to advise in reference to the width and heft of belts to be used on the different machines.

Before belts are fastened together around the pulleys they should be made perfectly square at the ends. If they are not square at the ends, when the ends are butted against each other to be fastened, this itself will make a crook in the belt.

There are a number of ways to fasten belts—some good and some very poor ways. Some belt hooks are better than others, but, as a whole, I consider them a poor fastening. They are stiff and clumsy, and will eventually cause any belt to break where the hooks are driven in. Wire lace is very good for new small belts if put in properly, but not very good for old belts. Where belts are not made endless, a good lace leather is about the best of all other fastenings. However, it is a mistaken idea that a very large string has to be used. Use a small string, and punch small holes in the belt just large enough for this string to be pulled through. Do not punch the holes too far from the ends of the belt. I prefer a hinge joint, because it gives readily as the belt goes around the pulleys, and is not so clumsy as some other ways of lacing.

Belts work better, last longer, run more smoothly, give less trouble, and transmit more power if made endless.

Care in Joining Belts.

Regardless of what method of fastening is used, great care should be exercised in joining belts, because if they are not square at the ends and if the edges are not kept even the belt is forced to not work well.

If lace leather is used and the lace is stretched more on one edge of the belt than it is on the other edge this will let the belt separate more at one edge than the other, and will make a crooked place where joined together.

All belts should be slightly narrower than the faces of the pulleys that they travel over.

The belting should be put in care of one man. If it requires more than one man to do the belt work, divide the work so that each man will have a certain portion of the belting to be responsible for. If it does not require one man's time, then give him all the belting, with certain other work.

Do not use resin, soap, lime, ashes, etc., to stop a belt from slipping, because any of these things will ruin the belt. Keep the belts in good shape and at the right tension and use the right width and heft, then they will give you service.

When leather belts are used they should be oiled when they begin to get dry with a slight application of a good animal grease, to keep them pliable and in condition so they will not crack. When pliable they will hug the pulleys and transmit more power, doing more nearly their full duty and will last longer.—Southern Lumberman.

Bill Nye at Bootjack Lumber Camp

I have just returned from a little impromptu farewell tour in the lumber camps toward Lake Superior. It was my idea to wade around in the snow for a few weeks and swallow baked beans and ozone on the half shell. The affair was a success. I put up at Bootjack Camp on the raging Willow River, where the gay-plumaged chipmunk and the spruce gum have their home.

Winter in the pine woods is fraught with fun and frolic. It is more fraught with fatigue than funds, however. This winter a man in the Michigan and Wisconsin lumber camps could arise at 4.30 a.m., eat a patent pail full of dried apples soaked with Young Hyson and sweetened with Persian glucose, go out to the timber with a lantern, hew down the giants of the forest, with the snow up to the pit of his stomach, till the gray owl in the gathering gloom whooped and hooted in derision, and all for $12 per month and stewed prunes.

I did not try to accumulate wealth while I was in camp. I just allowed others to enter into the mad rush and wrench a fortune from the hand of fate while I studied human nature and the cook. I had a good many pleasant days there, too. I read such literary works as I could find around the camp and smoked the royal Havana smoking tobacco of the cookee. Those who have not lumbered much do not know much of true joy and sylvan smoking tobacco.

They are not using a very good grade of the weed in the lumber regions this winter. When I say lumber regions I do not refer entirely to the circumstances of a weak back. (Monkey-wrench, oil can, and screwdriver sent with this joke, also rules for working it in all kinds of goods.) The tobacco used by the pine choppers of the northern forest is called the Scandihoovia. I do not know why they call it that, unless it is because you can smoke it in Wisconsin and smell it in Scandihoovia.

When night came we would gather around the blazing fire and talk over old times and smoke this tobacco. I smoked it till last week, when I bought a new mouth and resolved to lead a different life.

I shall never forget the evenings we spent together in that big shack in the heart of the forest. They are graven on my memory where time's effacing fingers can not money with them. We would most always converse. The crew talked the Norwegian language, and I am using the English language mostly this winter. So each enjoyed himself in his own quiet way. This seemed to throw the Norwegians a good deal together. The Scandinavians soon learn our ways and our language, but prior to that they are quite clannish.

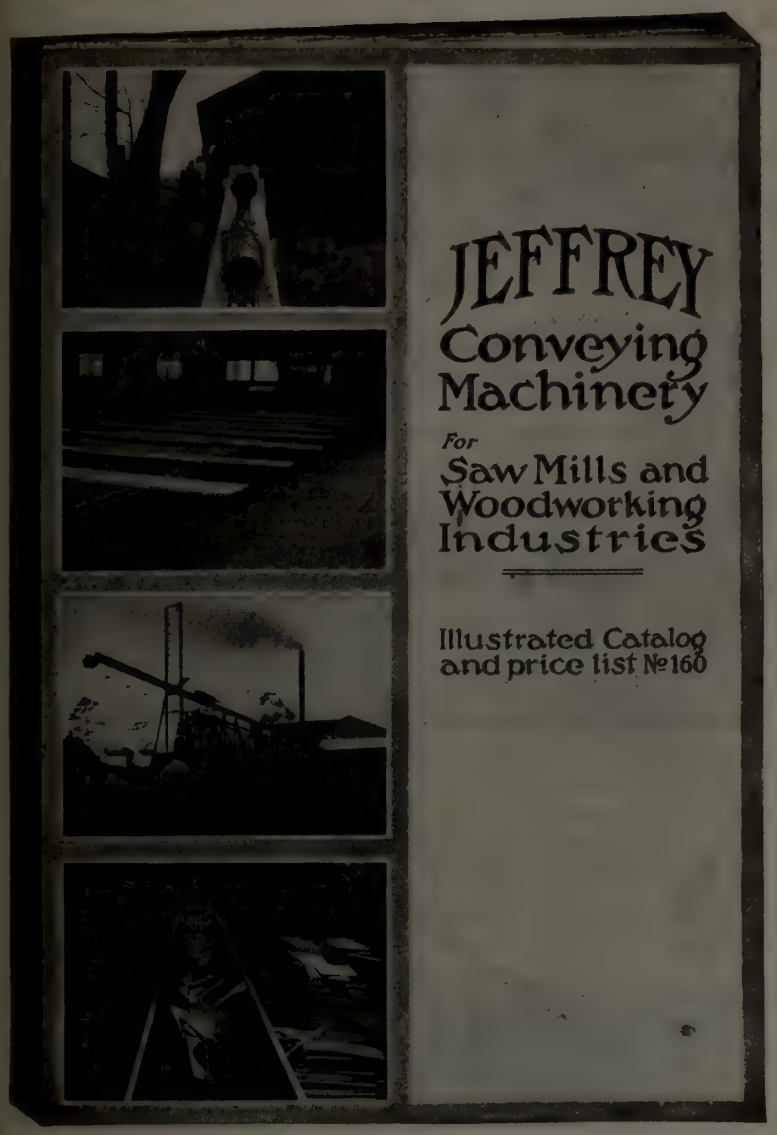
The cook, however, was an Ohio man. He spoke the Sandusky dialect with rich, nut brown flavor that did me much good, so that after I talked with the crew a few hours in English, and received their harsh, corduroy replies in Norske, I gladly fled to the cook shanty. There I could rapidly change to the smoothly flowing sentences peculiar to the Ohio tongue, and while I ate the common twisted doughnut of commerce, we would talk on and on of the pleasant days we had spent in our native land. I don't know how many hours I have thus spent, bringing the glad light into the eye of the cook.

I talked to him of his old home till the tears would unbidden start, as he rolled out the dough with a common Budweiser beer bottle, and poured the scalding tears into the flour barrel. Tears are always unavailing, but sometimes I think they are more so when they are shed into a barrel of flour. He was an easy weeper. He would shed tears on the slightest provocation, or anything else. Once I told him something so touchful that his eyes were blinded with tears for the nonce. Then I took a pie, and stole away so that he could be alone with his sorrow.

He used to grind the coffee at 2 a.m. The coffee mill was nailed up against a partition on the opposite side from my bed. That is one reason I did not stay any longer at the camp. It takes about an hour to grind coffee enough for thirty men, and as my ear was generally against the pine boards when the cook began, it ruffled my slumbers and made me a morose man.

We had three men at the camp who snored. If they had snored in my own language I could have endured it, but it was entirely unintelligible to me as it was. Still, it wasn't bad either. They snored on different keys, and still there was harmony in it—a kind of chime of imported snore as it were. I used to lie and listen to it for hours. Then the cook would begin his coffee-mill overture and I would arise.

When I got home I slept from Monday morning till Washington's birthday without food or water.—From "Bill Nye's Red Book.



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Creosoted Wood Block Paving

By Walter Buehler.

Creosoted wood block pavement properly laid is, without question, the most durable, serviceable, and comfortable pavement in existence. Anyone riding over block streets cannot deny this.

Its durability, its effectiveness, under heavy traffic, needs no further demonstration than the streets in Lower Manhattan or the Loop District in Chicago.

Its comfort and desirability are amply demonstrated by the miles of beautiful residence streets in such cities as Detroit, Minneapolis, and hundreds of others. Minneapolis alone has over 70 miles of block streets, some of these 14 years old, and this year they are laying over 375,000 square yards. Detroit, with many miles of block pavement and years of experience, is laying over 200,000 square yards this year. When the public have used a great quantity of a material over a long period of years and continue to demand it, that material has surely stood the acid test.

Proper methods of treatment are now most generally understood. The important points to consider are: Timber for treatment should not be too well seasoned; the oil should be forced in under slowly increasing pressure to assure a good uniform penetration. All responsible timber-preserving companies can be relied upon to treat the blocks properly.

Much has been said and written as to the proper quantity of oil to be used. There are two principal considerations—first, quantity necessary to prevent decay; second, quantity necessary to prevent absorption of water and thereby help control expansion. Two and one-half gallons of oil per tie in the treatment of a railroad tie has been found to be ample to prevent decay. This is about 10 pounds of oil per cubic foot of timber. Therefore, taking into consideration the better conditions under which a paving block is laid, better drainage, etc., it should require less oil to preserve it than to preserve a railroad tie. For example: The blocks in Indianapolis which absorbed only 6 pounds per cubic foot, are, after 20 years of service, perfectly preserved.

The second consideration—that is, the amount of oil necessary to prevent absorption of water—presents a different problem. Theoretically, we would assume that the greater quantity of oil used the less space for water, therefore the more waterproof. This assumption would be correct provided the cell spaces in the wood had anything to do with the expansion and contraction of the wood. It is a well known fact of timber physics that if the water is evaporated from a saturated stick no change in size takes place until all of the water is out of the cell structure and begins to come out of the wood fibre itself. That is, as expressed scientifically, the point of fibre saturation is reached; therefore, a large quantity of oil in the cell structure does no especial good, but, on the contrary, acts as a reserve supply to prolong the period of bleeding. It is also a fact, I believe, that the preservation does not penetrate the fibre, but only the cell structure. Therefore, the value of the preservative relative to expansion and contraction is dpendent upon its ability to penetrate the cell structure of the wood and paint the fibre structure with a layer of oil, which will either keep the water in the fibre and the block expanded to its normal size or keep the water out of the fibre of a thoroughly seasoned block.

As a paving block has six sides, on all of which the fibres are exposed, a certain amount of surface evaporation or absorption takes place. This accounts for the trouble with blocks treated with 20 pounds of heavy oil, which expand with the first rainstorm after they have been laid, when the blocks have been allowed to lie along the street for a long period before laying, or where thoroughly air-seasoned timber was used in the manufacture of the blocks. The quantity of oil alone will not prevent contraction or expansion. Other factors must be taken into consideration—that is, methods of treating and laying. A sufficient quantity of oil should be used to thoroughly treat the blocks, the quantity varying with the quality. That is, I firmly believe that an average of 16 pounds of an oil with a gravity of 1.08 to 1.12 is sufficient.

No other one feature of the creosote block pavement has been so much discussed as the quality of the oil to be used. In the early days very light gravity oils were used. These early pavements caused considerable trouble, due to expansion and contraction. The quality and quantity of oil were blamed for this trouble, and each year found the manufacturer advocating higher and higher gravity oils, and greater and greater quantities. This reached its climax about 1913, when the standard specificaions adopted by the Association for Standardizing Paving Specifications called for an oil of not less than 1.14 gravity at 68 degrees F., and 16 to 22 pounds of oil per cubic foot. In order to obtain this high gravity oil it was found necessary by many manufacturers to use mixtures of distilled oil and tars. We soon began to have trouble, due to bleeding of the block pavements, and, in addition, the expansion trouble was not entirely cured. As a natural consequence, a reaction took place, and, as is generally the case, the pendulum swung to the other extreme.

It is my personal opinion that, within certain limits, it makes very little difference what the quality of the oil is, provided that you have a staple oil and the blocks in proper condition for treatment, thoroughly penetrated with it, and then laid properly under the right conditions and a reasonable amount of attention given the finished pavement during its life.

Lubrication and Casings for Silent Chain Drives

The Link-Belt Company, Chicago, Ill, have published a bulletin (No. 286) on lubrication and casings for silent chain drives. The bulletin expresses briefly and clearly the advantages secured by the use of a casting which holds oil, through which the chain dips or runs. This is a simple and easy method of lubrication, and requires very little attention. Casings with link-belt oil-proof, dust-proof seals permit the use of silent chain drives where it would not be advisable to employ them otherwise. Many link-belt silent chain drives so equipped are being run successfully to-day in cement mills. The bulletin contains a number of excellent illustrations, clearly explaining the important details of construction and operation in connection with these casings. The company states that from prime mover to machine or from lineshaft to countershaft, wherever it is desired to transmit power without slip or loss, this method is most efficient, showing 98.2 per cent. efficiency on actual test. The Canadian Link-Belt Company, Ltd., 1189 King Street West, Toronto, handle these goods, and will be pleased to furnish full information regarding them or regarding any others of their well-known line.

Important to Pulp and Paper Manufacturers

The selling rights for Canada of the Record improved quick opening gate valve, with patent clean-outs, have been secured by the Canadian Pulp Mill Machinery Company, Limited, 18 Tansley Street, Montreal. The same company have obtained contracts for the supply of the P. and M. rotary diaphragm screen to the following: St. Maurice Paper Company, Bathurst Lumber Company, and Brompton Pulp and Paper Company. An order for grinders has been secured from the Donnaconna Paper Company.

Miscellaneous Items of Interest to Lumbermen

One ton of coniferous wood waste will produce from 15 to 25 gallons of 190-proof alcohol.

The farm woodlots of the United States contain about 10 per cent. of the total standing timber in the country.

Mr. A. E. Clark, of Edward Clark & Son, wholesale lumber dealers, Stair Building, Toronto, has been reappointed a member of the Inspection Rules Committee of the National Hardwood Lumber Association for the current year.

The Ha Ha Bay Sulphite Company and the Ouiatchouan Falls Paper Company have given orders to the Canadian Boomer and Boschert Company, Tansley Street, Montreal, for hydraulic pumps, presses, balers, and accumulators.

The stand of timber on the two great national forests in Alaska is estimated by the Forest Service as over seventy billion board feet, while the annual growth will, it is said, produce of pulpwood alone enough for the manufacture of three thousand tons of wood pulp a day.

Capt. W. A. Grafftey, who is in hospital at Boulogne, France, suffering from a slight gunshot wound in the thigh, is the youngest son of Alderman W. K. Grafftey, managing director of the Montreal Lumber Company. Another son is a sub-lieutenant in the Canadian Motor Boat Patrol Service.

Dr. James White, vice-chairman of the Canadian Commission of Conservation, states that when the report of the commission is made it will have some surprising information for people who think the standing timber resources of British Columbia are much larger than they actually are. He says the conditions regarding the forests may not be alarming, but the amount of timber is much less than what has been realized.

Reports from Bangor, Me., state that lumber operators in eastern and northern Maine are finding a great scarcity of woodsmen for woods operations during the coming winter. Wages are running from $35 to $40 per month and keep. Practically no men are offering from the Maritime Provinces, which was once the best source of labor supply for that district. It is expected that the output this year will be as large as last year, in spite of the labor shortage.

It is officially announced from Ottawa that the British Board of Trade will not strictly enforce the Merchants' Shipping Act against owners of vessels or masters of ships arriving between October 31 and November 15, between March 30 and April 16, 1917, with cargoes of light or heavy wood goods carried upon the decks of ships. While the needs of Great Britain have caused these concessions it is announced that masters and ownrs still must insure safe and proper loadings under the same shipping act.

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LEVIATHAN and ANACONDA have been sold on a "make good" basis for over thirty years. If they hadn't made good we would have been out of business long ago. The fact that our business is progressing rapidly is ample proof of the merit of this belting.

With every belt we guarantee full value in service, dollar for dollar, horsepower for horsepower, and just as we have figured our tables of horsepower for the best results, just so in making the above statement, we not only expect to give equal service, but BETTER SERVICE, AND MORE ECONOMICALLY.

A Leviathan Main Drive in constant service for four years at the plant of the Riviere du Loup Pulp Co.—24 in x 6 ply. No cost of up-keep; the belt has never been touched since the day it was installed.

Why not give us a trial order and let LEVIATHAN or ANACONDA prove itself?

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ROUGH or DRESSED

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We have accumulated the following Wormy Pine, which we offer at special prices. It is a regular grade of Mill Run except that it is wormy.

2 cars	3 x 6	and wider	10 to 16 feet.
1 car	4 x 5	" "	10 to 16 feet.
3 cars	4 x 6	" "	10 to 16 feet.
3 cars	4 x 8	" "	10 to 16 feet.
2 cars	4 x 10	" "	10 to 16 feet.
1 car	4 x 12	" "	10 to 16 feet.
2 cars	6 x 6	" "	10 to 16 feet.
1 car	8 x 8	" "	10 to 16 feet.

Also some 2 inch.

Write or phone for prices.

Herman H. Hettler Lumber Co.
Midland, Ont.

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Dressed and in the Rough

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Pine, Spruce Hemlock Hardwoods, Lath

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Wholesale Dealers in Rough and Dressed Lumber. Lath and Shingles
Offices—500 McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

The Houpt Paper Mills Ltd., Camden East, Ont., have obtained a charter.

The R. Laidlaw Company, Limited, Sarnia, Ont., recently suffered a loss by fire.

Fire completely destroyed the sawmill at Calabogie, Ont., belonging to James Dempsey, Stewart Street, Renfrew, Ont.

A small fire broke out recently at the planing mill of W. Williamson, Toronto. The loss was covered by insurance.

The sawmill belonging to Gordon Staley, Glencolin, Ont., was recently destroyed by fire. The loss is estimated at $2,800, and the plant will be rebuilt.

The Bishop Lumber Company, Limited, has been incorporated with head office at Nesterville, Ont., and capital stock of $200,000, the provisional directors being H. H. Bishop, H. W. Bishop and J. A. Bishop.

The Waupaca Company, Limited, has been incorporated with head office at Port Arthur, Ont., and capital stock of $100,000, the provisional directors being H. Keefer, G. A. McTeigue, J. A. Duffy, A. G. Cowan, and H. E. McKay. The objects of the company include owning and operating timber limits, dealing in timber and lumber, operating sawmills, pulp mills, etc.

The Abitibi Power and Paper Company, Iroquois Falls, Ont., who suffered considerable inconvenience in connection with their operations as the result of the great forest fires this summer are again operating at full capacity. It is reported that the company will increase the capacity of its paper plant to 400 tons per day and that of the suliphite plant to 125 tons per day.

The Armstrongs, late of New York, have bought out the Mattagami Pulp & Paper Company, which has been engaged for some months in putting up a new sulphite plant at Smooth Rock Falls, Ontario. All the interests of the company, including large timber limits, have passed to the Armstrongs, and the company's officials have been replaced by men selected by the new owners. S. R. Armstrong has already taken up the duties of manager.

Eastern Canada

A. P. Beaupre & Company, sash and door manufacturers, Montreal, P.Q., have been registered. Those interested are Arthur P. Beaupre and Mrs. Francis Paul.

The Bathurst Lumber Company, Limited, of Bathurst, N.B., has applied to the Dominion Government for permission to build wharves at its mills on the Nepisiguit River, in part of the public harbor at Bathurst.

Stetson, Cutler & Company's sawmill at Indiantown, St. John, N. B., started operations again on September 16th, after being closed down since July 29th. The mill had been idle on account of scarcity of tonnage and congestion of stock in the yards.

William R. Patterson, Windsor, N.S., who lost his sawmill by fire about a year ago and had commenced the construction of a new mill, has again had the misfortune to suffer in a similar manner. On September 15 the new mill, which was in the course of erection, was destroyed by fire, together with some 5,000 feet of new lumber. There was no insurance.

Le Parc des Allies Limitee is the name of a new firm which has been incorporated with head office at Quebec, P.Q., and capital stock of $20,000, to carry on business as operators of timber limits, sawmills, pulp mills, etc. Those interested in the new company are A. G. Verret, F. E. Fortin, V. R. Lamontagne, A. Pouliot, E. Turgeon, V. Marcoux, and J. A. Bolduc, all of the city of Quebec.

An organization has been formed by paper men at Montreal for the purpose of handling the export business of Canadian paper mills. Incorporated under the name of the Canadian Export Paper Company, Limited, with a capital stock of $500,000, the organization has secured wide powers. It will be composed of the leading members of the Canadian Pulp & Paper Association, and the ultimate object is to bring the marketing of Canada's surplus products of pulp and paper under a single selling organization of a powerful and aggressive character. This will apply purely to the export business, and the idea is not to boost prices but to put the selling end of the business on a scientific basis, with a view to the greatest possible development along national lines. Already a subsidiary organizaztion of the Pulp & Paper Association is hard at work studying the technical end of the business with a view to improving on the already high standard in the manufacturing processes, and the selling end will now come in for the same scientific organization.

Western Canada

The Eagle Lumber Company, Limited, has been incorporated with head office at Killam, Alta., and capital stock of $20,000.

The Farmers Mutual Lumber Company, Limited, has been incorporated with head office at Irma, Alta. The capital stock is $20,000.

A shingle mill is being erected at Arrowhead, B.C., by Ralph Simpson.

The building will be two storeys, 32 x 60, and three shingle weaving machines are to be installed.

The New Ladysmith Lumber Company, Nanaimo, B.C., has acquired 2,500 acres of timber adjoining its holdings at East Wellington.

H. M. Ellis, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $50,600, to carry on business as lumber and timber merchants, sawmill, pulpmill and shingle mill owners.

The Dominion Shingle & Cedar Company, Limited, has been incorporated with head office at New Westminster, B.C., and capital stock of $45,000, to carry on business as lumber and timber merchants, loggers, shingle mill, planing mill and sawmill proprietors, etc.

The B. C. Trading and Transportation Company, Limited, has been incorporated with head office at Kamloops, B.C., and capital stock of $100,000, to carry on business as manufacturers and dealers in timber, lumber and logs and to operate sawmills, planing mills, etc.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 25th day of October, 1916, for the purchase of Pulp License X234, to cut 1,423,546 feet of Douglas fir and hemlock on an area adjoining Lot 2351, Mill Creek, New Westminster District.

The Colonial Pulp and Paper Mills, Limited, in which Mr. Geo. F. Whalen, Vancouver, and a number of his associates have acquired the controlling interest, are going ahead with the erection of a large plant at Quatsino Sound, B.C. The first unit will have a capacity of 60 tons of sulphite fibre per day.

Sealed tenders are being received by the Minister of Lands for British Columbia, until the 9th day of October, 1916, for the purchase of License X659, to cut 1,024,000 feet of fir, cedar, and hemlock and 5,120 lineal feet of poles on an area adjoining S. T. L. 1484P, Ramsay Arm, Range 1, Coast District. One year will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 11th day of October, 1916, for the purchase of License X703, to cut 10,066,000 feet of Douglas fir, cedar, larch, yellow pine, white pine, cotton-wood and dead and down timber; also 14,000 cedar poles and 86,000 railway ties, covering that portion of Lot 274, Kootenay District, situated south of the Goat River. Two years will be allowed for the removal of the timber.

Mr. Geo. F. Whalen, of Vancouver, B.C., and a number of his associates, have organized the Empire Pulp and Paper Mills, Limited, with a capital of $2,500,000, and will take over the old Swanson Bay Properties, where a pulp mill was installed a few years ago, but was only operated for a short time. The plant is now being overhauled and will be brought up to a capacity of 30 tons of sulphite fibre daily. The company will also carry on at Swanson Bay the manufacture of high grade spruce lumber.

Canadian Exports to Cuba

Canadian exports to Cuba during 1915 and 1914 included the following:

	Value, 1914.	Value, 1915.	Increase, 1915.	Decrease, 1915.
Wood pulp and newsprint	11,922	7,264	.....	4,658
Lumber	276,195	146,356	.....	129,839
Box shooks	3,486	4,950	1,464	.....
Barrels	14,715	13,392	.....	1,323

The total imports into Cuba from Canada during 1915 were valued at $1,123,336.

Offshore charter rates continue to soar, latest quotations being as follows: From Puget Sound or B. C. ports to Sydney, 125s.; to Melbourne, 137s. 6d. to 140s.; to Fremantle, 150s. to 160s.; to Iquique, 120s. to 125s.; to Valparaiso, for orders, 122s. 6d. to 125s. (2s. 6d. less direct); to South Africa, 250s.; to United Kingdom, direct port, 270c. to 275s.; Puget Sound or Columbia River to San Francisco, about $5.50; to Southern California ports, $6.50 to $7.00. There is an insufficient supply of steam schooners to handle the California business offering.

At a meeting of Washington lumbermen and State bankers, held at Seattle, "The Small Sawmill" was the topic discussed by C. L. Clemans, of the Nippon Lumber Company, Alpine, Wash. In the course of his remarks Mr. Clemans said: "In my opinion the great trouble with the lumber business during recent years may be laid to the ambition of some of my friends in the business who have endeavored to steadily increase their operations and have developed such great capacities that they have in many instances felt themselves compelled to bear the market to move their product." The same view has often been expressed in British Columbia. It is possible to point to various small mills that have made considerable money year after year, but some at least of the big concerns wear out their machinery in an endeavor to get back the first cost of the plant and equipment.

We Scan Every Board

before we permit it to go from here. It must be first class in every way or it doesn't go except for rough work. If you are building anything worth while build it right. And the first step is to get the best lumber, such as we sell exclusively.

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Prices on application

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"Brazel Patent" SNOW PLOWS

Known in every Camp from the Atlantic to the Pacific as the most satisfactory Snow Plow made.

Combination Model, Lumberman's Snow Plow, can be used either with or without Rut Cutter.

One man to operate. Adjusting wheels close together make change for light or heavy work in an instant. Wings placed to throw snow 9 ft. wider than sleigh track or narrower if desired. Height of mouldboards prevent snow falling back on track. BRAZEL PLOWS cut 6 in. wider than logging sleighs, roll snow outside track and away from roadway. Cut off knolls, fill up holes and leave a perfectly level road. Cut off dirt and manure heaps from an ice road leaving a clean roadbed. Roll up and push entirely away from the road, 12 inches of loose snow each time the plow passes over.

THE BATEMAN-WILKINSON CO., LIMITED
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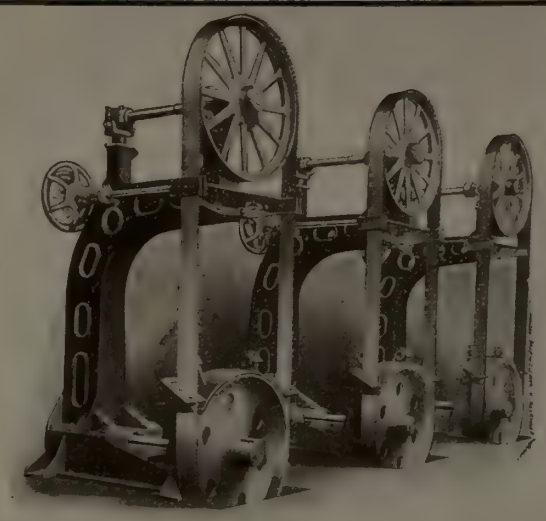

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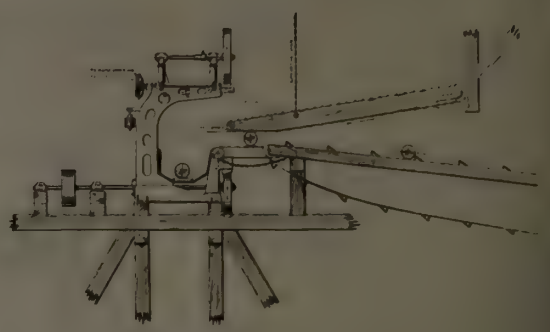

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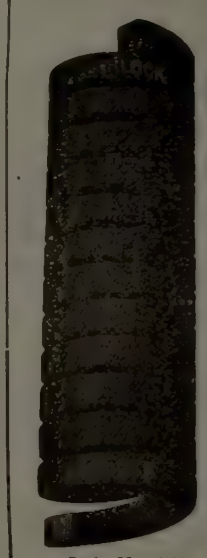

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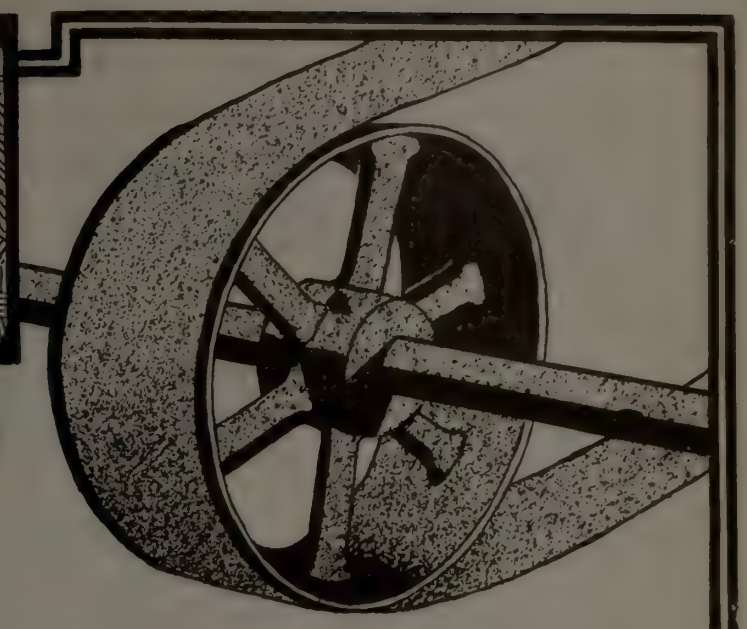

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4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	27 00	28 00
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1 x 8 common and dressing ...	27 00	29 00
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Dimension Timber up to 32 feet: 8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
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Hard maple, 1st and 2nds, 4/4	40 00
Hard Maple, common and better, 4/4	33 00
Hard maple, 12/4 & 16/4, 1sts and 2nds	50 00
Red oak, plain 1st and 2nds, 4/4 ...	60 00
Red oak, plain, No. 1 com., 4/4	42 00
Red oak, plain No. 2 com. 4/4.....	32 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain 1sts and 2nds, 4/4	60 00
White oak, plain, No. 1 com., 4/4...	42 00
White oak, plain, No. 2 com., 4/4....	32 00
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	60 00
Red and White oak, plain, No. 1 com. 5/4 and 6/4	45 00
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00
Red and White oak, plain, 1sts and 2nds, 8/4	70 00
Red and White oak, plain, No. 1 com. 8/4	50 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00
White oak, ¼ cut No. 1 common	57 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$52 00	54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ...	29 00	30 00
Pine, No. 1 dressing shorts ...	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ...	23 00	24 00
Pine, 1-in. x 5-in. s.c. strips ...	24 00	25 00
Pine, 1-in. x 6-in. s.c. strips ...	24 00	25 00
Pine, 1-in. x 7-in. s.c. strips ...	23 00	24 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	26 00	27 00
Pine, 1-in. x 10-in. M.R.	28 00	29 00
Pine, s.c. sidings, 1½ and 2-in.	28 00	30 00
Pine, s.c. strips 1-in.	21 00	23 00
1¼, 1½ and 2-in.	24 00	26 00
Pine, s.c. shorts, 1 x 4 to 6 in.		20 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x 10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11' ...	17 50	18 00
1"x 3" to 6", 12'-16'	19 00	20 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	17 00	19 00
Pine, mill culls stock, 1 x 12 ..	21 00	22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16' ...	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Quebec Spruce Deals		
12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00
Cuts and Better	
4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00
No. 1 Cuts	
1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00
No. 2 Cuts	
1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00
No. 3 Cuts	
1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00
Common and Dressing Mill Run	
1-in. x 4-in.	27 00
1-in. x 5-in.	27 00
1-in. x 6-in.	28 00
1-in. x 8-in.	28 00
1-in. x 10-in.	30 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00
No. 1 Barn	
1 inch	33 00 45 00
1¼, 1½ and 2-in.	36 00 45 00
2½ and 3-in.	45 00
4 inch	50 00
No. 2 Barn	
1 inch	28 00 36 00
1¼, 1½ and 2-in.	30 00 36 00
2½ and 3-in.	38 00
No. 3 Barn	
1 inch	26 00 30 00
No. 1, 1, 1¼, 1½, 2-in.	26 00 30 00
Box	
No. 1, 1, 1¼, 1½, 2-in.	22 00 25 00
No. 2, 1¼, 1½, 2-in.	24 00 25 00
Mill Culls	
Mill run culls, 1-in.	19 00
1, 1¼, 1½ and 2-in.	20 00
No. 2	17 00 18 00
Lath	
No. 1, 32-in. pine	1 85
No. 2, 48-in. pine	4 50
No. 1, 48-in. pine	5 00
No. 3, 48-in. pine	4 00
Hemlock Lath 48 in.	4 00

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1. E.			
	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8..	15 00	18 00	21 50	22 50
2 x 10	19 00	19 50	22 50	23 50
2 x 12	19 00	20 00	24 50	24 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	22 50
2 x 4, 10, 18, 20	24 50
2 x 6, 8 to 16	22 50
2 x 8, 8 to 16	22 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	30 50
2 x 10 and 2 x 12; 8-16 ft.	27 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	29 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	31 50
No. 1 Common Boards	
4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50
Flooring	
4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00
Shiplap—Finished	
6 inch	23 00
8, 10 and 12 inch	24 00
Siding	
6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00
Lath	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	28 10
3 x 8 in.; 8 to 16 ft.	25 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	28 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	30 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	21 50
2 x 4 in.; 12 and 14 ft.	22 50
2 x 4 in.; 10 and 16 ft.	23 50
2 x 4 in.; 18 and 24 ft.	24 50
2 x 4 in.; 22 and 24 ft.	25 50
2 x 4 in.; 26 to 32 ft.	27 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.....	24 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.....	26 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.....	27 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.....	29 00
2 x 14 in.; 10 to 16 ft.	29 00
2 x 14 in.; 18 and 20 ft.	31 00
2 x 14 in.; 22 and 24 ft.	32 00
2 x 14 in.; 26 to 32 ft.	34 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	25 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	26 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	27 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	28 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	30 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	28 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	28 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	29 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	29 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 50
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ...	23 50
No. 2 Shiplap, 6 in.	22 50
No. 2 Shiplap, 8, 10 and 12 in.	23 50

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 85

LATH

Fir lath, ¾ x 1½ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ¾ x 1½ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00

(Continued on page 66)

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Phone—Main 7025

CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	62 00
No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10 4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	42 - 44	26 - 28	14 - 16
5/4 to 8/4	44 - 46	28 - 30	16 - 18

SAP BIRCH

4/4	37 - 39	24 - 26	16 - 18
5/4 and up	37 - 39	24 - 26	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in...		98 00
Selects, 1 to 2 in.		88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	72 00	74 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	46 00	50 00
No. 1, 1 x 10	37 00	38 00
No. 1, 1 x 8	36 00	37 00
No. 2, 1 x 12	38 00	40 00
No. 2, 1 x 10		35 00
No. 2, 1 x 8		34 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	29 50	30 00
No. 3, 1 x 8		29 00
Canadian spruce boards	23 00	25 00
Spruce, 10 in. dimension	27 00	28 00
Spruce, 12 in. dimension	28 00	29 00
Spruce, 9 in.		25 00
Spruce 8 in. and under dimen.		27 00
10 and 12 in. random lengths, 10 ft. and up	26 00	27 50
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	21 00	22 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	22 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50	23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled		22 00
1½-in. spruce laths	4 10	4 15
1½-in. spruce laths		3 75

New Brunswick Cedar Shingles

Extras	3 50	3 60
Clears	3 10	3 15
Second clears	2 30	2 40
Clear whites	2 10	2 20
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.		3 75
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear		3 65

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If you install a

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Common Sense Dry Kiln

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Sturtevant Kilns are built with a thorough understanding of the requirements of the average plant, and are so simple that the average attendant can operate them with good results.

Why not get in touch with our experts on lumber drying — or send for Catalogue No. 220-C.

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This is a product that should have your most careful attention. When so much depends directly on the successful operation and dependability of Fire Brick in your plant, it will repay you many times to make a most careful investigation before the installation. Let us show you where our product has been successfully used for years. Let us suggest a special brand for your particular purpose.

We have an interesting catalogue that will be sent you. It will give you an insight into the proper methods of Fire Brick construction.

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200 Rooms, Private Bath, $2.00 Single, $3.00 Up Double.
100 Rooms, Private Bath, $2.50 Single, $4.00 Up Double.
100 Rooms, Private Bath, $3.00 to $5.00 Single, $4.50 Up Double.

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Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa,
December 20th, 1912.

Deputy Minister.

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(Continued on page 70)

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(Continued on page 68)

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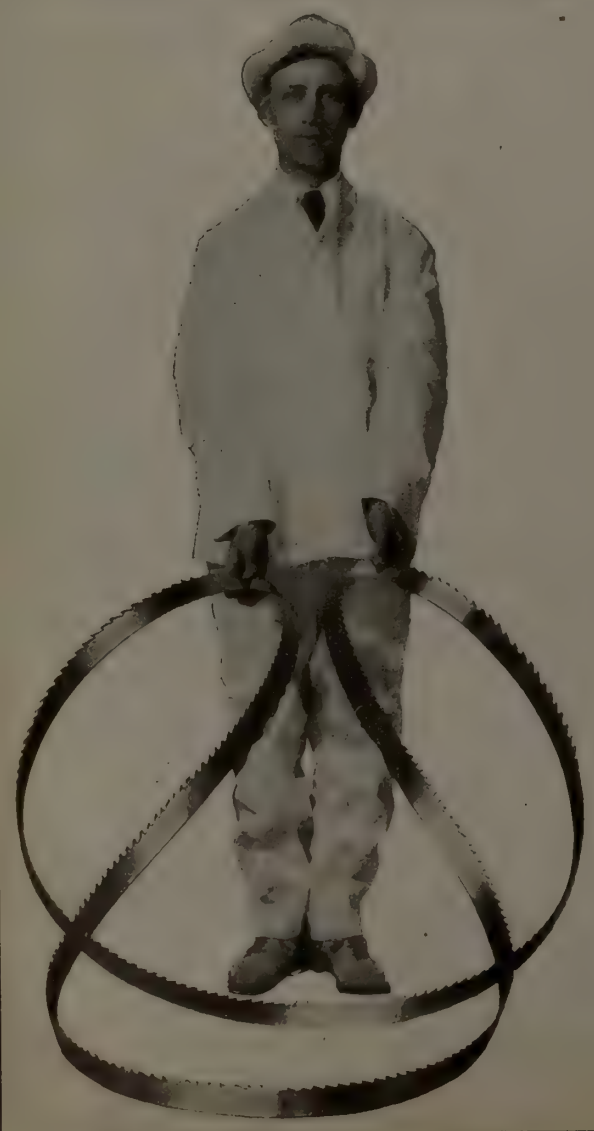

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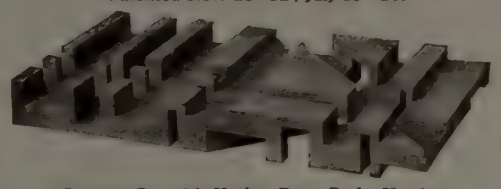

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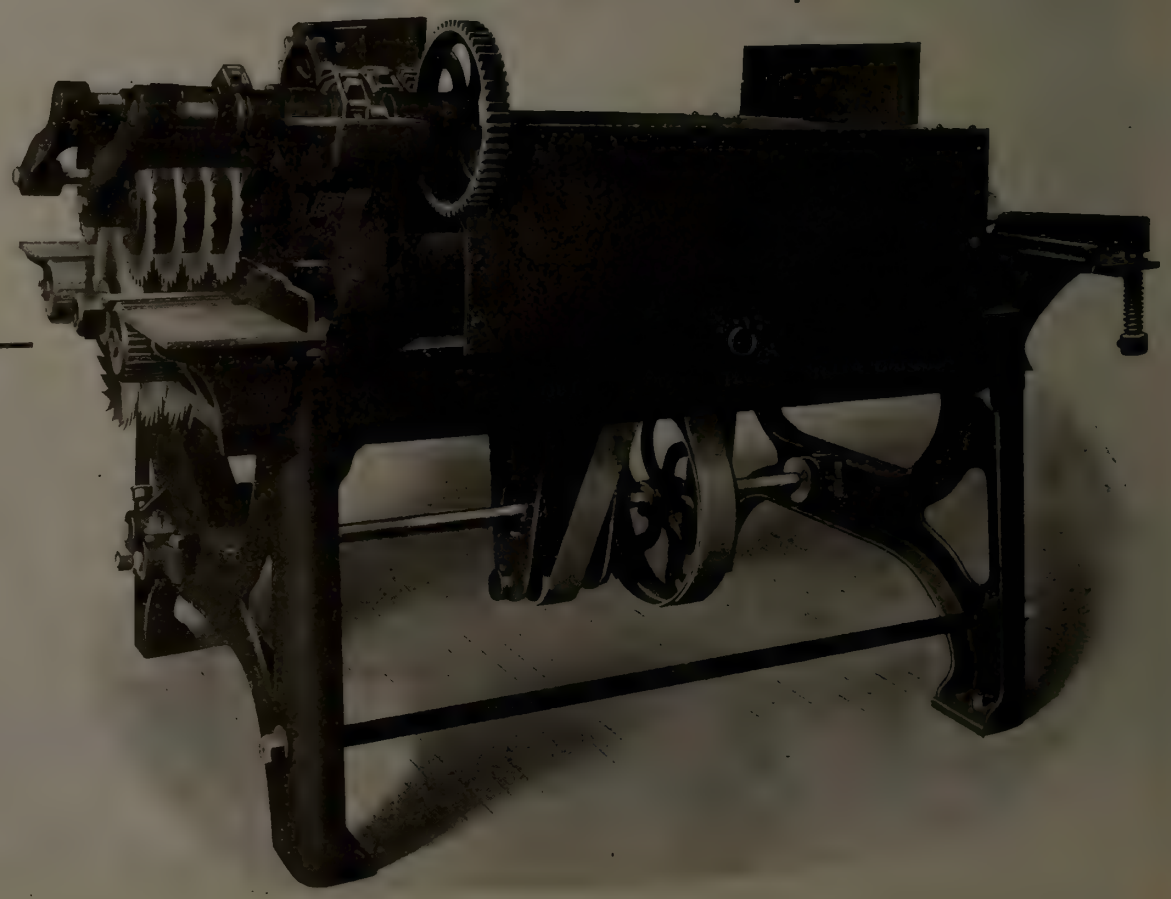

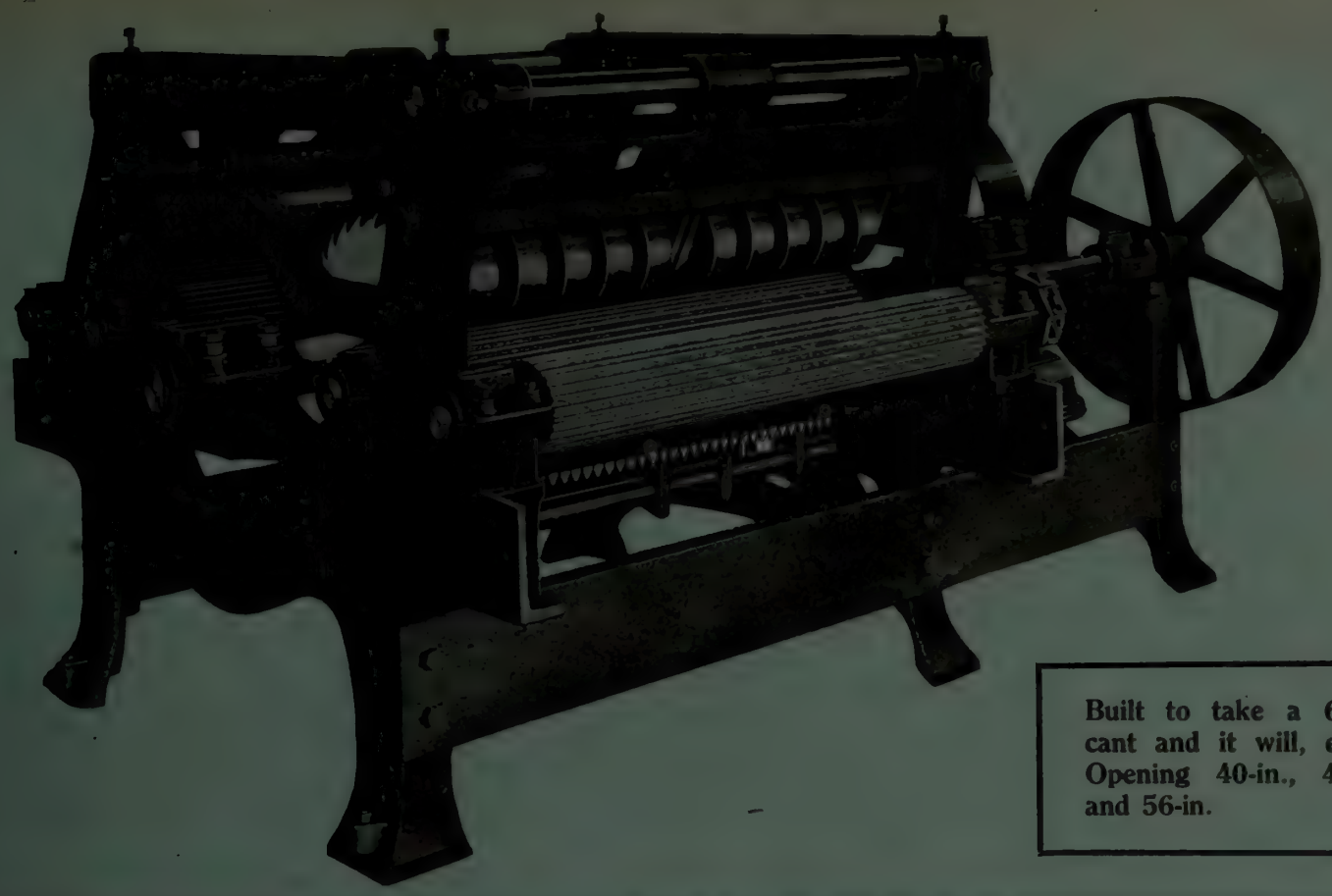

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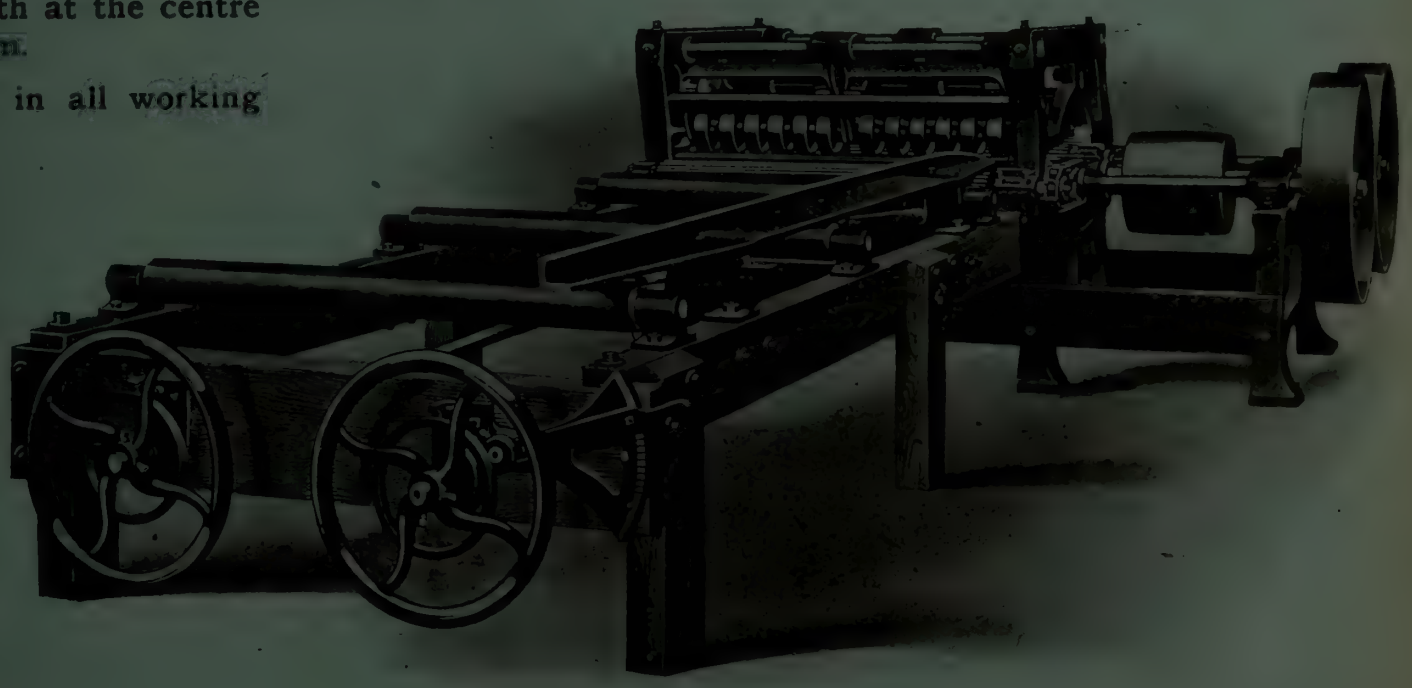

A 6-inch cant will go through this machine as easily as a 2-inch plank, and will come out edged to a hair.

Catalogue No. 113

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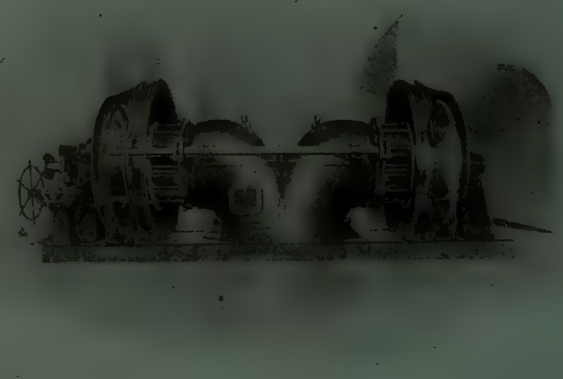

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Vol. 36 Toronto, October 15, 1916 No. 20

Canada Lumberman & Wood Worker

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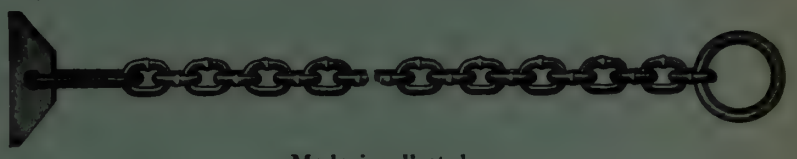


Made in all styles

Electric-Welded Boom Chain

We also specialize

Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

BUY GOOD HARNESS

Here's a big problem solved.
Forget your harness troubles. Alligator Brand is used year in and year out by wise lumbermen without the least trouble or delays of any kind.
Made to wear through sleet and snow and under most trying conditions.
The leather, tanning workmanship and hardware are good. Our 50 years experience is a guarantee of quality.
We have a big interesting catalogue giving complete descriptions of several harness models that will fill your needs. Write for it to-day.

Lamontagne Limited

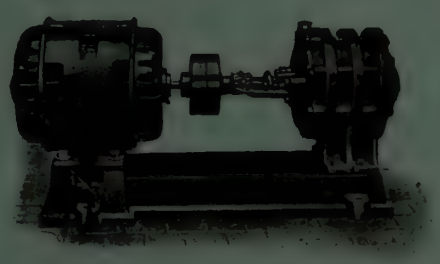
MONTREAL—338 Notre Dame St. W.
WINNIPEG—85 Princess St.

"TOWER"
HAIR BELTING

Woven from Camel's Hair Yarn

Manufactured and guaranteed by

Turner Bros. Canada Limited
Montreal



We are building a complete line of

Pumping Machinery

and know that we can supply your particular requirements.

Let us show you.

The Smart-Turner Machine Co., Ltd.
HAMILTON CANADA

Morrison's "BEAVER" Valves

For high pressure steam uses our "Beaver" valves will fill every requirement perfectly. "Beaver" Globe Valves, Check Valves, Angle Valves, and Cross Valves are made in sizes 1½-inch to 3-inch, all bronze, and sizes 2½-inch to 10-inch iron or semi-steel body, bronze mounted. The Angle Valve illustrated is constructed with outlet under level of seat, leaving no pocket where water may lodge when valve is closed. Can be furnished in stop or adjustable check pattern. Write for complete description and prices of "Beaver" Valves and any of our lines of Brass Goods.

The James Morrison Brass Mfg. Co., Limited
93-97 Adelaide Street West, TORONTO

Beaver Angle Valves
MADE IN CANADA.

Alphabetical Index of Advertisers, Page 62 Classified Directory to Advertisements, Page 64

THE PLANT BEHIND

DEARBORN FEED-WATER TREATMENT

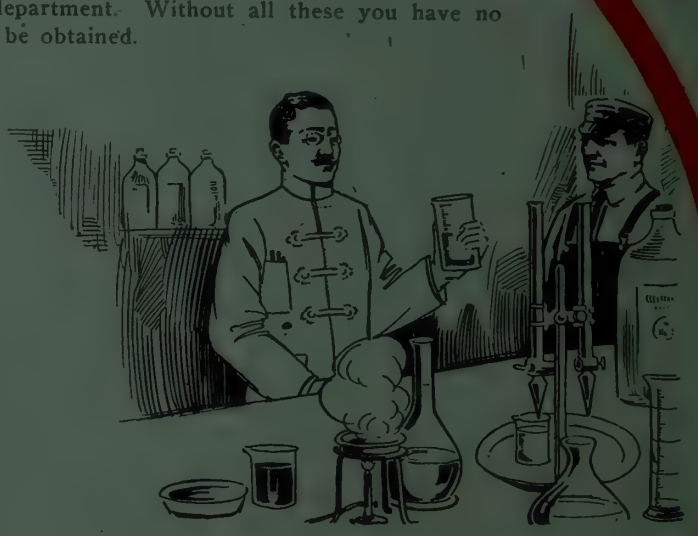
Dearborn Methods

Dearborn Scientific Treatment of Boiler Feed Waters

Hit the Mark

In order to intelligently cope with the subject of feed water treatment, a thorough knowledge of Chemistry, both theoretical and applied, and of steam engineering, both practical and theoretical, must be at hand. Complete, suitable, and properly equipped laboratories must be maintained and operated by thorough and competent chemists, especially trained as water analysts, and of equal importance, a suitably equipped manufacturing plant, for the proper compounding and mixing of such preparations as are prescribed for each specific case from formula constructed and furnished by the technical department. Without all these you have no reliable assurance that satisfactory or the best results will be obtained.

DEARBORN WATER TREATING PREPARATIONS are scientifically prepared to meet the requirements of the mineral ingredients and other objectionable constituents of the water, the percentage of each mineral salt governing the percentage of the antidotal ingredient in the treatment. By these methods we avoid the use of an excess or deficiency of any part of the treatment, every pound being utilized in the reactions taking place. There is no mechanical, unknown, or unlooked for result obtained from the use of our goods; we cause a complete chemical reaction to take place between the deleterious constituents of the water and the ingredients of our preparations.



GREATER EFFICIENCY
ELIMINATE
BOILER TROUBLES
SATISFACTION

NO MATTER WHAT the type or size of your boiler may be, Dearborn Service will give you increased steaming capacity and effect important economies.

IT'S ONLY GOOD BUSINESS for you to investigate any proposition which promises big economies and big gains in operating efficiency.

SEND a gallon sample of feed water for analysis.

MADE IN CANADA

Dearborn Chemical Company of Canada
LIMITED
1220-30 Dundas St., Toronto, Ont., Canada

Bartram Brothers

Limited

Ottawa, Canada

STOCK ON HAND UNSOLD AUGUST 31, 1916

White Pine, Good

1 x 4 and up x 6/9	2,469
6/4 x 4 and up x 6/9	296
1 x 4 and up x 10/16	4,291
1 x 7 and up x 10/16	5,825
2 x 4 and up x 10/16	687
3 x 4 and up x 10/16	2,790

White Pine Mill Run

1 x 4 x 10/16	45,871
1 x 5 x 10/16	35,934
1 x 4/5 x 10/16	97,724
1 x 6 x 10/16	81,067
1 x 8 x 10/16	127,593
1 x 9 x 10/16	1,879
1 x 10 x 10/16	3,211
1 x 12 x 10/16	11,163
1 x 7 and up x 10/16	140,334
5/4 x 4 x 10/16	4,651
5/4 x 5 x 10/16	2,165
5/4 x 6 x 10/16	3,371
5/4 x 7 x 10/16	7,771
6/4 x 4 and up x 10/16	40,122
2 x 4 and up x 10/16	210,268
2 x 6 and up x 10/16	3,150
2 x 8 and up x 10/16	10,879
3 x 4 and up x 10/16	118,859

White Pine Mill Culls

1 x 4 and up x 6/16	135,691
6/4 x 4 and up x 6/16	4,917
2 x 4 and up x 6/16	85,084
3 x 4 and up x 6/16	69,497

White Pine Dead Culls

1 x 4 and up x 6/16	252,103
3 x 4 and up x 6/16	9,920

Jack Pine C. & C. F.

1 x 4 and up 10/16	3,450
2 x 4 and up 10/16	1,440

Jack Pine Mill Run

1 x 4 x 10/16	35,721
1 x 5 x 10/16	36,290
1 x 4/5 x 10/16	904,679

Jack Pine Mill Run

1 x 6 x 10/16	76,357
1 x 7 x 10/16	24,286
1 x 8 x10/16	19,612
1 x 12 x 10/16	854
2 x 4 x 10/16	62,813
2 x 6 x 10/16	79,263
2 x 8 x 10/16	76,762
2 x 10 x 10/16	8,096
2 x 4 and up x 10/16	3,900
2 x 5/7 x 10/16	9,900
3 x 4/6 x 10/16	19,484
3 x 7 and up x 10/16	96,967

Jack Pine Mill Culls

1 x 4 and up x 6/16	83,541
5/4 x 4 and up x 6/16	230,035
2 x 4 and up x 6/16	73,669

Jack Pine Dead Culls

1 x 4 and up x 6/16	24,406
5/4 x 4 and up x 6/16	45,315

Spruce Mill Run

1 x 3 x 10/16	85,000
1 x 4 x 10/16	268,995
1 x 5 x 10/16	281,043
1 x 6 x 10/16	405,534
1 x 7 x 10/16	9,459
1 x 8 x 10/16	2,737
2 x 4 x 10/16	291,013
2 x 5 x 10/16	401,879
2 x 6 x 10/16	359,324
2 x 7 x 10/16	204,100
2 x 8 x 10/16	65,817
2 x 9 x 10/16	42,626
3 x 9 x 10/16	15,000

Spruce Culls

3 in. 5th Quality	80,000
3 in. 6th Quality	200,000

Lath Mill Run

1½ x 3/8 x 32 in. White Pine	433,350
1½ x 3/8 x 32 in. Jack Pine	784,750

QUALITY LUMBER

Buy NOW Before Prices Advance

OUR EASTERN STOCKS ARE ALMOST COMPLETE IN CHOICE

White Pine, Hemlock and Spruce Lumber and Lath,

Also T. & G. Quality Brand British Columbia Forest Products

We can supply you with the best stock on the market at reasonable prices.

See us before placing your Fall orders

Branch Office
852 Cambie Street
Vancouver

Terry & Gordon

Wholesale Lumber Merchants

Head Office
704 Confederation Life Bldg.
Toronto

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

The Long Lumber Company
HAMILTON, ONT.

Hardwood

45,000	4/4 Mill Run Maple	1915 Cut
14,000	4/4 Com. & Bet. Elm	" "
14,000	4/4 No. 2 & 3 Com. Ash	" "

No. 2 Hemlock

1915 Cut Must Move

200,000	8/4 x 6 and up,	No. 2 Hemlock
250,000	8/4 x 4	No. 2 "

4 Cars 3 x BC Shingles in Transit

Get our prices on above and also on pine, spruce, etc.

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

HIGH GRADE

MUIR, KIRKPATRICK & SHARPE

HEAD OFFICE
1325-6-7-8 Traders Bank Bldg., Toronto

WESTERN OFFICE
1007 Dominion Bldg., Vancouver, B. C.

We Have a Very Large and Complete Stock of

WHITE PINE, RED PINE, JACK PINE, SPRUCE and LATH

on which we are quoting very interesting prices.

LET US HAVE YOUR ENQUIRIES

We have several million nice dry Spruce and Pine Laths on which we can give very prompt shipment.

SHINGLES

WE ARE OFFERING SPECIAL:

300 M 1 x 4 and wider Cull Spruce, Bone Dry.
200 M 1¾ x 4 and wider Cull Spruce, Bone Dry.
200 M 2 x 4 and wider Cull Spruce, Bone Dry.
400 M 1 x 4 to 1 x 10 Mill Run Spruce, Bone Dry.
100 M 1 x 4 and 5 Mill Run Spruce Flooring Dressed to ⅞ in.
100 M 1 x 4 and wider Mill Run Spruce Dressed one side to 15/16 in.
600 M pcs. 1½ x ⅜ x 4-0 No. 3 Spruce Lath.
300 M pcs. 1⅜ x ⅜ x 4-0 No. 3 Norway Lath.

LET US QUOTE YOU

FIR and CEDAR

LUMBER

Murray & Gregory, Limited

Head Office:
ST. JOHN, N. B.

Established 1868

Quebec Office:
ST. CAMILLE, Bellechase Co., P.Q.

SAW MILLS

St. John, N.B., St. Camille and Lake Frontier, Que., cutting SPRUCE and PINE Lumber for British, United States and Canadian Markets.

Also

LATH, SHINGLES, PULPWOOD and RAILWAY TIES

Manufacturing and Grading Right

Trade *Mark*

Address all enquiries to our Head Office, ST. JOHN, N. B.

WE CAN SELL YOU

All from Horseshoe Logs

Lumber
Boxes
Lath
Blocks
Pails
Slabs
Posts
Sawdust

REMEMBER OUR PLANING MILL FACILITIES

The C. Beck Manufacturing Co., Limited

Penetanguishene, Ontario

"We Aim to Serve You with the Best"

Vancouver Lumber Co.

LIMITED

FIR
Timbers
Rough and Dressed

FIR
Flooring
Ceiling
Mouldings
Etc.

CEDAR
Shingles
Bevel Siding
Barn Boards
Silo Stock
Boat Lumber
Etc.

View of our Fir Sawmill, False Creek, Vancouver, B. C. (Capacity 200,000 ft.)

Our two modern mills enable us to give you

SERVICE and QUALITY

unsurpassed in British Columbia

Eastern Sales Office:

701 EXCELSIOR LIFE BUILDING
TORONTO, ONT.

Representative:—CHAS. PLANT

Watson & Todd Limited
OTTAWA

DRY NORWAY

2 x 4 —	10/16 feet	2 x 8 —	10/16 feet
2 x 5 —	" "	2 x 9 —	" "
2 x 6 —	" "	4 x 6 —	" "
2 x 7 —	" "	4 x 7 —	" "

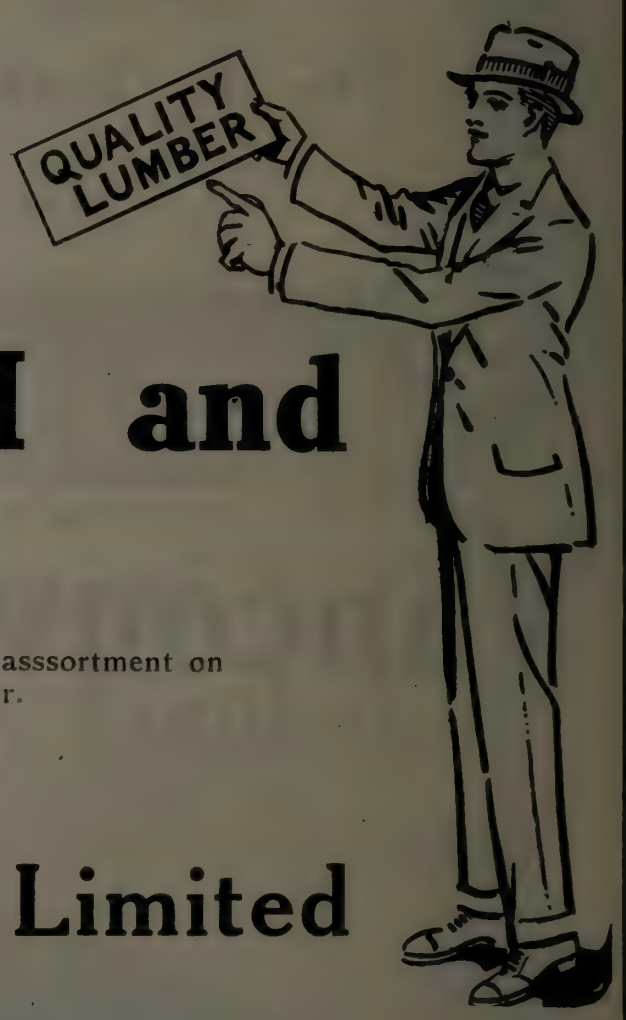
Send us your enquiries

The
Harris Tie & Timber Co.
Ottawa - Canada

Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

High Quality Lumber and Good Service

Our long experience insures good service and satisfaction on all orders placed with us for



LUMBER, LATH and SHINGLES

We specialize in **HEMLOCK BILL STUFF** and have the best asssortment on the Georgian Bay. Our yards are unexcelled for drying lumber.

All stock matched or sized if desired.

PHONE US A TRIAL ORDER

Established 1855

McGibbon Lumber Co., Limited
PENETANGUISHENE, ONT.

River Ouelle Pulp & Lumber Co.

Manufacturers of

SPRUCE

Lumber Lath Pulpwood

Head Office and Mills at:
St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of Quebec City

Also Mills at:
Crown Lake, Powerville Riv. Manie
On Nat. Transcontinental Ry.

Mill Yard.

Spruce, Tamarac, Whitewood and Poplar Lumber

SPRUCE AND WHITEWOOD LATH

Planing Mill in connection with Saw Mill

ROSSED SPRUCE PULPWOOD

Full supply of Seasoned Lumber always on hand.

RICH CLAY LOAM LANDS FOR SALE—Townships of Haggart and Kendry. District of Temiskaming. Excellent opportunities for the settler. Write for particulars.

New Ontario Colonization Company, Limited
Sales Office, BUFFALO, N.Y.

Mills:—Jacksonboro, Ont. Located on Transcontinental R.R., 32 miles west of Cochrane.

COMPLETE STOCKS

The fact that our stocks are complete and well assorted assures you of **Satisfactory Service, Good Grades** and **Right Prices.** We want your inquiries and orders when in the market for

Railway Ties and Pulpwood
Rough and Dressed Lumber and Lath

We specialize on cutting to order all sizes of

Dimension Timber

Also in Dressing in car or mixed lots 1″, 2″ and 3″ to customers' specifications.

Complete stocks always ready for prompt shipment.

We are the Largest Producers of Railway Ties in the Dominion

Austin & Nicholson
Chapleau, Ontario

Chicago Lumber & Coal Co.

Manufacturers

General Offices: EAST ST. LOUIS, ILLS.

In dealing with us you secure the following ***advantages:***

The finest long and short leaf Yellow Pine.
Genuine Louisiana red gulf Cypress and Arkansas White Oak.

Up-to-date mills and unsurpassed ***SERVICE.***

We are ***prepared*** to fill orders—try us.

California White Pine
California Sugar Pine
and Arizona Soft Pine

Best Stock for Factory and Pattern Lumber

Ask LOUIS WUICHET

Room 716 Railway Exchange, CHICAGO, ILLINOIS

We offer for Immediate Shipment

BASSWOOD

1″ and 1½″ Dry Basswood

DRY BIRCH STOCK

We offer in Birch End Stock—1 x 8½″ 1 x 9″ and wider
1 x 6 and 7″ 1½″ to 4″

Spruce, Basswood, Ash, Hemlock and Pine

HART & McDONAGH, 513 Continental Life Bldg., TORONTO

Phone Main 2262

QUALITY HARDWOOD

Birch
Beech
Maple

If you are interested in Hardwoods, you will be interested in us.

We are manufacturing high quality Hardwood Lumber, sawing and grading according to National Hardwood Association Rules.

The Logs are cut from our own soil-right Lands, and particular attention given to quality.

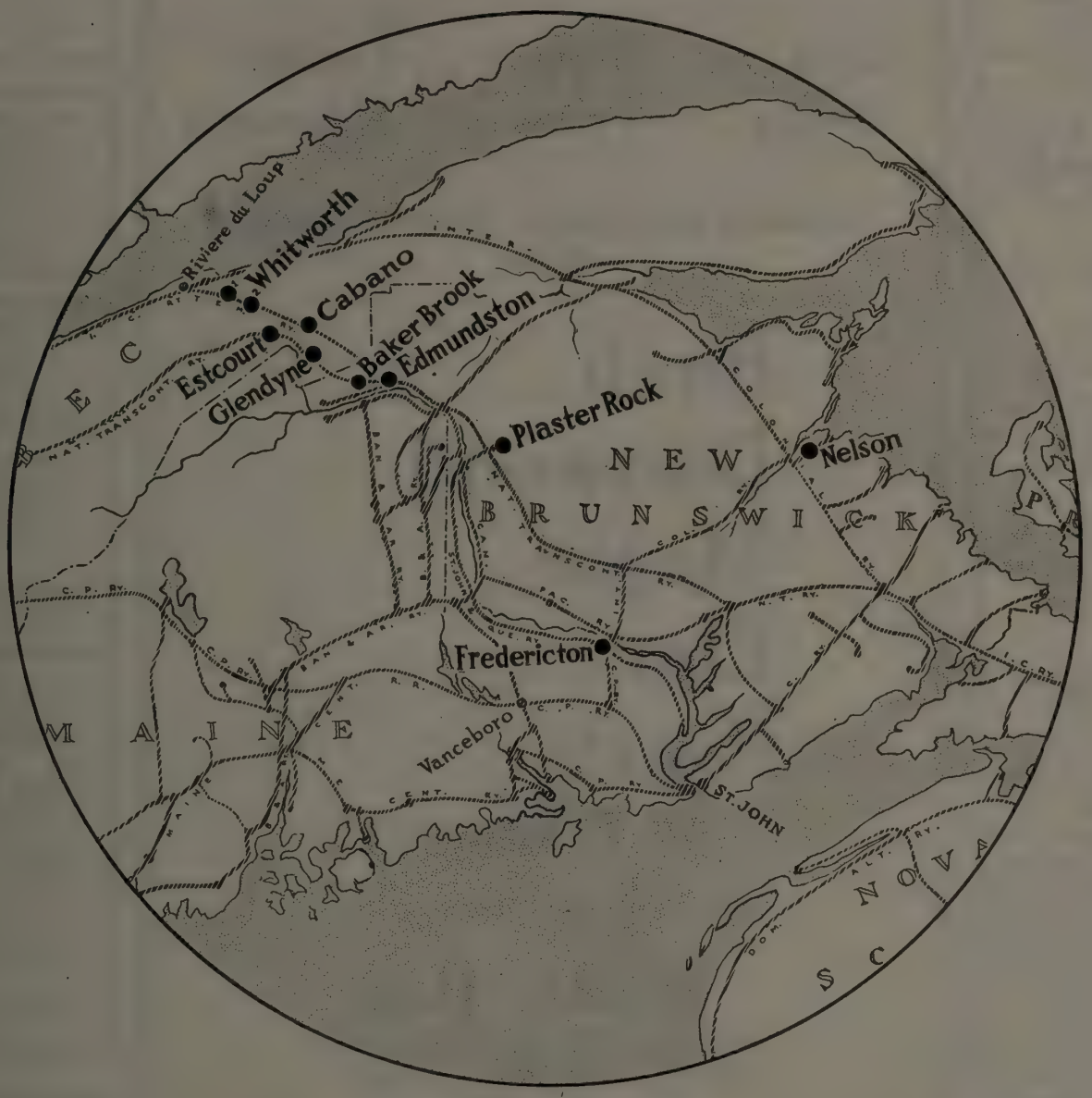
Our Mills are located on Canada Eastern Branch and Transcontinental Branch of the Canadian Government Railway, and in the heart of the best forests in New Brunswick.

Our Head Office in St. John will answer all enquiries.

Edward Partington Pulp & Paper Co.

ST. JOHN **Limited** **N. B.**

Ten Band Mills to Serve You



Mills and Railway Connections

Fredericton, N.B.	Railway connection		C. P. R.
Plaster Rock, N.B.	"	"	C. P. R.
Nelson, N.B.	"	"	I. C. R.
Edmundston, N.B.	"	"	C. P. R. or Temiscouata Ry.
Baker Brook, N.B.	"	"	Temiscouata Ry. and N.T.R.
Glendyne, Que.	"	"	N. T. R.
Escourt, Que.	"	"	N. T. R.
Cabano, Que.	"	"	Temiscouata Ry.
Whitworth, Que. (No. 1, No. 2)	"	"	Temiscouata Ry.

Fraser Limited, Fredericton, N. B.

ROUGH AND DRESSED SPRUCE, WHITE CEDAR SHINGLES, SPRUCE LATH, PIANO SOUNDING BOARD STOCK.

JOHN MCKERGOW, President — W. K. GRAFFTEY, Managing-Director

The Montreal Lumber Co. Limited

Wholesale Lumber

Ottawa Office: 46 Elgin St. — Montreal Office: 759 Notre Dame St., W

James P. Grant — John K. Campbell

Grant & Campbell

Manufacturers of

SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

New Glasgow, N. S.

PRESSES

Hydraulic and Screw for VENEER VENEER DRYERS PULP

Special machinery made to order

WILLIAM R. PERRIN

TORONTO, CANADA Limited

PATENTS SECURED OR OUR FEES RETURNED

Being next door to the Patent Office, we have personal interviews with Examiners, thus earlier allowance of your Patents. We have access to all Records and solicit the business of Manufacturers, Engineers, and others who realize the advisability of having their Patent business transacted by Experts. Send for our Booklet, etc.

HAROLD C. SHIPMAN & CO.
Reg. Patent Attorneys — Ottawa, Canada

BOX SHOOK WIRE

Wire tied box shooks can be handled more easily, more economically and with the safe assurance that wire will not break. Write for Quotations.

LAIDLAW BALE-TIE CO., Ltd.

HAMILTON, ONT.

CANADIAN OFFICE & SCHOOL FURNITURE CO. LIMITED
PRESTON ONT.
FINE BANK, OFFICE, COURT HOUSE & DRUG STORE FITTINGS
OFFICE, SCHOOL, CHURCH & LODGE FURNITURE
SEND FOR CATALOGUE

Spark Arresters

Wire Cloth for Refuse Burners

Our spark arrester is substantially built and will last for years. Don't wait until a fire has visited your property, equip your mill at once.

Prices on application

Canada Wire & Iron Goods Co. Limited

HAMILTON, ONT.

Lumber

Good Grades — Right Prices — Prompt Shipments

Canadian Hardwood. National Grading Rules

Birch
Basswood
Maple
Elm
Beech

All Thicknesses

Also full lire in

White, Red

and

Jack Pine

All grades and sizes.

Get in touch with us for prices

C. G. Anderson Lumber Company, Limited

Manufacturers and Strictly Wholesale Dealers in Lumber

705 Excelsior Life Building
Toronto

WE Buy, Sell and deal in all kinds of Lumber and Timber in Canada and United States: Spruce, White Pine, White and Basswood, Ash, Cedar, Douglas Fir, Beech, Birch, Walnut, Cherry, Chestnut, Cottonwood, Hemlock, Maple, Norway Pine, Short and Long Leaf Yellow Pine, Oak, Redwood, Birch, Maple and Oak Floorings, Pulpwood Ties, and Cedar Poles.

AUGER & SON

QUEBEC

HAEBERLE LUMBER CO.

LUMBER AND TIMBER

White Pine, Norway, Yellow Pine, Hemlock Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties,

Yellow Pine Timber a Specialty. Interior Trim Mill Work

NIAGARA FALLS, N.Y.

WHOLESALE DEALERS

Eastern and Southern Lumber

We are at all times in the market for dry WHITE PINE, DIMENSION SPRUCE, SPRUCE BOARDS, HEMLOCK BOARDS, LATH and CLAPBOARDS.

Advise us of your Market Prices and Stocks

A. H. Richardson Lumber Co.

176 Federal Street, BOSTON, MASS

SPRUCE BIRCH HEMLOCK

Merchantable	100,000′	1″ Spruce
"	100,000′	2 x 4 Spruce
"	300,000′	2 x 5 and up to 8″ Spruce
100,000′		1″ Birch
300,000′		3″ Birch
100,000′		1″ Hemlock

Prompt shipments

J. A. LAFERTÉ

Room 38-9
55 St. Francois Xavier Street
MONTREAL

HARDINGE

Watchman's Clocks

Write for details

SIGNAL SYSTEMS CO.
205 Stevenson Bldg., TORONTO

SPECIALTIES

Sawed Hemlock
Red Cedar Shingles
White Pine Lath
Bass and Poplar Siding

James Gillespie

Pine and Hardwood

Lumber

Lath and Shingles

North Tonawanda, N.Y.

Timber Estimates

Our reports are the result of the honest work of experienced men. We deal in facts.

JAMES W. SEWALL
OLD TOWN, - MAINE

Lt.-Col. L. J. D. Marquis
FOREST ENGINEER
Timber Estimates and Valuations.
Topographical and Logging Maps.
Forest Management and Operations.
TRANSACTIONS ON TIMBER LANDS
111 Mountain Hill, QUEBEC

A. D. McINNIS
Is prepared to make reports, and estimates on all classes and kinds of Timber, together with Maps, and cost of operating, also sell or buy for you.
25 years practical experience in woods operations and cruising.
CACHE BAY, ONTARIO

PHILIP T. COOLIDGE
FORESTER
Technical training and ten years' experience. Timber Estimating and Mapping. Supervision of Lumbering Contracts. Surveying. Forest Planting.
Stetson Building, 31 Central Street
BANGOR, MAINE

Cant & Kemp
52 St. Enoch Square
GLASGOW
Timber Brokers
Cable Address, "Tectona," Glasgow
A1 and A B C Codes used

FARNWORTH & JARDINE
Cable Address: Farnworth, Liverpool
WOOD BROKERS and MEASURERS
2 Dale Street, Liverpool, and Seaforth Road, Seaforth, Liverpool, England

WE ARE BUYERS OF
Hardwood Lumber
Handles
Staves Hoops
Headings
James WEBSTER & Bro.
Limited
Bootle, Liverpool, England
London Office
Dashwood House 9 New Broad St. E. C.

"Well Bought is Half Sold"

Please Examine These Two Bunches of Lath

AT SPANISH:

5 Cars 3/8 x 1½ in., 4 ft. No. 1 White Pine Lath.
7 Cars 3/8 x 1½ in., 4 ft. No. 2 White Pine Lath.
6 Cars 3/8 x 1½ in., 4 ft. No. 3 White Pine Lath.
3 Cars 3/8 x 1½ in., 32 in. White Pine Lath.
100 M. 3/8 x 1½ in., 4 ft. No. 1 Nor. and Spruce Lath.
38 M. 3/8 x 1½ in., 4 ft. No. 2 Nor. and Spruce Lath.

AT MILNET:

3 Cars 3/8 x 1½ in., 4 ft. No. 1 White Pine Lath.
2 Cars 3/8 x 1½ in., 4 ft. No. 2 White Pine Lath.
4 Cars. 3/8 x 1½ in., 4 ft., No. 3 White Pine Lath.
Well made, carefully graded, and dry

ALSO THESE LUMBER SPECIALS

3 Cars 3 in. Winter-cut Hard Maple, heavy to 1st and 2nd.
2 Cars 6/4 in. No. 1 Com. and Bet. Hard Maple.
2 Cars 6/4 in. No. 2 Com. and Bet. Basswood.
1 Car 5/4 in. No. 2 Com. and Bet. Basswood.
2 Cars 4 x 6 in. Birch Hearts.
1 Car 3 x 6 and up Birch Hearts.
2 Cars 4 x 4 in. Sound Cedar.
1 Car 4 x 6 in. Sound Cedar.
¼ Car each 4 x 4, 4 x 6, 5 x 5, and 6 x 6 Sound Cedar.

In wood we have:—
4 ft. Dry Hardwood.
4 ft. Dry Hemlock Slabs.

YOUR ENQUIRIES WILL HAVE PROMPT ATTENTION

Graves, Bigwood & Co.

MANUFACTURERS OF

Pine
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Hardwood } **LUMBER**

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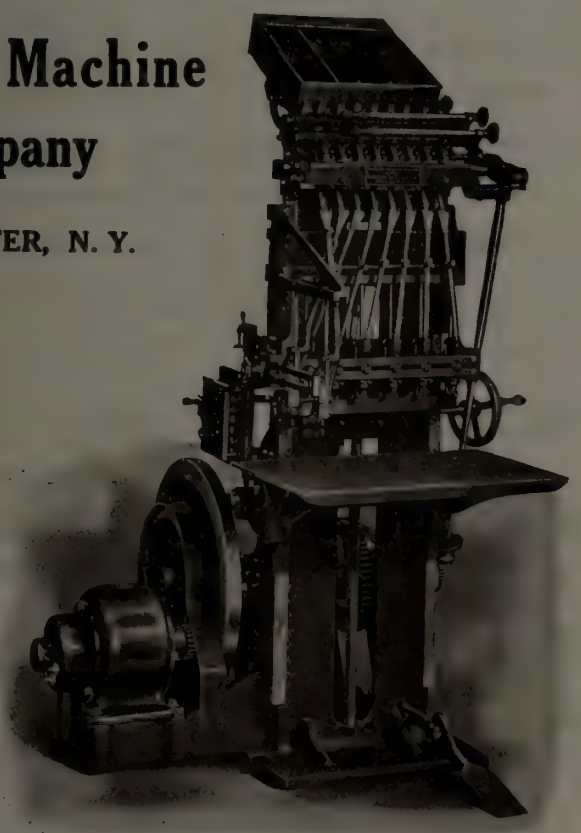

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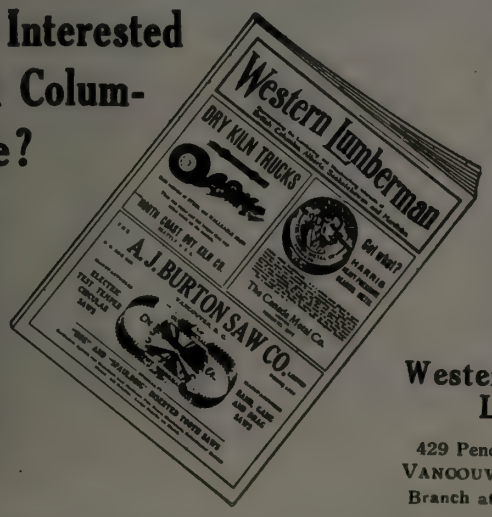

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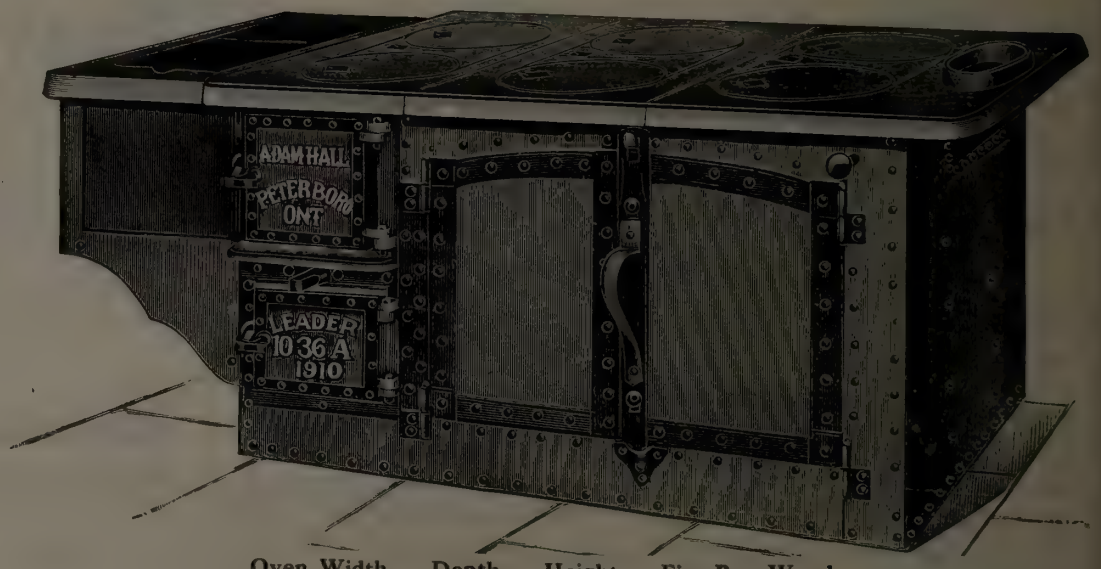

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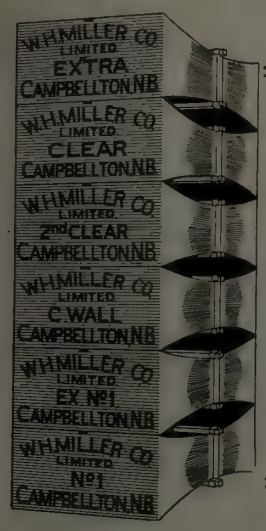

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MONTREAL **TORONTO** **WINNIPEG**

Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

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HUGH C. MacLEAN, Winnipeg, President.
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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster General for Canada, for transmission as second class matter.

Entered as second class matter July 18th, 1914, at the Postoffice at Buffalo, N. Y., under the Act of Congress of March 3, 1879.

Vol. 36 Toronto, October 15, 1916 No. 20

Shell Box Inspector Helping Manufacturers

In the course of a discussion upon the shell box industry recently, a prominent lumberman interested in the manufacture and wholesale marketing of stocks suitable for shell boxes, expressed the opinion that the Imperial Munitions Board, by the appointment of an inspector to visit plants and criticize and assist manufacturers, had done the industry an excellent turn. It is common knowledge, he said, that for some time there was much dissatisfaction among box manufacturers over the system of inspection of the work done. In numerous cases the inspectors went to extremes. At one plant they would give a very severe inspection, working a hardship on the manufacturer; in many cases the inspection being performed by men who had no knowledge of the work. At other factories the inspection ran to the other extreme, amounting really to very little inspection at all, thus enabling a manufacturer to get away with practically anything he wanted to turn out. This led to such widespread disapproval among manufacturers that the Imperial Munitions Board took action and appointed Mr. C. M. Tremear to a position which required him to visit manufacturers and to criticize and assist them in their work. Mr. Tremear is a practical woodworker and thoroughly acquainted with everything essential in connection with such duties. His efforts on behalf of the shell box manufacturers have been much appreciated by the manufacturers themselves.

In conversation with a number of these box manufacturers, we have been informed that the new system has been a great benefit. Mr. Tremear has been able to advise the manufacturers just where they were making their mistakes, and to correct them at a minimum of cost, making extensive savings both to the manufacturers and to the Imperial Munitions Board. He is not only a practical woodworker, but, before his appointment had had considerable experience in connection with the production of shell boxes and is conversant with the requirements of the Munitions Board. We are sure, from information received from men who have visited a large number of plants, that this move was an excellent one, in the interests of the efficient production of shell boxes, and we only hope that the Board will continue to place men in control of their inspection who understand what is required, rather than permit the work to be done by men who may secure their appointment by political influence. Of course, it is not to be expected that this new system will meet the approval of those under whose charge the inspection work was carried on previously. We believe, however, that it is a step in the right direction and know that the Imperial Munitions Board is receiving the commendation of shell box manufacturers in general for the step they have taken.

Loose Credits—The Root of Most Retail Evils

The retail lumber dealer is concerned, or ought to be, more than anything else about the class of customer that he is selling to, and about his personal relations with the customer. Two things are important in this regard. One is the financial standing of the customer and the other is the way in which the retailer treats his customer in regard to the credit which he grants him. These two things really make up one branch of the retailer's work, that of credits, and this branch is many times more important than anything else which the retailer has to think about.

Back of the matter of credits there must lie the individuality of the retailer himself. If he is a good business man he will either take charge of the credit end of the business himself or put it in the hands of a man whom he knows to be a specialist at this kind of work. Even then he will keep close touch upon the work of this man. The great majority of deals going through a retail office are upon a credit basis and it is necessary for the manager or the man in charge of the credit work to arm himself with everything available in the way of information and experience that will help him to deal with the numerous problems he has to solve. In short, the arrangement of any deal for the sale and delivery of a quantity of lumber from a retail yard resolves itself into a problem in which the two parties to the deal are themselves its chief elements, and it is upon the way in which the dealer or his credit man proves himself capable of handling these problems that the soundness and the future development of the business has its foundation. The retailer must, in short, become as good a judge of the deserts of an applicant for credit, or in other words of the large majority of his customers, as a banker is of those who come to him for loans.

How many retail lumbermen can say to themselves that they have measured up to the rudimentary requirements of a good credit man? We do not believe that the number is anything like as large as it should be. One only needs to take a glance at the ledger of even the best retail firms with which he is acquainted in order to see that many a customer who has no right to do so, gets away with large quantities of stock on the most flimsy sort of promises to pay, and that the quantity of bad debts written off from year to year is far too large a proportion of the actual volume of trade conducted.

Why is it so difficult for a retailer to make sure whether his prospective customer is a safe man to whom to extend credit? The man who buys lumber, taking him on the average, is much the same as the man who buys anything else. The retailer ought to be able to size him up better than he appears to do in many cases. Is it perhaps that the great quantity of routine and detail which a retailer has to handle throughout his business day takes his mind off the credit end and that when a man calls for a quotation he is likely to see in him only a prospective customer and not a prospective debtor? There is a good deal in this idea. We believe that the conduct of a retail business is not conducive of the production of ability to size up a customer to the extent that the business demands, and that in some way or other it is generally necessary for a retailer to give his credit work the special attention of a particular man who has nothing else for which to be responsible, whether he is employed in the office itself or is conducting a bureau for the exchange of credit information on behalf of the lumber trade in general.

From an acquaintance with retailers, extending over a number of

years, we have become convinced that there is something wanting along this line. The retailers have been far too keen to close their deals, to book their customers and to deliver stock, than they should have been. They have neglected the other end of the business and have been losers thereby. Many of them have lost far more than enough money in bad debts to pay all the expenses of good credit specialists who would have steered them clear of a large portion of their losses. In the office of every retail lumberman there should be a man whose duty it is to interview customers and size them up, from the credit point of view. No customer who is worth while having will object to questions about his intentions in the matter of paying for goods; in fact if he is a good paying customer he will be glad to let the retailer know that he is going to get his money promptly, as he will count upon better treatment when he makes this fact known. But unfortunately, in the past we have seen retailers going to the other extreme, thinking apparently that good business demanded it. We have seen them hunting for business with cut price inducements, and, careless credit considerations that advertised them to the crooks as easy prey. We have heard of them keeping solicitors on the street to get in touch with every prospective customer, whether he is a bona-fide owner of a building that is being put up, or is a fly-by-night speculative builder who puts up cheap houses on the lumberman's money and disappears whenever he finds himself in deep water. It is the same old story over and over again, from one firm and another, year in and year out, in good times and bad; too much anxiety to book an order and far too little consideration of whether the goods delivered are going to be paid for.

There is only one way in which to remedy all this; changing the method of handling customers, so that the percentage of bad ones will be reduced. To do this it is necessary to employ a modern and businesslike method of getting after those who are slow or crooked. The most effective method is by co-operating in the creation of a credit bureau which analyzes information furnished by the dealers themselves and thus forewarns them against those men whose methods have been proven to be dangerous. Co-operation of this nature accompanied by the employment of a skilled credit man in the office will enable any retail lumberman to reduce his proportion of bad debts to a mere fraction of their present amount.

Mill Construction Coming Into Its Own

The awakened interest in mill construction factory buildings, which is evident in many cities, makes the publication of any specific data on the subject of unusual value. Reinforced concrete buildings have been the strongest competitors of mill construction, and in many cities have become the predominating type almost entirely because they have been promoted and their advantages called to the attention of architects, engineers, and contractors.

Comparisons on a cost basis such as are contained in Technical Letter No. 6 of the Engineering Bureau of the National Lumber Manufacturers' Association of the United States are bound to be important factors in turning the decision of prospective builders to mill construction instead of concrete. This is especially true when the comparisons, as in this case, are made by an architect and engineer of high standing. Mr. F. E. Davidson, of Chicago, who is the author, is president of the Illinois Society of Architects. He writes from the basis of wide experience and practical knowledge, and has erected many very high-class buildings of the mill construction type in Chicago. His figures are not theoretical, but based on comparisons of two actual buildings.

Perhaps the most striking statement is that "the increased cost of a strictly fireproof manufacturing building is from 25 to 35 per cent. greater than the actual first cost of an exactly similar standard mill building." He figures depreciation charges at 3½ per cent. per year on standard mill buildings, as against 2½ per cent. on absolutely fireproof buildings. As to maintenance charges, Mr. Davidson states that he does not know of accurate records of maintenance which are more than three-fourths of one per cent. per year for mill buildings, while the same charges on fireproof buildings do not average less than one-half per cent. per year. In other words, the maintenance charges are essentially the same.

On the important question of insurance rating Mr. Davidson says: "Every architect and engineer, of course, knows that a standard mill sprinklered building is given a much lower insurance rating than an absolutely fireproof building if unsprinklered." Even if the latter is sprinklered, the difference in the actual rating between the two types with ordinary occupancy "would only amount to about 10 cents per $1,000 per year on the insurable value of the building."

On the advantages of standard mill construction Mr. Davidson writes as follows: "Thus, considering first cost, depreciation, maintenance, and insurance only, the argument is all in favor of the standard mill building, and when I refer to a standard mill building I mean a building designed by a thoroughly competent industrial architect, who will enclose all stairs and elevators with brick masonry walls and have the openings to same protected with automatic fire-doors, and with all windows, with the possible exception of street frontages, of sheet metal and glazed with wired glass, and with no unprotected vertical openings between any floors in the building. These are items which, more than any others, affect insurance ratings on any building."

In conclusion, Mr. Davidson gives specific cases, comparing concrete and mill construction buildings with exactly the same plans per cubic contents. He says: "In this instance it will be noted that the cost of the concrete structure would have been about 30 per cent. more than the cost of the mill building, and this saving to the owner was effected in addition to the advantages he gained in the matter of quick erection, etc. The insurance rate is the same on the standard mill building as it would have been on the concrete structure."

The moral of this, from the lumberman's point of view, is quite plain. Every lumberman ought to be a specialist in regard to the uses of wood, and have such information as that given above at his finger-ends, to pass on to prospective builders who are considering the use of cement or other so-called fireproof materials.

What Forest Fires Cost Canada in 1916

Canada has lost through forest fires in 1916 over nine million dollars. This equals more than six times what has been spent on forest protection work from coast to coast. The enormous sum wasted through this year's forest fires, most of which were preventable, would add another $480 to the first year's pension allowances of nearly 19,000 Canadian soldiers.

It is noteworthy that while some parts of the Dominion owe to rainy weather their immunity from fire damage, the season's record proves beyond gainsay that in areas where first-rate fire protection systems were in operation losses of life and property were held down to a remarkable minimum.

Quebec had some heavy fires in the Lake St. John and Saguenay districts also in the Gaspe Peninsula and west of Escalana, on the Transcontinental Railway. It is a striking fact, however, that within the 24,000 square miles of Quebec, covered by the two well-organized associations of limit-holders, the amount of green timber burnt is practically negligible. This immunity was not a matter of luck, but of consistent patient effort to educate settlers, lumberjacks, and others in care with fire, coupled with a system of promptly reporting all outbreaks and attacking forest fires in their incipiency with larges forces of men and modern equipment.

British Columbia faced fairly favorable fire conditions through the summer months, and the cost of fire fighting was reduced by about 75 per cent., as compared with the record of 1915. The number of

fires was about half of last year. The British Columbia forest protection service is the most complete in Canada thus far, and the saving of timber is a logical consequence.

A heavy average of rainfall kept fire troubles at arm's length in Alberta, Saskatchewan, and Manitoba, and this weather condition was undoubtedly responsible for the escape of the main areas of big timber throughout Ontario. The Clay Belt fires at the end of July and first week of August provided a tragic sacrifice of 262 lives and what is estimated to be six million dollars' worth of property. There was practically no forest guarding organization in the fire-swept district, except along the railway track.

New Brunswick escaped the risks of 1916 with a very small timber loss, and Nova Scotia had a similar experience. The records of the Dominion Railway Board show that the private-owned railway lines of Canada have not been responsible this year for any damaging forest fires.

Shipbuilding May Become Important Industry in Canada

The increased activity that is being displayed, both in Eastern and Western Canada in the shipbuilding industry as a means of developing our export trade, especially that in lumber, is of great importance to the industry. If it is carried out to its logical extent it will go a long way to remove the barriers against foreign shipment, and thus relieve the lumber industry of one of the chief causes of periodical trade depression. Elsewhere in this issue we publish a discussion of this development as it affects British Columbia. We are also able to reproduce below an interesting reference to a much wider aspect of the situation, as published by the Liverpool Journal of Commerce.

"There are indications," the Journal of Commerce says, "that, even probably before the end of the war, a new epoch in shipbuilding will develop in connection with the British Empire, and that certain famous shipbuilding and engineering firms in this country will open yards in Canada and probably in Australia.

"Such a possibility three or four years ago would have been regarded in a negative way, for it is a peculiar fact that the bulk of the people in this country, outside the shipbuilding areas, are ignorant of the supreme national importance of the shipbuilding and allied industries.

"The war has brought about in a rapid and vivid manner the realization of the fact that on shipowing and shipbuillding the future of the British Empire will have to rely to a very great extent.

"It has been hinted that Messrs. Vickers & Company contemplate a considerable expansion in Canada, and there is linked with the name of this firm that of Messrs. Yarrow, of Scotstoun, who already are directly interested in an extremely important ship-repairing and shipbuilding enterprise on the west coast of Canada. The famous firm of Messrs. Sir W. G. Armstrong, Whitworth & Co., as is well known, had some time ago realized the potentialities of Canada for shipbuilding purposes, and have been engaged for some time there, but it is further interesting to hear the suggestion that Messrs. Cammell, Laird & Co., and also Messrs. John Brown & Co., Clydebank, are on the point of laying plans for shipbuilding purposes in Canada.

"Whatever immediate foundation there may be for these rumors, there can be no doubt that the shipbuilding firms of this country are the most progressive and the most enlightened of any such firms in the world, and that they may be relied upon not only to continue the lead, which they have held for years, but under the new conditions and the broader sympathies of the Empire, that they will increase this lead to an extent that, at any rate for many generations, will enable the shipbuilding industry of the British Empire to dominate that of the whole world, whatever activities may be in progress in the United States and whatever developments Germany may subsequently desire to put into operation.

"Very wisely the Dominion Government is offering inducements to these great and reputable firms, and not only may it be announced in the future that Canada will be building many of its own ships, but this division and spreading out of the industry will have a very fine effect in readjusting the relationship of labor and in making provision for those new conditions of industrial life that must inevitably follow as a result of the present world upheaval."

Editorial Short Lengths for Busy Readers

On account of the great scarcity, and high price of iron during the war, there has been commenced in Norway the manufacture of turbine tubing made from wood. The tubes are wound spirally with steel wire, and are said to be fully as durable as the iron tubes. The factory has already a large number of orders.

Speaking in the British House of Commons on Oct. 10th, the War Minister, Mr. Lloyd George, said the valuable assistance of the Canadian forestry battalions was fully recognized. It had been already arranged for a proper co-ordination of their work, and that all the battalions, whether at home or abroad, should operate under the direct control of one expert Canadian officer. The suggestion made that all lumbering should be under Canadian control was being carried out as regards soft wood in France, but it was not desirable to disturb the existing arrangements for other kinds of timber in the war zone. The War Minister was replying to Bennet Goldney, who had urged that all timber cutting should be put under Canadian control, seeing that the Canadians had proved themselves so superior in this work while in England.

One hears so frequently that the timber resources of British Columbia are practically inexhaustible that it is interesting to learn that a lumberman—Reeve Lougheed, of Maple Ridge—has recently expressed himself to the contrary effect. Before a convention of Dominion fire rangers, held at New Westminster, Reeve Lougheed said it was customary to assume that the timber wealth of the province was inexhaustible; that it grew faster than it could be cut. In a sense this was true, but much of the forest wealth was on the mountain tops, where is was so nearly inaccessible that it could not be cut for a long time. The accessible timber, he said, was rapidly being cut, and if something in the way of reforestration were not done now there would be very little left of it in the course of fifteen years. He advocated experiments with Eastern hardwoods in burned-over areas, believing that this would be more practicable than using the slow-growing fir and cedar that were native to the province.

At the same meeting the fire rangers discussed methods of preventing and fighting forest fires. A resolution was passed asking the provincial government to amend the bush act so that it will once more be necessary to have a permit for setting out a fire up till October 1st. During the past two years no permit has been necessary after September 15th, and the rangers say experience has shown that the last two weeks in September are frequently the most dangerous of the whole season.

During the recent visit of Sir George Foster to Victoria, B.C., a deputation representing the lumber interests of Vancouver Island had an interview with him and urged him to do what he can to help in bringing about a reciprocity agreement between Canada and Australia and New Zealand. They pointed out to the Minister of Trade and Commerce that British Columbia can furnish Australia and New Zealand with great quantities of lumber, and also wood pulp and paper, while there is a market in Canada for large quantities of meat, butter, wool, and hides from Australia. An extensive interchange of goods between these countries could be carried on to the mutual benefit of all concerned. The deputation also urged the Minister to use his influence for securing the appointment of a Canadian customs official in New York.

242nd Forestry Battalion Leaves for Overseas

Lieut. G. T. Reid—242nd. Forestry Batt.

The 242nd Forestry Battalion, for service in the forests of Great Britain and elsewhere, which has been raised during the past few months, under Lieut.-Col. J. B. White, of the Riordon Pulp and Paper Company, Ltd., Montreal, was recently completed to the full strength of an infantry battalion. C Company of the battalion was raised in Toronto and other Ontario points, under Lieut. G. T. Reid, son of Mr. J. B. Reid, of Reid & Company, retail lumber dealers, Toronto. C Company left for Montreal on October 4th, where the battalion mobilized, and expected to leave for overseas about Oct. 15. The marching state of C Company was 150 men.

The 242nd Forestry Battalion is officered almost exclusively by men who have had practical experience in the lumbering business, among them being Lieut.-Col. J. B. White, in command; Major Donnoly, formerly with the 60th Canadian Overseas Battalion; Capt. Massiah, formerly with the C.P.R.; Capt. Bourassa, Ottawa; Capt. Lang, Ottawa; Capt. Fenton, Ottawa, a returned officer; Capt. Suckling, Montreal; Lieut. George Perley, nephew of Sir George Perley; Lieut. Strong, of the Strong Lumber Company, Montreal; Lieut. G. T. Reid, Toronto, and Lieut. Hughson, Montreal.

During the enlistment of C Company at Toronto the lumbermen of Toronto took an active interest in the affairs of the company, and contributed $1,000 to assist in financing it. About $2,000 was also raised in other ways. The men composing the 242nd Forestry Battalion are specially fitted for the work of felling and cutting timber in the forests of Great Britain and Europe. They are a fine, husky lot, practically all of whom have had a long experience in Canadian woods.

Lieut. G. T. Reid, whose portrait appears at the head of this article, is typical of nearly all the officers of the battalion. He has spent all of his business life in the lumber business, having had a year and a half in the bush in Quebec, a taste of the road as a salesman, and a long experience in the yard and office of Reid & Co., Toronto.

German Architecture in Dugouts on the Battle Line

The recent capture of extensive lines of German trenches by the allies has made it possible to learn something of the manner in which the Germans have used wood in the construction of their defences. The London Timber Trades Journal reprints an article on this subject, written by an architect for an English newspaper, in which he says:

"Judging from the plans of the dugouts captured from the Germans it is clear that the enemy employed a soldier-architect to assist the military engineers in making these halls comfortable.

"The timber construction is of the post-and-fan type. In the main it consists of a series of balk timbers, spaced at intervals of six feet, doing duty as stanchions; these run through the two floors. The timbers of the intermediate stage are framed into the story posts with stout beams. A similar system exists to carry the wooden sheeting immediately under the earth on the upper story. There is nothing special in the construction employed by the enemy, and in many ways the British dugouts, while of a more temporary nature, are far stronger, for they follow the system of braced props which is a feature of mining practice.

"Yet, notwithstanding the simplicity of the methods employed by the Germans for what they considered would be in their possession for the duration of the war, a certain decorative character is to be seen in the banded neckings to the upper part of the posts, in the paper wave ornament introduced into the officers' quarters, and in the birdcage balustrade to the stairways.

"At first sight the drawings of these elaborate underground halls recall the posts and framings which in the old days distinguished the three-decker. Then one thinks of the roof timbers associated with the factories and warehouses of the century before last, and finally one decides that timber construction offers many possibilities for small modern buildings. One lesson to be learned from the example of the Germans in this is that timber could be extensively and artistically used for rebuilding farmhouses and cottages in the areas visited by the devastation of the war."

The British steamer Crown of Seville, which sailed on September 22nd from Seattle, Wash., for London, carried 3,100,000 feet of spruce lumber consigned to the British Government. The lumber is used for constructing military aeroplanes. The shipment was one of the largest ever made from that port.

Lieut. C. P. Waldie Reported Killed

Lieut. C. P. Waldie—Reported Killed.

The Canadian casualty list of October 2nd contained the name of Lieut. Charles Percy Waldie, who has been missing since the battle of Loos, one year ago. The fact that Lieut. Waldie was then missing was reported at the time. A cablegram from the War Office now announces that for official purposes he is presumed to have died about September 26th, 1915.

Lieut. C. P. Waldie was the son of the late John Waldie, head of the Victoria Harbor Lumber Company, of Toronto and Victoria Harbor, Ont. He was well known to the lumbermen of the province, having occupied for a number of years the position of manager of the Victoria Harbor Mills. Soon after the outbreak of the war he went to England and took an officer's training course in the Inns of Court. Shortly after qualifying he accepted a commission with the Queens Royal West Surrey Regiment, and was stationed for a time at Worthing, England, subsequently proceeding with his regiment to France. Previous to the war, Lieut. Waldie had had no military experience, but he was one of those who felt the call of duty as soon as the war broke out. He was 32 years old, born in Canada and a graduate of Upper Canada College. He had made a great many friends among the lumbermen of Ontario who will learn with the deepest regret of his loss. Mr. F. N. Waldie, a brother, is well known as manager of the Victoria Harbor Lumber Company and Mr. R. S. Waldie is also well known to the lumber trade. Another brother, Capt. W. Scott Waldie is with the 122nd battalion, which has been in training at Camp Borden during the past summer.

Pacific Coast Shingle Men Hold Vancouver Meeting

A delegation of American red cedar shingle manufacturers, members of the West Coast Lumberman's Association, held a two-day session in Vancouver recently as guests of the Huntting-Merritt Lumber Company; Westminster Mill, Limited; Thurston, Flavelle Lumber Company, and the Vancouver Cedar Mills. The meeting was one of the many gatherings that have resulted from the decision of the cedar shingle interests of the Pacific Northwest to get together for the common weal of the red cedar shingle industry. The American and British Columbia mills sell practically in the same market. The delegates represented practically every district engaged in the manufacture of red cedar shingles in the Pacific Northwest. After the business meeting which was held in the offices of the B. C. Lumbermen's Association a golf tournament was played at the Shaughnessy Heights Golf and Country Club grounds. The cup, presented by the British Columbia mills, was won by Mr. H. C. Wyckoff, secretary of the West Coast Association. After the tourney the visitors attended a business dinner at the Vancouver Club.

The evening session was mainly devoted to a discussion of the present national advertising campaign which has been carried on by the association during the present year. It was the consensus of opinion that this advertising had done much to offset the competition of patent roofings, and had increased the building of bungalows, garages, barns, etc., on which cedar shingles were used. Mr. Josephs, of the Retail Lumbermen's Association of Kansas City, stated that through the efforts of newspaper and magazine advertising, retailers had been compelled to supply their customers with red cedar shingles when, as a matter of fact, they had been gradually getting into the substitute roofing habit. The visitors were taken on a tour of inspection and visited the Vancouver Cedar Mills, the Huntting-Merritt Lumber Company, the Thurston-Flavelle Lumber Company and the Westminster Mills, Limited.

New Brunswick and Maine Lumbermen Organizing

Owners of lumber mills and timber lands in New Brunswick and Maine met in Bangor recently for the purpose of forming a lumbermen's association, international in scope, and probably the most important organization of its kind in northern New England. The association may also extend into New Hampshire. Another meeting for the purpose of completing organization will be held in Bangor this month. The organization will be purely a lumbermen's and timberland owners' association for the mutual benefit of the business men concerned.

H. R. MacMillan Accepts Important Business Appointment

Mr. H. R. MacMillan.

H. R. MacMillan, head of the Forest Branch of the British Columbia Department of Lands, has resigned in order to accept the position of assistant manager of the Victoria Lumber and Manufacturing Company, Limited, Chemainus, B.C., of which E. J. Palmer—one of the most experienced of Pacific Coast lumbermen—is general manager. Mr. MacMillan returned to Victoria at the end of July from a world tour as Canadian lumber trade commissioner; and expected to leave again for China, Japan, and Russia to complete his work, but received a wire from the Department of Trade and Commerce, Ottawa, cancelling the previous instructions sent him.

By the resignation of Mr. MacMillan British Columbia loses an official who since taking office a few years ago has organized the Forestry Branch and brought it to a stage of perfection which has made it a pattern from which other provinces have been glad to cupy, Mr. MacMillan went to British Columbia in 1912 from Ottawa, where for nine years he had been assistant of forestry for the Dominion Government. He is a graduate of Toronto and Yale Universities, his course in forestry being taken at the latter institution. Mr. MacMillan has displayed admirable judgment and rare forestric insight in the handling of his department, and the splendid results brought about by the admirable system of forest fire protection initiated a few years ago and now brought to great perfection will in particular be remembered to his credit.

The firm with which Mr. MacMillan is now connected is one of the largest timber-holding and manufacturing concerns in the province, and among the shareholders are capitalists who control enormous timber interests in Washington, Oregon, and adjoining states. This being the case, we may expect that Mr. MacMillan's ripe talents in the way of forest administration and conservation will still find full scope for action.

J. O. Cameron Foresees Improved Trade

One of the many British Columbia lumbermen who are optimistic about the future of the lumbering industry in Western Canada is Mr. J. O. Cameron, of the Cameron-Genoa Bay Mills Lumber Company, Ltd., Victoria, B.C. In a recent interview Mr. Cameron said in part: "During the last two years the timber business has been poor, although there was a regular demand. The mills were prevented from engaging in the offshore trade by the scarcity of bottoms, the difficulty being accentuated by the landslide in the Panama Canal. It is now necessary to ship east by rail at a high rate, the timber transported being principally in the form of box shooks for ammunition boxes and aeroplane spruce, being bought by the Imperial Government. The skilled labor market has been reduced by enlistments, making Orientals more independent and increasing their wages one third. The war has seriously hampered work in the woods, where only white labor has been employed." The shipbuilding industry now flourishing in Victoria, Vancouver, and Westminster will, according to Mr. Cameron, be the means of affording relief to the situation by making it possible to extend the markets. Mr. Cameron stated that he believes that the growth of timber in British Columbia is more than keeping pace with consumption, especially since ample protection against forest fires now is provided by the Government. The best timber area is yet to be touched, the mills being compelled to limit their operations almost entirely to the coast districts until the new timber lands can be reached by railroads.

With regard to the establishment of new markets Mr. Cameron said that the greatest stimulant that the lumbering industry could receive, after tonnage had been provided, would be the granting of a preferential tariff with the Empire, to protect the industry from competition with the older established mills on the other side of the boundary. The principal markets would be on the shores of the Pacific, in China, Australia, and South America, although at present the trade with Australia is less than it was thirty years ago, on account of the fact that Canada needs a large proportion of British Columbia's timber for her own development.

Over 400 square miles of territory in the Peace River country have been burned over by forest fires reported about the end of September.

Death of Erastus Long, of Orillia, Ont.

The Late E. Long, Orillia, Ont.

News of the death of Mr. Erastus Long, of the E. Long Manufacturing Company, Ltd., Orillia, Ont., will be received with regret by lumbermen in all parts of Canada. Mr. Long's name was known to practically every lumberman in the country, on account of his long connection with the production of sawmill machinery. Last spring he laid aside his business activities and went to his cottage at Champlain Point to take a rest. Unfortunately, his health was already too much impaired, and he was brought back to Orillia towards the end of September, suffering from paralysis. For a time he seemed to recover slightly, but the end came on October 4th.

The late Mr. Long was born in the Township of Oro in 1868. As a lad he went to Orillia and learned the machinist trade with his uncle, the late Robert Brammer. Subsequently he went to Chicago, and quickly rose until he became a master mechanic. He returned to Orillia in 1894, upon the death of Mr. Brammer, and took over the business of the Orillia Foundry. This he developed steadily, until it became one of the most extensive plants in Canada for the production of sawmill machinery. In 1906 he took into partnership his half-brother, Mr. Francis Smith, and Mr. W. W. McBain, and organized the E. Long Manufacturing Company, Ltd. This business grew rapidly. The present plant was completed in 1910.

The late Mr. Long took much interest in the public life of Orillia, serving for some years on the Town Council. He was a member of the Water, Light, and Power Commission which was organized in 1913, occupying the position of chairman of that body. He also gave much valuable service to Orillia in connection with its electric power plant.

The Price of Pulp and Paper—Some Interesting Figures

The monthly commercial letter issued by the Canadian Bank of Commerce has the following interesting article dealing with the pulp and paper situation:

"Although pulp and paper mills in Canada have for some time been operating at full capacity, stocks of news-print are decreasing. Prices of raw and partly manufactured materials for paper-making are very much higher than they were a year ago, the causes being chiefly the increase in the cost of production and the greater demand, particularly from the United States. Last year the cut of wood for pulp was far below normal, which has resulted in a shortage at a time of increased demand and increased cost. A year ago raw pulpwood could be purchased in Northern Ontario at $4 a cord, whereas this year the price is $5.25 and higher. While the most important factor in the increased cost of pulp is the increase in the cost of labor, the difficulty in procuring chemicals is also a contributory item. Up to the present the output of Canadian paper mills has not been checked by these factors, but during the summer fires and floods have caused some slight loss and interruption, although not to an appreciable extent. Contracts made during the early part of the year or previously are being filled, but there is a decided reluctance to contract far ahead, even at prevailing high prices. Additional increases in the cost of production are feared, and the demand for pulp and news-print will doubtless continue. The new mills planned and in course of construction and the extensions to existing ones will, if carried out as intended, add a per diem capacity of 840 tons of news-print before the end of 1918. During the twelve months ending March last the amount of printing paper exported was 463,204 tons, or at the rte of 1,544 tons per day, as compared with a tonnage of 292,579, or 975 tons per day, in the corresponding period ending March, 1914. In the export of and demand for wrapping paper there are also similar develoments, and these, even before the outbreak of the war, attained considerable proprotions. From 1910 to 1916, according to a diagram shown in the bank's report, exports of paper, pulp, pulpwood, etc., have risen from $15,000,000 to $37,000,000 in value. Exports of paper have risen from $3,000,000 to $20,000,000; exports of pulp (mechanical and chemical) from $5,000,000 to $10,000,000, and exports of pulpwood have hovered between $5,500,000 and $7,500,000 during the ten years.

Great Britain's imports during the year 1915 included the following from Canada:—wood pulp, chemically dry bleached, £1,104; wood pulp, chemically dry unbleached, £4,164; pit props or pit wood, £38,004; railway sleepers, £1,125.

A System of Accounts for Retailers

Fundamental Principles Clearly Explained—A Valuable Report Upon An All-Important Problem

The first part of an article on this subject was published in our issue of October 1st, and dealt with books of account and statements as explained in a report prepared by the Federal Trade Commission of the United States. The balance of the report is as follows:

Profit and Loss Statement.

The amounts for making up this statement, Form B, can be had from the ledger and from the trial balance. It is made up at such times as the inventory is taken. A physical inventory should be taken at least once a year. The basis should be cost with conservative deduction for obsolete and shelf-worn goods. The inventory at the beginning of the period is, of course, that brought down from the end of the last period.

When monthly profit and loss statements are desired, and where the percentage of overhead and profit is known, the approximate cost of the goods can be arrived at in the following manner: Deduct the percentage of overhead and profit from 100 and multiply by the amount of net sales; the result will be the cost of the goods sold, which, when deducted from net sales, will give the approximate gross profit on sales.

If desired, the difference between the values placed on the inventory and the actual cost of same can be shown on the statement. Show the actual cost of inventory and then the deduction under the title "Stock Depreciation," carrying the net forward as illustrated. While this is not necessary, it is valuable information, and this method is recommended.

The total net profit, as shown by the statement, is that carried to the credit of the proprietor's account in the ledger.

Ledger accounts should be kept by the double entry principle, with all real (asset and liability) accounts, as well as with all nominal (profit and loss) accounts. A balance sheet of the same date as the profit and loss statement should be made up from the balances of all real accounts. The ordinary asset and liability accounts and a logical classification thereof are shown by Form C.

Accounts and Their Explanations—Real Accounts.

1. Cash on Hand and in Bank.—Charge this account with the total receipts of the month and credit it with the total disbursements as shown by the cash book. The balance should agree with the cash book balance.

2. Notes Receivable—Trade Customers.—Charge this account with all notes, time drafts, and acceptances held against others, and credit it with the same when paid or otherwise disposed of. The balance will show the uncollected notes receivable.

3. Accounts Receivable—Trade Customers.—Charge this account with the total of the charge tickets of the month, and credit it with the cash payments by customers (taken from the cash book at end of month) and with notes receivable, discounts, returns, and allowances (from the journal and credit slips). Balance of this account must agree with the sum of the balances of trade customers' accounts.

4. Reserve for Bad Debts.—Credit this account with an estimated amount, based on charge sales, sufficient to provide for losses, and charge the account with the balances of personal accounts when hope of collection is abandoned.

5. Prepaid Insurance.—Charge this account with all insurance, fire, burglary, fidelity, plate glass, liability, etc. At the end of each month charge the proper accounts (Nos. 35 and 44) with their proportion, the balance being an asset as "Prepaid Insurance."

6. Accrued Interest Receivable.—Charge this account at the end of the period with all accrued interest (not yet paid) on notes, etc., due from others, crediting "Interest Account." When the interest is received it is credited to "Accrued Interest Receivable."

7. Store Property.—Charge this account with the purchase price of the store property. Do not charge repairs to this account, unless they are in the nature of permanent improvements. A fair amount should be periodically credited to "Reserve for Depreciation."

8. Warehouse Property.—Charge this account with the purchase price of the warehouse property. Do not charge repairs to this account unless they are in the nature of permanent improvements. A fair amount should be periodically credited to "Reserve for Depreciation."

9. Reserve for Depreciation on Store and Warehouse.—Credit this account with the amonut of depreciation on store and warehouse, and charge same to "Rent Income" (No. 44).

10. Store Equipment.—Charge this account with the value of all equipment, such as counters, shelving, scales, measures, etc., used in the conduct of the business. A fair amount should be written off periodically for depreciation.

11. Office Equipment.—Charge this account with office furniture, desks, safe, and other office appliances (not included in 34). A fair amount should be written off periodically for depreciation.

12. Delivery Equipment.—Charge this account with the cost of automobiles, wagons, horses, and harness. This account must not be charged with repairs to automobiles and wagons, horseshoeing, or anything of this nature. A fair amount should be written off periodically for depreciation.

13. Notes Payable—Trade Creditors.—Credit this account with all notes given to trade creditors or time drafts accepted in their favor and charge the account as the same are paid. Balance of this account shows the amount of notes payable outstanding.

14. Notes Payable—Banks.—Credit this account with all notes given to banks and charge the account as the same are paid.

15. Accounts Payable—Trade Creditors.—Credit this account with merchandise bought on account, the amount being carried to this account monthly from the total of the invoice book and charge it with all merchandise returned and reductions (journal), and payments made and discounts taken (cash book). Balance of this account must agree with the sum of the balances of trade creditors' accounts.

16. Accounts Payable—Others.—Credit this account with amounts owing to creditors other than trade creditors.

17. Accrued Interest Payable.—Credit this account at the end of the period with interest accrued (not yet paid) on notes, etc., due others, charging "Interest Account." When the interest is paid it is charged to "Accrued Interest Payable."

18. Accrued Salaries and Wages.—Credit this account with salaries and wages earned and unpaid at the end of each month and charge the proper expense accounts. When payment is made this account is charged and closed out, and the balance of the pay roll charged in the regular way.

19. Accrued Taxes.—Credit this account with the taxes due up to the end of each month, charging the proportionate amounts to the accounts in which they belong. When the taxes are paid this account will be charged.

20. Proprietor's Drawing Account.—Charge this account with all withdrawals of cash (not salary). At the end of the period the amount of this account is closed into proprietor's capital account.

21. Mortgage Payable.—When a mortgage is placed upon real

PROFIT AND LOSS STATEMENT, JAN. 31, 1916.

								Per ct.	Per ct.
23	Sales					$4,659	96		
24	Less Sales Allowances					2	00		
	Net sales					4,657	96	.....	100.0
	Inventory of merchandise at beginning			$3,451	09				
25	Merchandise Purchases (cost delivered at store)			2,759	67				
				6,210	76				
	Deduct inventory of merchandise at closing	$3,062	17						
	Less Stock Depreciation	153	11	2,909	06				
	Net cost of goods sold					3,301	70	.....	70.9
	Gross profit from trading					1,356	26	.....	29.1
	BUYING EXPENSE.								
26	Salaries and Wages of Buying Force	25	00						
27	Miscellaneous Buying Expense	14	00						
	Total buying expense			39	00			0.8	
	SELLING EXPENSE.								
28	Salaries and Wages of Sales Force	177	33						
29	Advertising	30	00						
30	Miscellaneous Selling Expense	3	75						
	Total selling expense			211	08			4.5	
	DELIVERY EXPENSE.								
31	Salaries and Wages of Delivery Force	102	67						
32	Miscellaneous Delivery Expense	8	08						
	Total delivery expense			110	75			2.4	
	GENERAL EXPENSE.								
33	Management and Office Salaries	269	00						
34	Office Supplies and Expense	22	03						
35	Insurance on Stock and Store Equipment	1	61						
36	Taxes on Stock and Store Equipment	2	50						
37	Losses from Bad Debts	33	56						
38	Miscellaneous General Expense	26	79						
39	Rent	71	25						
	Total general expense			426	74	787	57	9.2	16.9
	Net profit from trading					568	69	.....	12.2
	INCOME FROM OTHER SOURCES.								
42	Interest	17	09						
43	Cash Discounts on Merchandise Purchases	6	55						
44	Rent income (net)	16	52						
45	Miscellaneous Outside Income	2	00	.....		7	98		
	Total net profit					576	67		

FORM B.

estate (or assumed at the time of purchase) this account is credited. When paid it is charged.

22. Proprietor's Capital Account.—This account represents the proprietor's net capital. At the end of the period the net profit is credited to this account. The amount of his drawing account is then closed into this account. The balance of the account is his net capital at time of closing.

In the event of a partnership each partner's net capital would be shown in his respective account and the net profit (or loss) carried to the credit (or debit) of their accounts in agreed proportions. In the event of a corporation, this account represents the amount of the issued capital stock, and the profit or loss is carried to "Surplus" account.

Nominal Account.

23. Sales.—Credit this account with the total sales of all merchandise, the charged sales being taken from the total of the charge tickets for the month and the cash sales from the "Cash Sales" column in the cash book. Returns should be charged at selling price for all merchandise returned by customers, whether for cash or credit. The difference in this account will be the net sales, which is transferred to the credit of "Trading Account."

24. Sales Allowances.—Charge this account with any allowance given a customer not contemplated when sale was made. Allowances should not be charged to "Sales," but closed at the end of the period into "Trading Account."

25. Merchandise Purchases.—Charge this account with the face of the invoices of merchandise before deducting cash discounts. The account is also charged with freight, expressage, and drayage on merchandise purchased. Credit the account with any returns of merchandise made to manufacturer or wholesaler and with any allowances for defects in goods received from manufacturer or wholesaler. The balance of the account is transferred to the debit of trading account.

26. Salaries and Wages of Buying Force.—Charge this account with part of salary of proprietor, active partner, and manager or buyer and the wages of office force proportionate to the time given to buying. If, for example, the proprietor estimates altogether that he gave one-fourth of his time to buying and three-fourths to selling, then one-fourth should be charged to this account and three-fourths to "Salaries and Wages of Sales Force." Similarly, the estimated number of hours a week given by any member or members of the office force to buying should be charged to this account.

27. Miscellaneous Buying Expense.—Charge this account with the traveling expense of buying trips and other expense incurred in buying (not covered by account 26).

28. Salaries and Wages of Sales Force.—Charge this account with wages and other remunerations of sales persons, order takers, and all others engaged in sellling, both as regular and extra force; also with the part of the salary of the proprietor, active partners, or manager, and of the wages of the office force proportionate to the time given to selling.

29. Advertising.—Charge this account with all expenditures for advertising purposes, such as space in newspapers and periodicals, space on street cars and billboards, circulars and postage thereon, advertising novelties, trading stamps, charitable donations, window display, electric signs, etc.

30. Miscellaneous Selling Expense.—Charge this account with the cost of wrapping paper, cartons, twine, salesmen's order books, and all other items of direct selling expense not covered by "Salaries and Wages of Sales Force" and "Advertising."

31. Salaries and Wages of Delivery Force.—Charge this account with regular and part time of employees engaged in delivering and with the part of the wages of other employees, whether on sales force or office force, proportionate to the time given to delivery work.

32. Miscellaneous Delivery Expense.—Charge this account with all stable and garage expense, including all repairs, taxes, licenses, upkeep, and with the depreciation charged on the delivery equipment; also charge this account with payments for express, parcel post, and contract delivery service.

33. Management and Office Salaries.—Charge this account with the salaries of the manager, bookkeepers, office clerks, stenographers, and of other general office help not otherwise charged.

34. Office Supplies and Expense.—Charge this account with purchases of stationery of all sorts, account books and forms (except selling and stock forms), typewriter supplies, printing and postage (except advertising), and depreciation on office equipment.

35. Insurance on Stock and Store Equipment.—Charge this account with all expense of insurance, fire, burglary, fidelity, plate glass, employers' liability, and other. This account is not to be charged with insurance on store or business property.

36. Taxes on Stock and Store Equipment.—Charge this account with taxes on all stock and store equipment. As taxes are not payable in advance, the amount charged this account must be credited to "Accrued Taxes."

37. Losses From Bad Debts.—Charge this account with the amount that has been reserved for bad debts (4).

38. Miscellaneous General Expense.—Charge this account with heat, light, repairs, depreciation on store equipment, and with any items that cannot be charged directly to any of the above particular accounts.

39. Rent.—Charge this account with all rents paid. If the store is owned, rent should be charged equivalent to the amount it could be rented for to others, crediting "Income from Other Sources"; in the latter event "Income from Other Sources" should be charged with the taxes, insurance, repairs, and depreciation on the store.

40. Trading Account.—This account shows the inventory of merchandise at opening, and is not touched again until the books are closed. It is then charged with merchandise purchases (25) and sales allowances (24) and credited with sales (23). The inventory at closing is then credited, and the balance will show the gross profit on trading. The gross profit is transferred to the credit of the "Profit and Loss Account." The inventory is then brought down as a new balance.

41. Profit and Loss Account (from Trading Operations).—Charge this account with the balances of all the expense accounts, and credit it with the gross profit from trading; the difference will be the net profit or loss, which is closed into the proprietor's account; if a partnership, to the partners' accounts, according to their several interests, and, if a corporation, to the surplus account.

42. Interest.—Charge this account with all interest paid and credit it with all interest received and close into "Profit and Loss Account."

43. Cash Discount on Merchandise Purchases.—Credit this account with all cash discount taken on purchases of merchandise. The account is closed into profit and loss. A record of such discounts available but not taken—cash discounts lost—will be found of use.

44. Rent Income (Net).—If the store is owned, the rent which has been charged to account 39 should be credited to this account, and it should be charged with insurance, taxes, depreciation, and repairs on store. The account is closed into "Profit and Loss."

45. Miscellaneous Outside Income.—Credit this account with incidental receipts, such as toll from telephone pay stations in store, etc.

BALANCE SHEET, JAN. 31, 1916.

	ASSETS.						
	CURRENT ASSETS.						
1	Cash on hand and in bank			$1,611	67		
2	Notes Receivable—Trade Customers			191	84		
3	Accounts Receivable—Trade Customers	$3,518	81				
4	Less Reserve for Bad Debts	33	56				
				3,485	25		
	Inventory of merchandise (at cost)			2,909	06		
5	Prepaid Insurance			100	14		
6	Accrued Interest Receivable				71		
	Total current assets					$8,298	67
	FIXED ASSETS.						
7	Store Property	4,500	00				
8	Warehouse Property	1,975	00				
		6,475	00				
9	Less Reserve for Depreciation on Store and Warehouse	26	98				
				6,448	02		
10	Store Equipment			272	71		
11	Office Equipment			74	37		
12	Delivery Equipment			396	67		
	Total fixed assets					7,191	77
	Total assets					15,490	44
	LIABILITIES AND CAPITAL.						
	CURRENT LIABILITIES.						
13	Notes Payable—Trade Creditors	1,210	50				
14	Notes Payable—Banks	900	00				
15	Accounts Payable—Trade Creditors	3,685	72				
16	Accounts Payable—Others	485	00				
17	Accrued Interest Payable	19	23				
18	Accrued Salaries and Wages	82	00				
19	Accrued Taxes	7	75				
	Total current liabilities			6,390	20		
21	Mortgages Payable (warehouse)			1,250	00		
	Total liabilities			7,640	20		
22	Proprietor's Capital Account			7,850	24		
	Total liabilities and capital					15,490	44

FORM C.

May Increase Use of Canadian Timbers at the Front

In an interview upon his arrival at Halifax, N.S., Sir Sam Hughes, when asked about the Canadian forestry battalion in England, said: "I visited the scenes of operations in Devon, at Virginia Water, and other points in England, as well as Castle Douglas, Dalbeattie, Grandtown, Nairn, and Kirkconnel in Scotland, my objects being not only to see the work of the Canadians, but also to observe the extent of the supply, and to consider how Canadian timber products could be utilized at the front. I had previously recommended a committee of leading Canadian lumbermen, representing the different provinces, to co-ordinate the facts and figures regarding the Canadian supply, and arrangements have been entered into, all purely unofficial, with the committee in Britain to see, first, what supplies Canada can furnish, and, second, how they can be gotten to the front. Already it is understood orders have come to Canada in this regard."

Steam Logging by the Aerial Method

By Robert Waddell, Engineering Expert, Washington Iron Works, Seattle, Wash.

I have been asked to discuss high lead logging, but this system is so bound up with others that it is impossible to treat it alone, and I think it best to begin with a brief review of the steps that have led to its adoption.

Loggers are familiar with the methods and appliances of ground yarding, and with their gradual evolution, from the use of horses and oxen at first to that of the modern yarding engine. So I propose merely to call attention to the limitations of this system, and compare it with others.

First: Ground yarding can only be used profitably on the best timber lands, such as flat, bottom lands, with as little underbrush as possible. It cannot be used in swampy ground, nor can it be used for getting logs down hill on steep slopes. (It can, in cases of necessity, be used for getting logs uphill on steep slopes). But, conceding the pick of the timber lands to this system, it still has several disadvantages well known to every logger. Amongst them are: The constant stoppage of the logs being hauled by stumps, etc., the great amount of brush and dirt brought in with the logs, making doubly difficult the work of the men around the landings; the necessity of "sniping" or pointing the logs to expedite their hauling; and the great loss of time caused at each cycle by the changing of the choker hooks to pass the bull block on the way to the landing. (See Fig. 1).

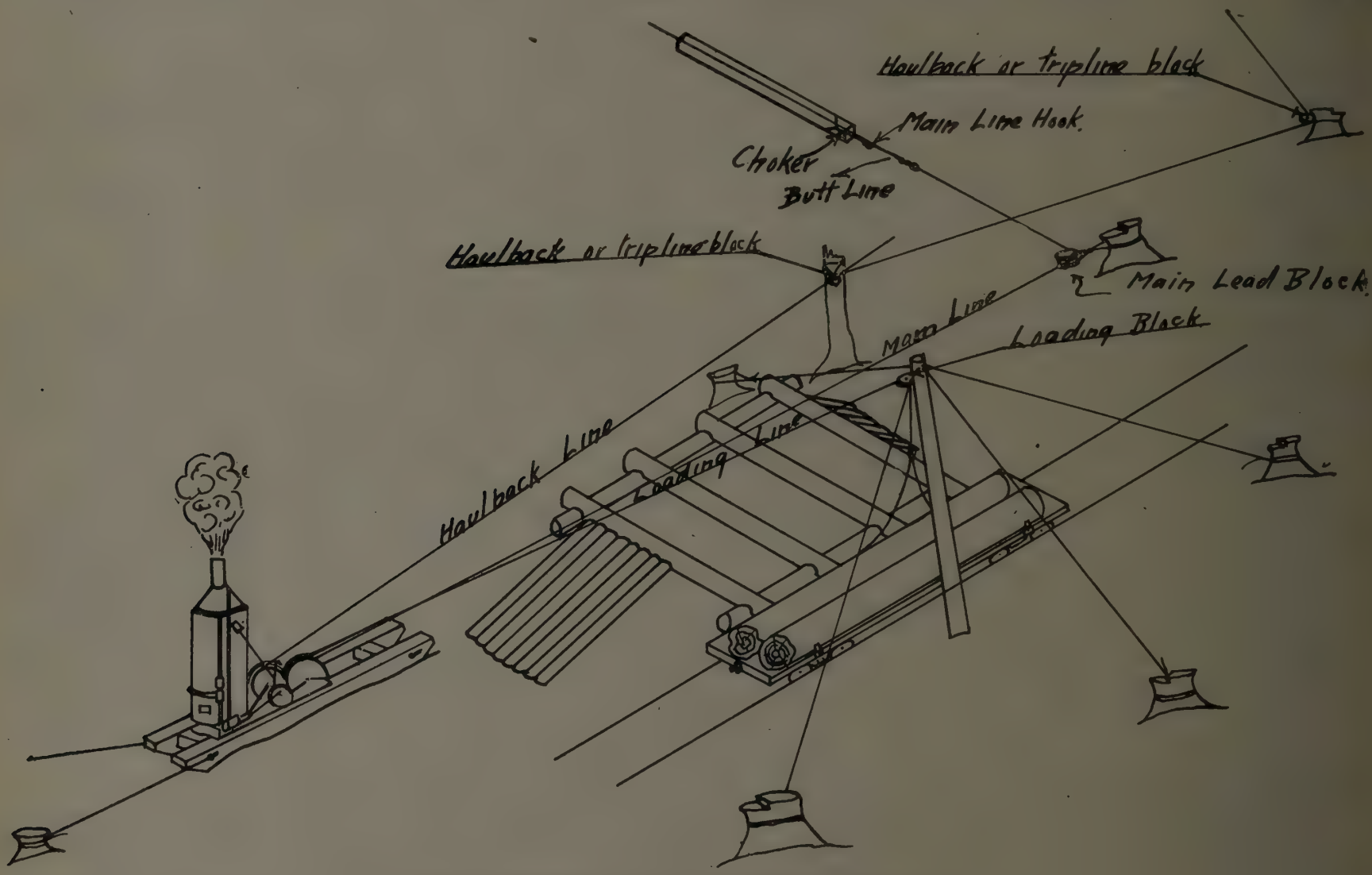

Fig. 1—General Arrangement showing Yarder hauling through Main Lead Block.

Overhead or Skidding Systems: To obviate some of the troubles named in connection with ground yarding, a variety of "Aerial line," or overhead skidding systems have been devised. Nearly all of these employ a "standing line" or "sky line," which is tightly stretched between spar trees at its extreme ends, and which forms the track on which a trolley runs. The log is suspended by one end from this trolley, and is half lifted, half trailed (or skidded) over the obstructions in the ground.

One of the simplest of these systems is the two line skidding system installed by the Washington Iron Works, with whom I am associated, at the Fernie Lumber Company, Fernie, B. C. (Fig. 2).

It is operated by a special three-drum donkey (Fig. 3) but can be almost equally well operated by any two-drum engine, such as a half-breed or road engine, with some minor alterations.

A suitable spar tree is picked out near the railroad track, another at the opposite end of the section to be logged, and a sky line is rigged between them. The engine shown in Fig. 3 has a special third drum for tightening the sky line, which is locked by a ratchet and pawl when the proper tension is obtained; but other and more rough-and-ready methods of tightening the sky line are often used.

On the sky line runs a two-wheeled trolley, made of boiler plate with manganese steel sheaves, and provided with a block hung to the underside of it. The yarding or skidding line is led from the skidding drum of the engine up the head-spar through a block, out through the block under the trolley, and ends in the hook for engaging the "Chokers" on the logs. The trip or haulback line is led from the trip drum of the engine out through the woods, through a block on the tail spar, and out to a shackle on the trolley. By pulling in this trip line the trolley is run out to the woods to the desired location, the skidding line is slacked out, hooked to the log, and then hauled in, bringing the log with it. Logs can be yarded from a limited distance each side of the sky line, and when this space has been cleared, a new tail spar must be picked and the line moved.

It is plain that, for any considerable span, the weight of the bight of the skidding line hanging between the trolley and the headspar must make it difficult if not impossible to "get slack," that is, reeve off enough line to enable the hook to reach the log. A tag-line is therefore attached to the hook, and by hitching this to some convenient stump momentarily, slack may be pulled as desired up to a radius of 1,000 feet, but for greater distances it is advisable to use intermediate supports for the sky line, and a special opensided trolley must be used to pass the hangers. This system is at its best on comparatively level ground or slopes of not more than thirty per cent. in small timber of from 200 to 500 feet to the log. Variations of this system are the North Bend system (Fig. 3) and others, but the essential principles are the same as described. The capacity per day may average 30 to 35 thousand, even in such small timber, and the speed of line used is commonly about 500 to 600 feet per minute.

Lidgerwood, Hawthorne and Other Interlocking Systems

I have already spoken of the limitations of the two-line aerial system, notably as to span, slack pulling, and grade of slope. To over-

come some of these troubles, several more powerful (and also more complicated) arrangements have been devised, the most notable being the Lidgerwood (Fig. 4) and the Hawthorne. Both of these systems employ the sky line as I have already described it, the skidding or yarding line, and the trip or haulback line, but both have in addition a slack-pulling line by which the skidding line is reeled out to the hook tenders regardless of the size of the span or weight of line. In the Lidgerwood system slack is pulled to the trolley, and carried out by man power from the trolley to the log, while in the Hawthorne system slack is pulled to a portable trip block, which is hitched to a

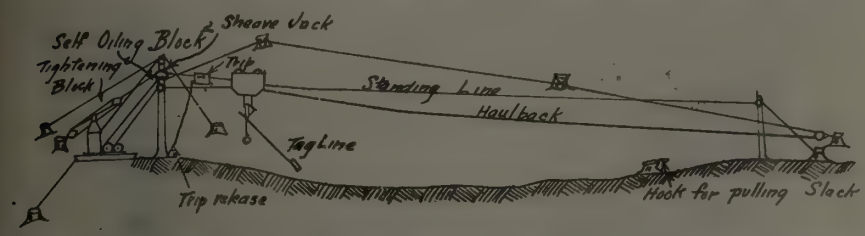

Fig. 2—Two Line Skidding System installed by the Washington Iron Works at the Fernie Lumber Company, Fernie, B. C.

stump near the logs to be yarded, thus eliminating all handling of the line by the crew. The most notable feature of both systems is the interlocking of the skidding and haulback drums on the engine, whereby the skidding line comes in at exactly the same speed as the haulback line goes out and the tension on the two lines is maintained without the use of brakes. This feature enables the rig to be used for downhill yarding on the steepest hillsides, for crossing swamps, ravines and other natural obstructions, all with the minimum expenditure of power.

The Lidgerwood skidder is usually mounted with its own log-loader just ahead of it, on a steel flat car, both engines taking steam from the same boiler. The car is provided with four hydraulic jacks at the corners, by which it can be set up on blocks, or "crabbed" sideways off the railroad to its own setting at the foot of the spar tree.

These systems are at their best among moderate-sized timber, and for spans up to 1,000 feet, although spans of 1,500 feet and more have been successfully operated. The average capacity in favorable circumstances may reach 50, 60 or even 70 thousand feet per day per machine, in Puget Sound forests, and the line speed may be from 400 feet to 800 feet per minute.

MacFarlane System: This overhead system is notable more from its originality than from its popularity, as there are very few in use.

There is the usual head and tail tree, but the sky line instead of being fixed is wound on the skidding and trip drums of the engine, and the whole span is raised, lowered, or traversed as would be the skidding line in the ordinary system. This feature, as you can see, entails a very massive design of engine, with large drums and very powerful brakes; and the operation of such a quantity of heavy cable makes the work of the woods crew more precarious. I have seen much time lost by the crew "bolting" into the woods after hooking a log, and having to return a corresponding distance to replace the chokers when they slipped.

High Lead System: I have mentioned the MacFarlane system

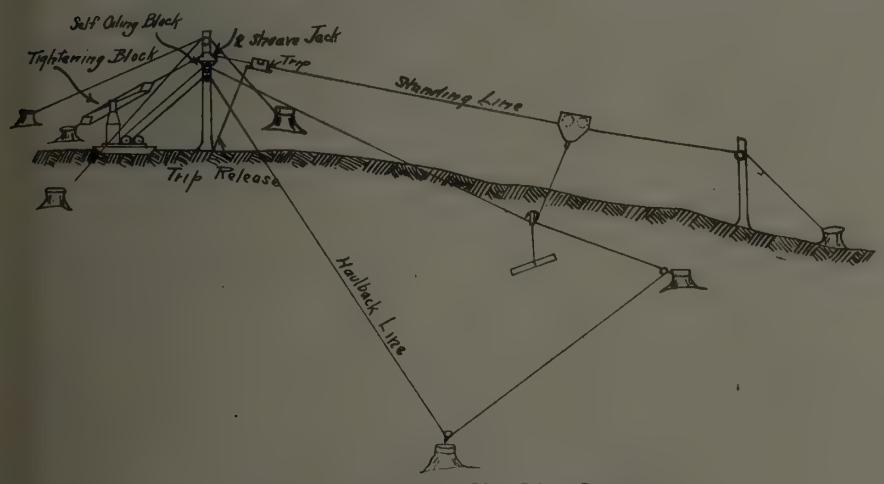

Fig. 3—North Bend Sky Line System.

more because it marks a step in the evolution of the High Lead than for any particular merits it possesses. Its principal weakness, as I have said, is the great size of drums and brakes to keep such a tension in the lines as will lift the log off the ground. But if we were to make no attempt to keep the log off the ground, this objection would vanish, and we should then have evolved, to all intents and purposes, the high lead yarding system.

It is a little difficult to describe the rigging and method of operation without the aid of diagrams, but I shall try to put matters as lucidly as possible. Suppose we choose a spar tree near our railroad track, as high a one as possible, and cut the top hamper from it. We then attach guy-wires all around to convenient stumps, using from four to nine, according to the height of the tree. At least two of these guys must cross the railroad, to be used for loading. To the top of the spar tree we attach the high lead block, which has been designed specially for this work, and takes the place of the old bull-block. It is built with large diameter sheave, and large oil reservoirs in the side plates. This block is commonly from 100 to 180 feet from the ground, so it is essential that it should hold enough oil to last about a week at least.

The weight of the block may be from 700 to 1,300 pounds, depending on the size, and the greatest care should be taken to see that the straps and rigging that support the block are strong enough, and well put on.

The yarding donkey may be set in any position from right against the spar tree to 150 feet away from it—the latter position is the safer if any accident happens to the rigging. From the main drum of the donkey the line is led up through the high lead block and out into the woods, while the trip or haulback line may be led in the same way, or along the ground if preferred, to the trip block which is attached to a convenient stump.

The logs are pulled from every direction radially towards the spar tree as a centre, and are dropped promiscuously in a pile at the base of the spar. It would be impossible with this system to pull the logs to a landing (unless a separate donkey were used for the purpose) so no attempt is made to arrange the logs parallel to the track. The pull on each log as it is being yarded, comes from the top of the spar, which tends to lift the front end of the log over any obstructions, and makes an enormous difference in the speed and ease of yarding. Also, there is no sniping or pointing of the logs required, and the condition of the logs reaching the mill is greatly improved by the absence of stones.

I have it from mill men that the trouble from stones in the logs is only one-tenth as great with the high lead as with ground yarding, and this makes a very considerable saving in the upkeep and life of the

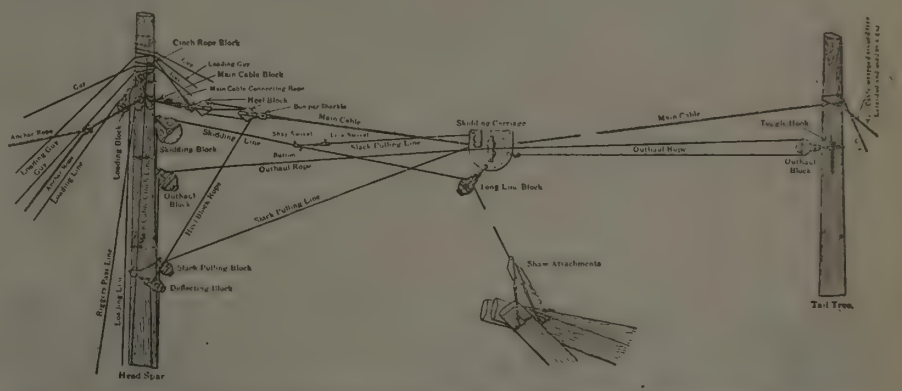

Fig. 4—Lidgerwood Interlocking Slack-pulling Cableway Skidder and Loader.

saws. A great deal less brush and mud is also pulled in with the logs from the high lead system, which makes the work of the loaders much more tolerable.

The capacity of an ordinary compound geared yarding donkey is commonly increased from 15 to 30 per cent. by the change from ground yarding to high lead yarding, but the full benefit of the high lead can only be realized by using a machine capable of higher line speeds. For this reason the firm with which I am associated have put on the market the Simplex Yarder, a long stroke, direct geared donkey, having considerably higher line speed than the ground yarder, yet powerful enough to be used for ground work if required. Line speeds for ground yarders vary from 200 to 270 feet per minute, and for Simplex yarders from 300 to 350 feet. The haulback drums have been correspondingly speeded up, as it is just as important to get the line out into the woods quickly as it is to get home the log. With modern "Simplex" yarders it has been found quite possible to average from 100 to 125 thousand a day, and in one exceptionally favorable situation 200 thousand a day has been yarded.

These great capacities of the yarder have necessitated a corresponding speeding up of the loading facilities, for it is no use yarding 125 thousand if your loader can only get rid of 60 or 70 thousand a day. The difficulty is rendered greater by the logs coming in promiscuously, and lying across each other in a heap at the base of the spar tree, so that ordinary loading engine has no chance of loading even half the output of the yarder. As far back as 1910, the Washington Iron Works designed and built what they called a "Duplex" loader; from the fact that it consisted of two entirely independent and similar units, which handled both ends of the log simultaneously with two loading lines; and this engine has proved to be the one touch necessary to complete the success of the high lead system. The machine consists of two nine by ten and one-quarter double cylinder reversible engines, mounted one above the other, each driving a loading drum directly bolted to its gear, An extra drum is provided on the lower engine for car spotting, but the essential feature of the loader is the driving of the loading drums without the use of frictions, and the

reversibility of the engine to do away with the use of brakes and haul-back lines.

When I described the rigging of the spar tree, I mentioned that two at least of the guy wires should pass across the track, to be used for loading; and I shall try now to make this part of the system clear. On each of these two guy lines crossing the track is mounted a small two-wheeled trolley, or "loading jack," which is anchored, by a tag-line from the spar tree, so as to hang directly above the track. To the underside of each loading jack is suspended a loading block (preferably of the oil-reservoir or auto-lubricating type) and on the spar tree itself, at a point some distance below the high lead block, are hung two more loading blocks. The loading lines are led from the two drums of the loader up the spar tree, through the two blocks on the spar, and down through the blocks on the loading jacks. At the end of each line is fixed a set of tongs (which must be of high tensile steel) by which the log is lifted.

Two men take each one of these tongs, and run out to the pile of logs, slack being paid out to them by steam. If only one end of the log to be loaded is accessible, that end only is caught by a pair of tongs, and the whole log pulled out of the pile by one loading line. As soon as the other end is clear, the other pair of tongs is hooked in, and the log can then be pulled along, one end at a time or both together, till it comes to the side of the track. It is then lifted bodily, and hangs from the jacks, parallel to the car, and directly above it, from which position it can be lowered gently on to the car. This method of holding the logs by both ends makes the operation of loading logs at least twice as rapid as the older plan, and is at the same time much easier on the cars.

With this machine we have found it easily possible to load four cars per hour, working from the pile delivered by a high lead yarder, and this output is far beyond the capacity of the yarder.

To complete the description of the high lead system, I should like to refer to a special combination of high lead yarder and loader which we have furnished several firms with, amongst them the Cherry Valley Timber Company, Stillwater, Washington, and the Everett Logging Company, Tulalip, Washington (Fig. 5).

These rigs were designed for camps possessing very complete railroad facilities, and consist each of a Washington Simplex Yarder having an extra large boiler, a Washington Duplex Loader, without boiler, taking steam from the yarder boiler, both being mounted on a steel flat car. The flat car is specially constructed for the purpose, having trucks that will swivel all around the circle, and being provided with four 6-inch hydraulic jacks, one at each corner, supplied from a pump driven by the loader. The loader is at the front end

Fig. 5—Complete High-Lead Unit Consisting of Washington "Simplex" Yarder and "Duplex" Loader (Patent applied for) with oil burning equipment, mounted upon special steel car with swivel trucks. In operation at the Cherry Valley Timber Company's Camp, Stillwater, Wash.

of the car, the yarder in the middle, and at the back is a large oil and water tank.

This combination has many advantages over the separate machines on sleds, where the railroad facilities are ample. A setting can be very rapidly changed, far more rapidly than where the donkeys are on sleds and have to pull themselves along, as the whole car can be crabbed on to the railroad by the same method as I described for the Lidgerwood, and then pulled by the locomotive to the new setting. I have with me two excellent photos of the rig at the camp of the Cherry Valley Timber Company, Stillwater, which I shall pass around. The rigging of the spar tree is very clearly shown, also the loading jacks and blocks with the log hanging from them (Fig. 6).

I believe I have described the essential features of the various methods of handling logs as fully as I am able in a limited time, and without the aid of diagrams or views; but there are still some facts and figures on the cost and performance of some of them that you might care to listen to. I give them with due reserve, as every practical logger has his own idea as to the cost of operating, and is inclined to doubt the figures given by a competitor.

First, a comparison of the cost of building a landing for ground yarding, and rigging a spar tree for high lead yarding shows that the landing may run from one hundred and fifty dollars up, while the spar tree works out at about sixty dollars. In cases where two sides are yarded, one spar tree will take the place of two landings, which makes the comparison sixty against three hundred, and the cost

Fig. 6—High-Lead Yarding at the Cherry Valley Timber Company's Camp, Stillwater, Wash.

about ten cents a thousand for the loading, and two cents for the spar tree.

In this estimate I have taken not merely the cost of the actual landing, but the whole cost, including blasting, as the stumps must be removed and the road cleared for ground yarding at the landing, which is not required for high leading.

Next, as the time required to string out lines. Once the spar tree is guyed, it takes about an hour and a half to string out the yarding and loading lines for the high lead system, and about the same for ground yarding. For the overhead system, such as the Lidgerwood, the Hawthorne or others, considerably more time is taken, as there are at least two extra lines, and one of them, the sky-line, has to be set up tight.

The actual figures covering four years working on the Merrill & Ring Logging Company, Washington, give a daily average capacity of forty thousand for the ground and an increasing average of fifty to seventy-five thousand for the Lidgerwood and high lead systems, these two being in this case about equal in efficiency. I may say that the timber is fairly small, running about five hundred feet to the log, so the case is more favorable to the Lidgerwood system than it would be with larger timber.

The comparative costs for the three systems, obtained from the same company, give (all in cents per thousand) for the ground yarding 120 cents, labor only, Lidgerwood 91 cents, labor only, and high lead 81 cents, labor only. For ground yarding upkeep of engines only 12 cents, high lead upkeep of engines, 12 cents, and Lidgerwood upkeep of engines 9 cents. For ground yarding cost of wire only, 11 cents, for high lead 14 cents and Lidgerwood 13 cents.

Again, in commenting on these figures, I may say that the yarders used for high leading were old fashioned ground yarders, of a nearly obsolete type, and the Lidgerwood machine was absolutely modern, so that the upkeep charges show very unfavorably to the high lead system. This upkeep charge is more than double what is given by other firms employing up-to-date machines. Taking these figures as a basis of comparison, we see that the total cost is slightly in favor of the high lead system, whilst both the Lidgerwood and the high lead systems are far ahead of the ground yarders. Both the Lidgerwood and the high lead are delivering from 25 to 75 per cent. more logs at about thirty per cent. less cost per thousand feet. From Mr. McDonald, at the Cherry Valley Timber Company, I have received practical confirmation of the relative efficiencies of the ground and high lead systems that I have just quoted, and for the cost of wire he gives 15 cents per thousand for the ground system and 10 cents a thousand for the high lead system.

Opportunities in South America

United States Investigator Tells of Lumber Markets and How to Get Into Them More Extensively

The West Coast Lumbermen's Association, at its monthly meeting on Sept. 29th, had the privilege of hearing an address by Roger E. Simmons, special investigtaor for the Bureau of Foreign and Domestic Commerce, who recently studied lumber trade conditions in South America. Mr. Simmons referred at considerable length to the markets for Douglas fir. There was an erroneous impression, he said, to the effect that South American business men possess little intelligence and low business ideals. On the contrary, their standards will compare very favorably with those of this country. A characteristic for which South American business men are noted is their loyalty. Mr. Simmons said: "Secure confidence by open, square dealing, protecting the interests of your clients, and you will find South American patrons upon whose loyalty you can depend. The personal equation enters largely into business. Friendship and loyalty comes in return for service." In speaking of the class of dealers engaged in the lumber business, he said that the yards are always located on important streets, all lumber is stored in enclosed sheds, the buildings are imposing and of good character, and are not located on the outskirts of the towns. Some sheds have sufficient room to accommodate 3,000,000 feet, and in times of normal business imported stocks of lumber totalling over 200,000,000 feet are carried on the southern continent.

Despite the fact that the forests of South America are vast and contain great quantities of timber, Mr. Simmons said that American manufacturers do not have to fear the competition of native woods greatly, because the species are so scattered in the forests, are so expensive to log and manufacture, that the price is extremely high and will allow the payment of large import duties on foreign wood. The only wood that occurs in thick stands is classified as a softwood in Brazil, and is variously called Brazilian white pine, Parana pine, or Araucaria. It produces an inferior type of lumber, much subject to warping and twisting, and is very susceptible to the attacks of fungi. Consequently it is not to be greatly feared as a competitor of American woods.

Mr. Simmons said that the high import duties on rough lumber are imposed by the governments in the hope of helping local manufacturers of lumber, but, instead of accomplishing the desired result, they are causing the people to run largely to the use of substitutes for wood in building construction. The duty on surfaced lumber is prohibitive, and he believes that the interests of the American lumbermen may be served by exporting cut-to-size stock for stiles, rails, panels, furniture stock, and car material, etc., in the rough, so that the remanufacture may be accomplished by local industries of the countries to which the exports go. He said that while all of the countries of South America present possibilities for the increase of the exportation of lumber, he believes that none afford the opportunities of the section termed the "River Plate." This district is termed one of the largest, if not the largest, import markets for lumber in the world.

Douglas Fir Shipments.

In speaking of the opinion regarding Douglas fir caused by the method of handling exports, Mr. Simmons said that no complaints have been made as to the grades received, the volume of the cargoes, or the manner in which they have been prepared for shipment. He complimented the West Coast lumbermen by saying that is the only instance in which the South American dealers are perfectly satisfied with a wood imported from the United States and their treatment by the exporters. In speaking of the inspection of shipments, he said: "The result of your wisdom in estabilshing an inspection bureau and taking steps to transact export business on a standardized and business-like basis is especially apparent in Chile, where Douglas fir in the face of competition of the chief native woods is meeting over half of that republic's demand. To my mind, this is the most notable achievement of American trade in South America." To put Douglas fir on the same satisfactory footing in the Plate market it is only necessary to employ the same principles that have built up such a large trade in Chile and Peru. The importers, who are the principal lumbermen, carry enormous stocks, and frankly say they will oppose the introduction of a wood, such as Douglas fir, that will force them to carry duplicate stocks of two woods suitable for the same building purpose, Southern yellow pine occupying the position of standard stock lumber. As both woods are usually quoted at about the same figure, the price factor will not exert any influence. Mr. Simmons says the situation as it stands does not appear promising for Douglas fir, yet he suggests that the West Coast lumbermen can open up a large and profitable market by active co-operation of all the manufacturers and the organization of export selling agencies. How this may be applied to increase the market is best told in his own words: "Through co-operation and export selling agencies you are in a position to arrange with one of the principal importers in the Plate section for the placing of a cargo of Douglas fir on consignment, to be paid for as it is sold. A salesman with a knowledge of the merits and properties of Douglas fir should follow the shipment to the Plate and work with and under the guidance of the importer. If the trade becomes interested, as undoubtedly it will, importers will not seriously object to the innovation. Such a plan would not interrupt present business relations nor oppose customary system of procedure, while it provides for placing the wood on the market for examination." He said that he did not believe that the establishment of local yards stocked with West Coast woods in the Plate district would be a successful way in which to introduce the woods, both because of the enormous costs that would have to be sustained by the importers and the natural prejudice of the trade.

The importers of Chile, like those of the Plate section, have strong and effective organizations, a good knowledge of trade conditions and credits. By organized effort they have developed the lumber business to its present magnitude, and intend to protect and maintain their advantages. As in Argentina, there is a market for an increased sale of Douglas fir, but, according to Mr. Simmons, the best manner in which to increase the trade is not by becoming interested in local lumber distribution, but by the co-operation of American exporters with Chilean importers in an educational campaign to enlighten the people as to the proper uses of wood. He says: "An educational campaign is the imperative need in Chile, but more so in Peru, and of equal importance in Argentina, Uruguay, and Brazil, where it is necessary that the people be informed how to use and what woods to use; that proper seasoning will prevent shrinkage, warping, and in many cases decay; that woods can be treated to prevent rot when exposed to dampness and also made fire resistant; that wood does not contract or expand with the temperature, and that it does not hold heat or cold as steel does, and that painted lumber in the open will probably utlast galvanized iron.

Regarding other possible markets for Douglas fir, Mr. Simmons said:

"In Brazil there exists an immediate opening for marketing a softwood to substitute for Swedish pine, this lumber to be brought to Brazil only in the form of deals, 3 x 9, 14 to 18 feet long. The quantity used ranges from 10,000,000 to 15,000,000 feet annually. With the outbreak of hostilities in Europe the supply of this Swedish lumber has eeen practically cut off. The American wood that will successfully meet requirements at proper prices will not only find immediate demand, but doubtess a permanent trade in the future.

"It is well for manufacturers of Douglas fir, with the operation of the Panama Canal, to look to the possibilities of trade with Venezuela, where lumber is admitted free, provided it arrives in sizes no less than 12 x 12 random lengths, varying from 16 to 40 feet. Douglas fir is more readily applicable to these sizes than any other American wood, and for that reason West Coast mills should not overlook Venezuela's markets.

"Lying off the coast of Venezuela is the Island of Trinidad, owned by England. Over 10,000,000 feet of American lumber is consumed there annually. Recently a consignment of Douglas fir salvaged from a wrecked vessel nearby was brought to the island. It was the first time the wood ever appeared in that market. It made a favorable impression, and doubtless after the war enquiries for quotations will be asked, with prospects of this lumber becoming a market standard."

In concluding, Mr. Simmons said:

"Increased sales for United States lumber in South America can be said to depend, first, upon filling orders with lumber properly conditioned, accurately measured, and uniformly graded; secondly, trade extension by publicity and demonstration.

"Nothing can further these factors to greater advantage than the co-operative export selling agencies that you propose to organize. Nowhere is co-operation among lumbermen more essential than in the development of foreign trade. I am sure if American lumbermen are to make the most of the great opportunities that are before them in South America they must at once perfect organizations which can successfully not only seek foreign business, but can study to take care of its proper transactions in such a way as to be satisfactory to foreign purchasers and to reflect favorably on our lumber industry and the American business character."

A cable from Great Britain states that Col. Pelletier, agent general for Quebec, recently left for Canada to assist with arrangements now in progress for the development of Quebec timber lands in the special interest of returned soldiers. Two Engilsh groups, it is reported, are subscribing one million dollars each for the purchase of timber lands, which will be cleared of pulp and other wood and then thrown open for farm settlement on easy terms.

P. P. Clark, ex-warden of Hastings County, Ont., died at his home in Belleville recently, after several months' illness. The late Mr. Clark spent most of his life in St. Ola, where he was engaged in the lumber business, owning a sawmill and conducting a general store.

Imports of timber, hewn and sawn, into New Zealand, during the seven months ending July 31st, were valued as follows:—1916, £73,576; 1915, £167,864.

Lumber Experts Going to Europe

United States Government and Lumbermen Co-operate to Study Foreign Trade Opportunities

The United States Bureau of Foreign and Domestic Commerce of the Department of Commerce have examined a large number of lumber experts in order to find the most suitable men to engage in an investigation of European lumber markets, in accordance with a plan recently decided upon by the National Lumber Manufacturers' Association, the Federal Trade Commission, the United States Forest Service, and the Bureau of Foreign and Domestic Commerce. Those who passed the examination with the most credit will be given an oral examination at Washington, before a board composed of representatives of the lumber industry and the officials of the three government branches concerned.

In regard to the investigation, Dr. E. E. Pratt, chief of the Bureau of Foreign and Domestic Commerce, has made an announcement to the following effect: Five trade commissioners are to be chosen, who will be specially qualified to secure and report detailed information about the requirements of European lumber consumers and the methods and capacities of European lumber producers. All the expenses of one commissioner will be paid by the government. The cost of the others, including the services of a Russian interpreter, will be borne by the National Lumber Manufacturers' Association. All will be appointed by the Department of Commerce.

Before the end of November the commissioners appointed will be holding conferences with manufacturers throughout the country, so as to ascertain precisely what information will be of greatest value to them. After this the commissioners will leave for Europe.

One commissioner will study lumber requirements in the United Kingdom, Holland, and France. A second will cover Southern Europe and Northern Africa, including Spain, Italy, Greece, Algiers, and Egypt. A third will study conditions in the Central Empire, covering the markets of Germany and Belgium, and perhaps those of Turkey, and the production of Southern Germany and Austria. A fourth commissioner will go to Norway and Sweden, to make an estimate of the lumber-producing power of those countries. A fifth will study conditions in Russia, Siberia, and Roumania.

The investigation is to be one of the most thorough ever undertaken, and may extend over two years. It is expected that by the end of the war enough information will have been collected to be of assistance to American manufacturers who are then ready to handle European trade.

The commissioners will be expected to have a thorough acquaintance with American woods, their varying qualities, the uses for which they are best adapted, the dimensions and grades in which they are usually marketed, and the woods that compete with them. They will make a complete study of the European building trades, and of the kinds, qualities, and dimensions of lumber that are most popular for all sorts of construction—in fact, they will study every variety of market in which the American lumber exporter is interested.

A special study will be made of the furniture trade, the methods and requirements of cabinet-makers and carpenters, the use of American oak, gum, and other hardwoods, and the demand for soft and hard varieties of these American woods. The names and addresses of lumber importers, large users, etc., will be furnished, together with the character of their supplies.

In the course of his announcement Dr. Pratt said:

"The destruction of European forests resulting from the high price of coal and the ravages of war will undoubtedly increase the demand for the lower-grade mill products, and thus afford an outlet for much material that is now in this country, either wasted outright or wasted in part by being put to an inferior use, as once black walnut was used for fence posts and cross ties. The possibilities of building up a market for this part of the tree will be particularly studied.

"If we are to do business with Europe successfully to-morrow, as well as to-day, it is important that we know what our chief competitors are doing, and for this purpose investigators are going to Sweden and Russia. They will make estimates of the timber stands of those countries, the means that are being developed to insure a steady supply of good lumber, the cost and methods of logging, the efficiency of the sawmills, the methods of selling and delivering the finished product, and the general competitive power of those countries.

"During the progress of their investigations the commissioners will make preilminary reports on the more important phases of the work, and these reports will be bulletined at once to the lumber associations and distributed by them to their members. On their return, they will tour the country, according to the usual practice of the bureau's special agents, advising with the lumber manufacturers as to the most profitable opportunities in European markets.

"The fact that the United States lumber producers have been exporting to Europe some $50,000,000 of wood and its manufactures annually is the best evidence of the future market that waits the lumbermen across the sea."

Organization of American Lumber Industry for Export Trade

The information brought out at the recent conference between United States Government officials and representatives of the American lumber trade, briefly summarized, is as follows:—

Belgium.—The forests have been entirely destroyed and the nation so wrecked physically and financially that it will have to be entirely rebuilt, and this rebuilding will have to be financed by the Allied powers.

Northern France.—Northern France will have to be entirely rebuilt. A great deal of railroad construction will have to be undertaken; so much indeed that it is said the number of ties, sleepers and timbers is beyond estimate at the present time. This same condition holds true with regard to the farm buildings, villages and cities of the section. This need will be definite, regardless of the outcome of the war.

England.—The forests of England and those of Scotland have been almost entirely cut in an endeavor to secure material needed at the front and for building construction brought on by the war. Lumber will have to be imported for practically all future building until new forests grow to take the place of this timber.

Italy.—The supply of Italian timber has been almost entirely used either in Italy's war operations or exported for the benefit of the allies. It is said that great quantities of lumber are in immediate demand.

Spain.—Because of the geographical situation Spain has been called upon to supply lumber to the warring nations, with the result that all marketable timber has been cut.

Germany.—So far it has been impossible to secure any estimate upon the conditions of Germany's timber, but it is known that it has cut as much timber as possible from the invaded portions of France, Belgium and Russia and has conserved home resources as much as possible. However, it is expected the demand from Germany for foreign lumber will also be very great.

Russia.—The supply of standing timber in Russia is very great, both in the Baltic Provinces and in southern Siberia, but owing to the lack of development of the timbered sections and poor transportation facilities the timber will not be available to the Allies for some time after peace is declared. Much development work will have to be done before Russia takes a dominating position in the lumber world.

How to Secure These Foreign Markets

To secure this business, it was declared to be necessary only for the American lumbermen to go after the trade systematically, with an advance knowledge of the needs of the various nations, and the securing of information as to markets and business practices. It was stated that the French Government has already offered to buy enormous quantities of railroad timber on twelve months' interest-bearing notes.

The Government called this conference in the belief that it was a function of the Bureau of Foreign and Domestic Commerce to assist the lumbermen to develop this market efficiently and the lumbermen voted to join in the movement by partially financing the expenses of trade commissioners to proceed at once to Europe and begin gathering information. The method of working out the underwriting of this expense was left to a committee.

The most illuminating exposition of conditions abroad was made by John E. Rhodes, secretary of the Southern Pine Association, which sent a representative abroad several months ago, and whose reports, already fragmentarily at hand, show that the demand for lumber will be beyond belief. France, it was shown, as well as other foreign powers, is strongly prejudiced in favor of American lumber. The plan of rebuilding France, as being outlined by French governmental authorities, is to have towns and villages on the community basis, with model farms on the American plan. The picture of utter devastation presented by Mr. Rhodes, as part of his showing of the opportunities for American lumbermen, was striking. It so impressed the representatives of other lumbering regions that they agreed that it was time for American lumber manufacturers of all sections to unite to care for this great market, regardless of whether the interested districts themselves were exporters or not.

Hull Merchants Want Canadian Stocks

Timber merchants at Hull, England, continue to manifest interest in Canadian timber, but state that it is now impossible to arrange for shipping space from Canada. One Hull firm largely interested in maple floorings and blocks writes that within the past two years they have bought about £12,000 worth of maple floorings from the United States and £1,500 from Canada, and now have orders placed in the United States for £4,000. They state that American firms, although handicapped by ocean space shortage, are yet managing to make deliveries, though this has proved impossible in the case of Canadian firms from whom they endeavored to secure supplies, the latter reporting that the steamship companies have refused all business in this commodity both to Liverpool and to Manchester.—Weekly Trade and Commerce Bulletin.

From the Canada Lumberman of Thirty-five Years Ago

BLACK WALNUT.—A Gloomy Outlook for Furniture Men.—A few years ago black walnut was a drug on the market, and was not at all popular with furniture manufacturers and dealers, but recently it has been so universally sought for and used so extensively for almost every kind of furniture that latterly it has become very scarce, and now it is found next to impossible to obtain a sufficient supply to meet the increased demand, at almost any cost. An idea of its scarcity and value may be gained when $100 per thousand feet has been paid this year for the same quality and quantity of black walnut as could be purchased last year for $70. The rapidity at which the supply has decreased is owing to the impetus the trade has received through the organization of a large number of extensive furniture companies in the United States. The immense number of sewing machines (the wood-work of which has been manufactured from black walnut) that have been annually turned out, both in the States and in Canada, is one of the principal causes of the rapid consumption. A prominent dealer in the city states that there are now ten anxious buyers distributed throughout the States to every one there was two years ago, and that there is more difficulty in procuring a few thousand feet of the precious lumber now than there was in securing half a million feet three years ago. When walnut first came to be used it was obtained from Port Stanley, the Counties of Kent, Essex, and South Middlesex, and it also grew in abundance on the banks of the Thames River, Ont.; but now the Canadian supply is exhausted, and lately it has been obtained from the State of Indiana. There was such a great similarity between the wood of the two countries that manufacturers had no choice and paid the same price for either. Since the Canadian supply has failed, the immense drain on the forests of the State of Indiana has caused the supply to give out there, and now the walnut (which is of a lighter shade and consequently not so good) is obtained from the States of Arkansas, Kentucky, Kansas, and South Tennessee.

If walnut is not replanted at once the outlook for good furniture in the future will be very dreary. If it were planted along the shores of Lake Erie or in the counties before mentioned, or in any part of the province west of Ontario, in twenty years' time it would pay 5,000 per cent., so says an old arboriculturist. In the meantime the prospect is gloomy in the extreme, and dealers look forward to a speedy and complete exhaustion of the supply.

Editor's note.—The above was written 35 years ago. It is interesting to note that the recent revival of interest in walnut as a furniture wood has been met by the appearance of plentiful supplies from United States manufacturers. First and seconds one-inch walnut is worth to-day about $120 a thousand feet, without the duty. A Canadian consumer, paying the duty, would be able to get as much walnut as he wants at about $129 a thousand feet.

M. J. Scanlon's Views on the Western Situation

M. J. Scanlon, of Minneapolis, vice-president of the Powell River Company, Ltd., British Columbia, in a recent report regarding the future of the lumbering industry of Western Canada, said: "There are several things that are acting against the lumber industry in the West, one of these being the scarcity of tonnage to carry the lumber, and then there is the fact that the demand from Mexico is not so great as it used to be. Then British Columbia has to reckon on the competition from the East, which is becoming a formidable factor. The people of the United States would use more British Columbia lumber were it not for the fact that we cannot get the class of lumber we require there, and also that the freight rates are so high. That leaves us only one alter- also that the freight rates are so high. That leaves us only one alternative, and that is to place our orders in Eastern Canada. I do not mean to say that we have abandoned British Columbia as a lumber-producing centre. Far from it, but what I wish to convey is that at the present time, under conditions due to the war, our business connection with British Columbia is not so great as we would like it to be, though that, of course, is bound to right itself. If the United States building permits have gone up by leaps and bounds, and we have to get lumber somewhere, we take it from the nearest and cheapest place. After the war a different state of affairs will arise. The forests of the Eastern States are being rapidly depleted of their supplies, while all the time British Columbia is building up a supply that must of necessity be used by manufacturers and others, not only in Canada, but in the United States as well. At present there is only about 35 per cent. of the capacity of the sawmills in the States in operation, and the same thing applies to Canada. There has been overproduction in both countries, and that overproduction is still going on, though not to the same extent as formerly. My opinion is that when times get normal, when matters are settled in Mexico, and when the war in Europe is over, there will not be sufficient lumber to take care of the orders that will flow in. Of course, Europe will look to America for a large supply for reconstruction work and then will come a time of prosperity for both countries. The one great handicap that we are up against in the United States is the labor situation. There is a scarcity of labor, and there is no question of that, and until the war ends there will continue to be a scarcity. Before the war started we were getting 1,200,000 immigrants yearly. The war has been on two years, and that makes 2,500,000, and you can easily understand the effect this is having on the abor market."

B. C. Lumbermen Want More of Australian Market

The royal commission to discuss the best means of extending the Empire's trade has an appointment to sit in Vancouver, and the shipping men, together with lumbermen there, propose to lay before it the advisability of doing something to overcome the disadvantages under which British Columbia lumber mills operate. The chief drawbacks are lack of tonnage and the higher cost of production in British Columbia than in the United States. E. W. Hamber, a director of the Dominion Bank, and also closely identified with the lumber interests, discussing the subject recently, said that naturally the question as to why so much of Australia's business goes to San Francisco when the supplies of Douglas fir in British Columbia are so vast and so accessible presents itself, and leaves the impression that the mills at the coast are not under management as effective as are those in the neighboring states, which supply 228,672,576 out of a total of 238,773,612 feet imported by Australia. Mr. Hamber says as to this:

"The logging operations in British Columbia are more costly, owing to the topographical nature of the country. It costs the British Columbia lumberman more for his machinery and sundry requirements, for the installation and upkeep of his plant. Owing to the surplus of labor in the United Staes the wages of the lumbering camps, mills, and factories are lower on the average than those prevailing in British Columbia. In most cases San Francisco shipping interests control the vessels carrying cargoes of lumber, consequently our mills are handicapped in this regard, as is only natural wherever preference can be given. American-owned vessels will load at American ports and assist American industries. It would also be found that cargo-carrying vessels, through different added expenses, make a slight discrimination to the detriment of British Columbian ports, making a difference of some 25c to 50c a thousand on the freight."

Canada enjoys a preferential arrangement with South Africa, which amounts to about 2½ per cent. on the value of the lumber, with the result that she does 64 per cent. of the total lumber trade with that portion of the Empire. Some arrangement with Australia similar to that with South Africa is sought. Australia would not be willing to give a reference unless a reciprocal arrangement can be entered into.

Great Britain's Import

Great Britain's imports during 1915 and 1914 included the following:—

	1914		1915	
	Quantity Cwts.	Value £	Quantity Cwts.	Value £
Wood, unenumerated, hewn (i.e., except fir, pine, spruce, pitwood, oak)—	Loads		Loads	
Total imports	63,229	267,627	33,285	226,078
Principal sources—				
Russia	30,332	77,890	1,942	7,289
Canada	14,451	109,395	18,448	125,294
United States	9,863	58,042	11,969	90,218
Staves—				
Total imports	93,439	556,066	109,377	707,888
Principal sources—				
Russia	38,698	237,848	20,815	121,177
Sweden	21,514	68,345	45,921	133,020
United States	15,181	124,039	32,723	298,356
Norway	12,822	43,242	13,495	50,361
Canada	244	1,791	690	5,432
Millboard and wood-pulp board—				
Total imports	1,275,662	645,850	1,212,982	665,241
Principal sources—				
Russia	429,346	186,328	141,656	68,355
Sweden	398,889	215,274	495,679	272,975
Canada	169,802	78,718	211,722	100,833
Germany	115,796	72,948	1,697	2,438

Credit Men Honor Montreal Lumberman

Mr. W. Rutherford, of William Rutherford and Sons Company, Limited, represented the Canadian Manufacturers' Association at a dinner organized by the Canadian Credit Men's Trust Association, held in Montreal on October 3. The object was to discuss the subject of legislation as it affects commercial questions, particularly in the matter of credits. Mr. Rutherford suggested that Government aid should be asked, because the more losses that were eliminated from the various accounts of the companies the more there would be for the Government to collect on earnings. Ninety per cent. of the traders were honest, but business men had to protect themselves against the shyster.

Machinery and Equipment

What Manufacturers of Logging, Sawmill and Woodworking Appliances are Doing

Do You Have Trouble With Your Boilers?

Boiler trouble which so frequently occurs at sawmills, planing mills and woodworking plants, often causes expensive shutdowns and the consequent loss of time. Sometimes even it results in an explosion wrecking the whole plant. We would therefore call our readers' attention to the announcement of the Dearborn Chemical Company, of Canada, Limited, on page 2 of this issue.

The services of the Dearborn Laboratories are offered free of charge to all power plant operators who experience difficulties due to unsatisfactory boiler feed supplies, it being only necessary that a one gallon sample of the water used be submitted for analysis, together with a small sample of scale, representative of the accumulation present in the boilers, and a description of the plant equipment and conditions under which the boilers operate.

Plant of The Dearborn Chemical Company, of Canada, Ltd.

No charge will be made for the analysis, and a copy of the results obtained will be furnished, together with a statement as to the comparative quality of the water when considered for use as a steam boiler feed supply, recommendations as to the most suitable treatment, and a careful estimate of the cost incurred in the successful overcoming of any and all troubles experienced, attributable either directly to the water being used, or to the conditions under which it is being used.

P. B. Yates Plant Being Enlarged

Yates Quality (formerly Berlin Quality), the interesting monthly house organ published by the P. B. Yates Machine Company, of Beloit, Wis., and Hamilton, Ont., in its issue for July-August contains a number of specially interesting illustrated articles. One of these shows the extensive new plant which is being put up by the Company at Beloit. The cover of this issue is an illustration of the steel work in progress upon the new plant. No less than 21 important additions have been made to the plant of the company during the last thirty years, and now the present need for more room has led to the erection of still another addition, which will be the largest of all, occupying a full city block adjacent to the present plant. The new addition will be 266 x 296 feet and will contain 110,000 square feet of working floor space. In this way the company will secure an increase of 38 per cent. in their working floor space and their annual production will be greatly facilitated.

Installing Large Water Wheels

The S. Morgan Smith Company, York, Pa., have received contracts for the installation of water wheels for the Ouiatchouan Paper Falls Company, and Price Brothers, Ltd., the latter for their Rimouski pulp mill and their Jonquiere pulp mill. The turbines are required chiefly for driving grinders, and range from 350 h.p. to 1,800 h.p.

Sturtevant Fuel Economizers

The B. F. Sturtevant Co., Boston, Mass., have issued a bulletin (222) describing their economizers for use in power plants and paper mills. The bulletin is extensively illustrated and shows installations of their economizers in a number of important plants, including those of the Abitibi Power and Paper Company, Iroquois Falls, Ont.; the Brompton Pulp and Paper Company, East Angus, P.Q., and the St. Lawrence Pulp and Lumber Corporation, Chandler, P.Q. Sturtevant economizers have also been installed in a number of other Canadian plants, including those of the Spanish River Pulp and Paper Company, Espanola, Ont.; Ontario Power Company, Thorold, Ont.; Miramichi Pulp and Paper Company, Chatham, N.B.; J. R. Booth, Ottawa; Belgo-Canadian Pulp and Paper Company, Shawinigan Falls, P.Q.; Lincoln Paper Mills, Merritton, Ont., also the Anglo-Newfoundland Development Company, Grand Falls, Nfld., in addition to a large number of installations of important plants in the United States. Sturtevant fuel economizers have steadily come to the front on account of their obvious operating and mechanical advantages. One of their chief claims to distinction is found in the taper, metal-to-metal joints. There is not a gasket throughout the machine. This eliminates entirely the leakage with gasket joints. The Sturtevant Company have a staff of skilled engineers whose services are available in connection with any installation. As the conditions in paper mills vary greatly, this service is exceptionally valuable. The company will be glad to send their engineers to look over plants and make recommendations suited to special conditions.

Timber Preservation for the Farmer

How the farmer may preserve his buildings by the proper use of preservatives for timber is told in a bulletin just issued by the Department of Agriculture, prepared by George M. Hunt, chemist in forest products at the Madison, Wis., laboratory of the Forest Service. The bulletin is the summary of years of experimenting with timber in various ways on the farm, and through the laboratory, these experiments being made also in co-operation with agricultural experiment stations. The bulletin gives an exhaustive review of the causes of decay, due to the action of low forms of plant life, called fungi, which break down the fibre of the timbers. The bulletin goes in detail into methods of impregnating timber with various preservatives, and advocates coal tar creosote as the best preservative for general use. A special section of the bulletin is devoted to silos, which the author declares, can readily be made wonderfully lasting, while if the treatment of the staves for such wooden silos is properly done there is absolutely no impregnation of the ensilage. Treatment of shingles, telephone poles on rural lines, bridge timbers, sills and foundation timber are all described and advised as a measure of economy to the farmer. The author urges that groups of farmers provide co-operative treating plants for their locality where the pressure method of impregnating wood can be used, and thus give the best results. Where this is not possible it is shown that even application by brush is a valuable manner of protecting buildings against decay.

Miniature Sawmill as a Window Display

A miniature sawmill was displayed recently in the windows of T. McAvity & Sons, Ltd., St. John, N.B., to attract attention to the lines of staples carried by the firm and to show just how a sawmill looks in operation. The setting for the work was truly sylvan. The dense woods surrounding the miniature mill and the true-to-life mill pond all gave the necessary fixings to make the scene an ideal one. The miniature water-wheel turned with the regularity of its larger brother. By means of electric lights one could obtain a view of the interior of the mill. Its appointments were such as are to be found in the real industry. The log was already in position, and the saw had cut well into its heart. In the pond were other logs, ready to be drawn up as needed, and on the runway the hoisting chain had already drawn up its load, ready to be placed before the saw. It was a typical scene of industry, no essential being lacking to make the impression realistic. The entire large window was set in keeping with the spirit of the illustration.

British Columbia Timber Report for August

The timber returns for August, issued by the Forest Branch of the Department of Lands, Victoria, B.C., show the total scale of sawlogs for the province to be 107,843,857 feet B.M., in addition to 257,589 lineal feet of poles and piles and 26,635 cords of shingle bolts, posts, ties, etc. The returns according to forest districts are as follows: Vancouver, 73,313,384 ft. sawlogs, 62,430 lin. ft. poles, etc., and 15,248 cords of bolts, ties, etc.; Cranbrook, 12,855,604 ft. sawlogs, 20,330 lin. ft. poles, etc., and 7,715 cords of posts, bolts, etc.; Island, 12,411,953 ft. sawlogs and 209 cords bolts, ties, etc.; Prince Rupert, 4,378,017 ft. sawlogs, 47,083 lin. ft. poles and piles, and 60 cords of bolts, posts, etc.; Kamloops, 2,920,687 ft. sawlogs; Nelson, 1,685,969 ft. sawlogs, 114,582 lin. ft. poles, etc., and 3,215 cords of posts, bolts, etc.; Vernon, 177,157 ft. sawlogs; Hazelton, 83,184 ft. sawlogs; Lillooet, 9,558 ft. sawlogs and 11,282 lin. ft. poles and piling; Fort George, 8,344 ft. sawlogs, 1,882 lin. ft. poles and piles, and 100 cords of posts, etc.

New Vessels Will Develop B. C. Trade

Annual Capacity for Forty Million Feet Now Being Built —Only Canadian Cargoes on Outward Trips

In a recent communication to the Department of Trade and Commerce, Mr. H. R. McMillan, Special Trade Commissioner of the Dominion Government, says that he regards the condition underlying the future trade in Canadian lumber as very greatly improved. With special reference to British Columbia, he calls attention to the fact that in regard to the supply of bottoms, work is now actually going forward on nine ships, which, when completed, will carry about 40,000,000 feet per year, worth with outward freight earnings about $1,000,000. Three of these ships are being built in Victoria and six in North Vancouver, and all are being financed by Pacific Coast lumber companies. Already the cargoes have been sold in Australia for loading in early 1917. These ships are being built under the British Columbia Act, upon terms by which the outward-bound cargoes must be Canadian. Eight of these ships will be launched and outfitted with 320 horse power Diesel engines. The ninth will be prepared for engines but will be operated under sail until the engines, which now cost double the normal prices, can be purchased advantageously. There is a likelihood that other companies now investigating the question will build ships. The markets for which these boats are being built are Australasia, China, and Africa.

Improvement of Producing Facilities.

Mr. McMillan says that oversea buyers have already advanced as one argument in favor of buying in the United States the more extended lumber manufacturing facilities existing on the Pacific Coast of that country as compared with Canada, but upon having discussed this point recently with the leading operators of mills and several of the leading owners of stumpage, a conclusion that a betterment of Canadian conditions is now in sight was reached.

Some few years ago several lumber manufacturing companies were started in British Columbia under such an unreasonable load of overhead expenses that they could not compete in the open market, and, as a result, have now been closed down during the past two or three years. Even when operating the plants just mentioned they were equipped chiefly for the railroad trade, and the over-production on the railroad market was too great for them to be able to operate.

On account of the recent interest aroused in export trade a reorganization of these companies has been contemplated. Representatives are now writing down the assets to a reasonable figure for operation as soon as conditions warrant. There is a strong likelihood that several other mills built only for the rail trade will equip themselves with scows, docks, and other facilities for handling export shipments. This change in policy on the part of the rail mills will be a great improvement, as it will enable them to assist when a large volume of export business offers, thus increasing the facilities of the ports and rendering them partially independent of railroad market in times of local depression, and will relieve internal lumber over-production.

Mobilizing Possible Export Lines.

Export of timber from the Canadian West coast up to the present has consisted of a few staple lines, but it is intimated that a trade will be developed in shelving, door stock, pattern stock, shingles, pine clears, and spruce box lumber which will compete with Oregon and California, and in spruce and hemlock flooring and linings which will compete with Scandinavia. Although these articles are now produced in British Columbia, they have never been assembled for export, and when this can be done the overseas buyers will find it easier to assemble assorted cargoes. Mr. McMillan intimates that the present would be an opportune time for capitalists to establish on the Pacific Coast export houses, favorably known and with strong foreign connections. He says that at the present the whole Pacific Coast lumber export trade is in the hands of such houses in the United States. This question has been discussed with several of the larger lumber companies to whose interest it should be to enter this trade. All of these companies have developed certain connections, and it is hoped that new connections will be formed in foreign countries.

In regard to grading rules for the export trade, Mr. McMillan is of the opinion that it would be in the interests of the producers to have them revised. Of course, this is an international matter, but it is to be hoped that the trustees of the Grading Bureau and other authorities concerned may be able to do something in the way of revising the rules.

It is learned that a national advisory board is being formed in the United States, to include representatives of the Federal Government, timber holders, and manufacturers, in order to consider the serious public questions arising out of over-production of lumber on the Pacific Coast. The United States Federal Government is reported to be sending representatives of the timber industry to France and Germany to study the after-war demand for lumber.

Mr. McMillan states that the Chinese lumber market is the natural complement of the European, Australian, and African markets. The three last named markets take only 30 to 40 per cent. of highest grade timber in the log. The remaining timber—all low grade—is then left to dump on the domestic market, and the Chinese and South American markets take this low grade. The manufacturer shipping to Europe, Australia, and Africa is in a bad position if he cannot at the same time contract to ship his low grade to China and South America. Unfortunately the trade in China is almost all in the hands of two companies—the Chinese Import and Export Company (a German organization, backed financially and officered by Germans) and the Robert Dollar Company.

Several Canadian mills are interested in the Chinese business with a view to operating some of the new boats in the Chinese trade, bringing back cargoes of sulphur and rice. A few of the mills in British Columbia are hopeful that they may establish relations with a company in China that would enable them to make a contract to cut a fixed quantity of thirty to forty million feet per year. Smaller mills and larger ones also hope that a package trade may be built up on the several lines now running regularly to Japanese and Chinese ports. It is believed that commercial development in Japan, especially now during the activity of shipbuilding, will afford an opportunity for the development of this class of trade. The box manufacturers also are very hopeful of developing an export trade with China.

Quebec Cullers Report

The following comparative statement of timber, measured and culled to date, is furnished by the Quebec Supervisor of Cullers' Office, under date of October 6th:—

	1914. Cubic Feet	1915 Cubic Feet	1916 Cubic Feet
Waney White Pine	591,440	399,280	142,160
Red Pine	1,040	.....	.....
Oak	337,360	110,120	321,160
Elm	305,240	46,840	69,440
Ash	680	840	1,680
Butternut	.....	.....	40
Birch and Maple	50,800	48,880	46,880

Shipbuilding in Nova Scotia

Continued activity is reported from the shipyards along the bay shores of Cumberland and Colchester Counties, in Nova Scotia. The keel was recently laid at Port Greville of a three-masted schooner of 400 tons. Another vessel of similar class at the same place is rapidly nearing completion. At Spencers Island a schooner of 425 tons is now in frame. This is the first ocean-going craft to be built there in fifteen years. The Glooscap, one of the largest sailing ships ever built in Canada, was the product of that town's skill. A schooner of 430 tons is nearly ready for launching at West Advocate. Its three masts are 90-foot Douglas fir sticks. All of these vessels are being built primarily for the lumber trade, and have been specially designed to meet the requirements of that service.

Hoffman Brothers' Fire Did Not Interfere With Business

Hoffman Brothers Company, Fort Wayne, Ind., report that a fire which occurred in one of their isolated buildings on the night of October 6th destroyed only one of their six veneer saws and a small amount of veneers, but did not in any way affect the orders which they have or materially decrease their production. Three new mills were in process of construction before the fire, as it has been necessary for them to increase their capacity to meet the demand for their product. Their new "Plant C" will be in full operation about the 20th of October. The firm manufacture veneers and hardwood lumber, and do a large business in sawed veneers (single ply), in the domestic hardwoods, such as quartered and plain red and white oak, ash, cherry, hard maple, domestic black walnut, etc.; also band-sawn hardwood lumber.

Veneers for Piano Cases, etc., in Demand in Australia

There is an active demand for veneers for making piano cases and for high-class cabinet-making. Walnut veneer is especially favored in the Australian piano industry. Canadian manufacturers sending a range of small samples, together with quotations upon the basis of free-on-board steamer Montreal or St. John, are assured of their veneers being promptly brought under the notice of the principal Australian importers.

Good Fire Record in Dominion Railway Belt

Two hundred and ninety-nine fires occurred in the Dominion railway belt under the jurisdiction of the Dominion forest rangers in the season of 1915, and the loss of merchantable timber was somewhat extensive. In the season just closed 90 fires occurred up to September 28, and of the total amount not one could be classed as a real hazard, and damage to timber was practically nil. Of the 90 fires in 1916 no ess than 26 occurred in September.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch. each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Maple Wanted

Wanted 4-in. Maple plank and Maple Axles. Jackson Wagon Company, St. George, Ont. 20-20

BASSWOOD AND PINE WANTED.—No. 2 Common and Mill Cull Basswood, 1 in. cull pine, Winter cut preferred. Apply M. Brennen & Sons, Hamilton, Ont. 16-21

Wanted to Buy

Maple Squares 18 inches to 48 inches long; 1 in., 1¼ in., 1½ in., 1¾ in., 2 in. and 2¼ in. squares.—Apply to A. K. Hansen & Company, Quebec. Que. 20-t.f.

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Lumber Wanted

We are in the market for a quantity of Birch, Soft Elm, Hard Maple and Basswood, dry stock, for immediate shipment. Will be pleased to receive full particulars as to quantity, grade, and lowest prices. Apply, The London Lumber Co., Ltd., London, Ont. 18-21

For Sale–Lumber

Lumber Wanted

A list of what stock you wish to move placed in this column for a few issues will dispose of the lumber. Let us quote you on an ad. 20-23

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal. Que

For Sale

1 car 1 x 4 in. and wider, 37 in. long.
1 car 1 x 4 in. and wider, 31 in. long.
1 car 1 x 4 in. and wider, 22 and 25 in. long.

Dry Quartered White Oak, Clear 1 face 2 ends and 2 edges, 2 years old, nicely figured, Ohio stock. Write us for delivered prices.

PROBST LUMBER COMPANY,
18-21 Cincinnati, Ohio.

For Sale

We have the following stock for immediate delivery:—

50,000 ft. 3 x 6 Hardwood Hearts, mostly Maple.
25,000 ft. 4 x 4 Hardwood Hearts, mostly Maple.
200,000 ft. 1 in. Hardwood crating, principally Maple and Birch.
100,000 ft. 1 in. Birch, No. 2 Common and Better.

The Pedwell Hardwood Lumber Company,
18-t.f. Toronto, Ont.

For Sale–Machinery

Machinery Wanted

If you have any machinery for sale right here in this column is the place to advertise it. Every man who reads here is looking for a machine—if you have that machine you can do business. Let us quote you on an ad. 20-23

FOR SALE

1—Wicks Gang.
1—Ideal Engine, 13 in. x 12 in.
1—Plain Engine, 16 in. x 24 in.
1—Plain Engine, 5 in. x 7 in.
1—Boiler, 72 in. x 16 in.
1—Boiler, 54 in. x 12 in.
2—Upright boilers.
1—Cookston water heater.
Several steam pumps.

CHAS. PEDWELL,
16-t.f. McVicar, Ont.

FOR SALE

We have the following second hand machines to offer, ask us about others not listed, if you are interested.

1 Egan 30 in. 2 drum sander.
1 McGregor Gourlay 30 in. 2 drum boss sander
1 Jackson Cochrane 36 in. 3 drum sander
1 Egan 42 in. 3 drum sander
1 Cowan 42 in. 3 drum sander
1 Cowan 48 in. 3 drum sander
1 C. M. C. 8 in. 4 side sticker
2 Ballantyne 12 in. 4 side stickers
1 Egan 36 in. single surfacer
1 Harper 26 in. single surfacer
1 Cowan No. 220 24 x 10 single surfacer
1 McGregor Gourlay QY 15 in. planer and matcher
1 McGregor Gourlay QY 9 in. planer and matcher
1 Jackson Cochrane 54 in. band resaw, 5 in. blade
1 Jackson Cochrane No. 165 rip saw

P. B. Yates Machine Co., Limited
Hamilton, Ont.
19-t.f.

Wanted–Machinery

Portable Saw Mill

Wanted portable saw mill about 25 horse power, that will cut 5 to 10 M. feet hardwood per day. Apply Box 464, Canada Lumberman, Toronto, Ont. 20-20

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

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MARRIED MAN, THIRTY YEARS OLD, ten years' experience in office work as Accountant, speaking both languages, desires to change, best of references. For particulars write to P. O. Box No. 69, Three Rivers, Que. 16-24

OPEN FOR ENGAGEMENT from October the first. Qualification, a practical knowledge of grades in hard and soft wood lumber. Have acted in the capacity of Superintendent and Manager for large lumber operation with satisfaction. Satisfactory references on application. Box 287. Phone 146, Huntsville, Ont. 19-20

OFFICE CLERK (Lady) WITH EXCELLENT BUSINESS EXPERIENCE, wants position. Any lines. Preferably Timekeeping, Pay Rolls, Cashier, or General Assistant to Manager, lumber company's plant, Quebec province, or northern New Brunswick. "Lumber," Box 462, Canada Lumberman, Toronto, Ont. 20-20

WANTED POSITION AS ORDER CLERK and Eestimator in Mill-work Factory. Can work from plans. Have had six years' experience in shop and offices. Age 23 years. Single. At present employed in factory which does a large business in Sash, Doors, Blinds, Trim and Cabinet Work. Box 468, Canada Lumberman, Toronto, Ont. 20-20

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

FIRST CLASS MILLWRIGHT WANTED at once to install machinery in saw mill. The Turner Lumber & Pulpwood Company, Lake Edward, Que. 20-20

Business Chances

For Sale

Twenty acres Elm and Basswood, also 40 acres of Virgin Cedar near station. S. A. Price, 71 Lakeview Avenue, Toronto, Ont. 20-23

Contracts To Let

Contracts to let for taking out and making railway ties at two points in eastern Ontario. Box 466, Canada Lumberman, Toronto, Ont. 2020

Sawing Contract

Wanted party with portable saw mill to cut hardwood by the thousand. Four or five years' work for good responsible person. Apply Box 463, Canada Lumberman, Toronto, Ont. 20-20

Timber Tract and Mill

Valuable Timber Tract, British Columbia; nearly 10,900 acres; 60,000,000 feet of timber; on railroad. Local market for mine props. First class mill, 30,000 feet daily capacity. Very attractive proposition. George W. Grant, P. O. 1676, Calgary, Alta. 18-21

For Sale

Planing Mill and Lumber Yard in Town of Sudbury, Ont. Electric power, 40 h.p. motor, planer and matcher, surfacer, rip-saw and dado saws, sticker, circular resaw, crosscut saw, turning lathe, mortiser, tenoner, borer, sander, sash and door clamp, shaving baler, automatic knife grinder, fan and blowing system, knives, etc. Mill now running, dressed lumber buildings, barn. No better location in town. Splendid rail facilities, and no doubt the best thriving town in Ontario.

Address, Box 457, Canada Lumberman, Toronto, Ont. 18-t.f.

Miscellaneous

Blankets For Sale

Two Hundred Pairs Clean Blankets in good condition. The Peterborough Lumber Company, Limited, Peterborough, Ont. 20-22

Timber Limit For Sale

Thirty-six square mile limit, North Shore, License allows cutting all kinds of timber. Contains Hemlock, Birch, Spruce, Pine, Cedar Ties and Poles, Pulpwood and Hardwood. Railroad runs through part of berth. Cheap operation. Splendid opportunity for small mill. Apply Box 423, Canada Lumberman, Toronto, Ont. 13-t.f.

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont.

Tenders for Pulpwood and Pine Limit

Tenders will be received by the undersigned up to and including the 1st day of December next for the right to cut pulpwood and pine timber on a certain area situated on the Pic River and other territory adjacent thereto, in the District of Thunder Bay.

Tenderers shall state the amount per cord on pulpwood, and per thousand feet, board measure, on pine, that they are prepared to pay as a bonus in addition to dues of 40 cents per cord for spruce, and 20 cents per cord for other pulpwoods, and $2.00 per thousand feet, board measure for pine, or such other rates as may from time to time be fixed by the Lieutenant-Governor-in-Council, for the right to operate a pulp mill and a paper mill on or near the area referred to.

Such tenderers shall be required to erect a mill or mills on or near the territory and to manufacture the wood into pulp and paper in the Province of Ontario—the paper mill to be erected when directed by the Minister of Lands, Forests and Mines.

Parties making tender will be required to deposit with their tender a marked cheque, payable to the Honourable the Treasurer of the Province of Ontario, for twenty-five thousand dollars ($25,000), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said $25,000 will be applied on account of bonus dues as they accrue, but the regulation dues, as mentioned above, will require to be paid in the usual manner as returns of cutting of wood and timber are received.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.
Toronto, August 28th, 1916.

N.B.—No unauthorized publication of this notice will be paid for. 18-22

Cost of Machinery

In connection with sawmill costs, there is a difficult problem for every manufacturer to work

out, and that is the cost of machinery. What is meant by this is not the original cost of any given machine, but the proportional cost of the item of machinery for doing any given work. This must necessarily include the cost of machinery as compared to the work it does, the life of a machine, or the amount of depreciation in value each year, and the chance, meantime, of some other more up-to-date machine being invented, necessitating the replacing of the machine before it has really served its time.

It is considered by a contributor to the American "Hardwood Record" that machinery depreciates about 10 per cent. each year. This is, in substance, that the life of a machine should be reckoned at about ten years. This may be a fair average, but it is not conclusive. There are machines in use to-day that are 75 years old. Other machines are sometimes ruined through accident or something of the kind inside of five years. Some machines wear out very rapidly. Others last as long as a man. Estimates are complicated by the claims made for some new machinery that it will pay for itself in a very limited time.

The matter of machinery paying for itself raises a complicated question. It goes without saying that every machine must pay for itself in a certain length of time. Otherwise, it is a loss. But to make it pay for itself, a certain amount each year must be allowed to the machine for its share of the work, just as so much is allowed for the machinist. This is one way of looking at it. There is another way. There are those who say that improved machinery will do more work than others previously in use at the same labor cost. This is frequently true, but it, like lots of other truisms, depends to a certain extent on other things.

In the first place, if it effects a saving over the old machine, you will have an advantage in first cost until your competitor puts in the new machine also. Then the situation changes. You haven't any more advantage over the other man in the business than you formerly had, and the benefits that accrue from the saving go to the world in general by cheapening the article produced. This is one of the inevitable results of competition, and is a point which must be considered in deciding whether or not a machine will pay for itself on the basis of its work compared to the work of the older machines.

Another factor is the possibility of some other machine being invented soon after this new one is installed. This other machine may offer such advantages over the new one that it will become necessary to make a change before the machine has had time to pay for itself. In this case, if you don't buy the new machine, you are left behind by your competitor, who will get it and then have the advantage over you. It is easy to see, therefore, that this matter of the cost of machinery, and of machines paying for themselves, is a subject in which one may get tangled.

The Man Who Named the Douglas Fir

Douglas was the family name of Lord Selkirk, founder of the Red River Settlement, and it was the name of other men who have been prominent in Western Canada, so that considerable doubt exists in the popular mind as to the particular man after whom the famous Douglas fir was named. It is found that it was not named after a founder, governor or chief justice, but after a remarkable man in a humbler sphere of life. It should also be noted, too, that while the name of Douglas will always be associated with the common name of this magnificent tree, yet the scientific name fails to show any connection. It is called scientifically Pseudotsuga, literally false hemlock. It is not false hemlock. It is a much finer tree than any hemlock, and it is to be hoped that a later generation of botanists will change the name and give Douglas a place in it.

Regarding Douglas, Dr. Charles S. Sargent, Director of Arnold Arboretum at Harvard University, has this to say, in a footnote in his famous work "Silva of North America":

"David Douglas (1798-1834) a Scotch gardener, sent by he Horticultural Society of London, to explore the forests of the Northwest Territory, is from his courage, energy, and success in the presence of great difficulties and dangers, and from his untimely and horrible death, a conspicuous figure in the annals of American botanical exploration. Douglas, who had been trained by Sir William Hooker, and had made a short botanical journey in Eastern America in 1823, was sent in 1824 by way of Cape Horn to the Columbia River, where he arrived in April, 1825. He spent two years in Oregon, discovering some important trees, including Abies Nobilis (noble fir), Abies amabilis (Lowland fir), and Pinus Lambertiana (sugar pine), the largest of its race.

Entente Allies are again buying Pacific Coast spruce aeroplane stock, after being out of the market for several months. Shipments of spruce for aeroplane purposes amounted to 2,353,355 feet, valued at $125,243, during the month of September, the shipments being the heaviest of any one month since the war started.

Tea that is all genuine leaf and produces the greatest quantity of flavoury satisfying infusion

"SALADA"

Send for samples and prices.
SALADA TEA CO. TORONTO

Union Lumber Co.
Limited

1915 CUT—MILNET (Sellwood Jct.)

40,000 feet 2 x 10—10/16 Norway.
500,000 feet 1 x 4 and up 6/16 No. 1 Mill Cull.
1 Car ⅜ x 1½—4 ft.—No. 2 Red Pine Lath.
1 Car ⅜ x 1½—4 ft. —No. 3 Red Pine Lath.
5 Cars ⅜ x 1½—32 in. Mill Run White Pine Lath.
5 Cars ⅜ x 1½—32 in. Mill Run Red Pine Lath.

Red and White Pine Timbers

12 x 12—5/20 - 5/22 - 5/24 - 13/26 - 1/28 - 1/30 - 3/16.
10 x 12—10/26 - 6/24 - 5/28 - 3/20 - 3/16.
10 x 10—2/26.
8 x 10—1/24 - 2/22 - 5/26.

Write, wire or phone for prices.

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

Books For Sale

SPECIAL PRICES

The Preservation of Structural Timber, by Howard F. Weiss. Published in 1915 by McGraw-Hill Book Company. 312 pages, illustrated. Price $3.00.

Scribner's Lumber & Log Book, 1915 Edition, Price 35c.

Baughman's Buyer & Seller, 75c.

Utilization of Wood-Waste (Second Revised Edition), by Ernst Hubbard. Published in 1915 by Scott, Greenwood & Sons. 192 pages, illustrated. Price $1.50.

Canada Lumberman
347 Adelaide Street West
TORONTO

Rogers-Buffalo Automatic Saw Sharpeners

No. 1 Automatic Saw Sharpener

This is one of the famous Rogers-Buffalo Automatic

SAW SHARPENERS

and is guaranteed to give perfect satisfaction.

We make a full line of Knife Grinders and saw Sharpeners.

Let us quote you prices

Samuel C. Rogers & Co.
10-16 Lock St.
BUFFALO, N. Y.

Review of Current Trade Conditions

Ontario

Although there is nothing specially interesting to report in connection with the lumber trade situation in Ontario, as compared with that of a fortnight ago, the general condition of the trade is fairly satisfactory, and there is quite a fair volume of consumption in progress in all parts of the province. Of course building operations have little or nothing to do with the volume of trade, and the building factor has now probably been eliminated pretty well until next spring. The general industrial situation and the extensive recruiting of men from all parts of the province are still causing manufacturers to limit the extent of their operations. The outlook at present is that the production at nearly all Northern Ontario points will be very heavily reduced during the coming winter. A wholesaler who is in very close touch with this situation says it is a known fact that the production of lumber on the north shore of Lake Huron will be cut down by at least 75,000,000 feet next summer. He also expresses a belief that the output on the Georgian Bay and north shore will be 40 per cent. short of normal. The chief reason for the curtailment is the greatly increased cost of taking out logs in the woods during the coming winter.

The shortage of stocks is already making itself felt on the Ontario market, and there is a fair demand and prices have been stiffening. During the last month there has been an advance of from $1.50 to $2 a thousand on most of the soft woods that are produced in Ontario. A wholesaler, discussing matters with us, advises us that September was a splendid month with his firm. We have reports of a similar nature from several other firms. This particular wholesaler has found a better demand in practically all quarters, not only in Ontario, but for export to the United States and to Europe. There is a shortage of common lumber in 4, 5, 6, and 8-in.—in fact, these lines have almost disappeared, and stocks in nearly all other lines are low. There is a good demand for culls, and prices are strong.

Eastern Canada

The market at St. John, N.B., continues to improve. The actual demand has not increased to any great extent, but buyers of deals for foreign account are taking more interest in the market. Evidently the allied powers are expected to use great quantities during the present fall. There is considerable activity in the making of contracts with rotary or portable mills in the interior, and a large number of these plants are expected to operate this winter. As high as $18.50 to $19 is being offered for these winter-sawn deals. St. John operators are seriously handicapped by the great shortage of labor and the high cost of provisions, feed, etc. No contracts for the full 1917 cut of deals have yet been reported, but some are expected before long. Stocks of deals held at St. John are light. Freight rates are unchanged. Much improvement is reported in the American market, particularly in New England, and prices have advanced $3 per thousand during the last two months. Further advances are expected. The demand is keen, and enquiries are coming in steadily. The New York market also is improving. The car shortage is a serious handicap to the mills in connection with this trade. The rafting season on the St. John has come to an end, and it is expected that the final statement will show a total of between fifty and fifty-five million feet.

Boston wholesalers report that they expect the supply of lumber to be short during the coming year. Stocks on hand are now shorter than usual. The mills are not able to run full time as a rule, and it costs them about as much to do three-quarters of a day's sawing as it did previously to do a whole day's. Pine prices are rather unsettled. About six months ago they showed signs of stiffening up, but when the English demand fell off the prices went back to where they had been previously, and the situation seems to have continued on this basis up to the present. A strengthening tendency is shown in the price of barn boards. One by ten-inch are selling at $40, and 1 x 8-in. at $38. For 1 x 10-in., No. 2, the price is about $37, and for 1 x 8-in., No. 2, about $35. For 1 x 10-in., No. 3, $31.50 is the selling price, and for 1 x 8-in., No. 3, $30 to $31. Ten-inch are worth fully as much as twelve-inch at present, as stocks of this size are short. Canadian spruce boards at Boston have stiffened, and are now bringing $25 to $27. Spruce dimension 10-in. is worth $30; 12-in., $31; 9-in., $29, nad 8-in. and under, $28. Spruce, random lengths, 10 and 12-in., are bringing $29. The smaller sizes are also somewhat higher, being worth in random lengths as follows: 2 x 3-in. and 2 x 5-in., $22; 2 x 4-in., 2 x 6-in., 2 x 7-in., and 4 x 4-in., $23; larger sizes up to 8-in., $24 to $25. Some people are asking a little more than that for random spruce. Lath are selling at $4.25 for 1 5/8-in. and $3.80 to $4 for 1½-in.

The demand for shingles at Boston is steady and quite satisfactory for this time of year. White cedar extras are selling at $3.45 to $3.60 and clears at $3.20 to $3.30. There is a satisfactory demand for red cedars. The best grade of Vancouver shingles, 16-in., 5 butts to 2 in., are selling at $4. The best perfections, 5 butts to 2 1/8 in., are bringing $4.95. Eurekas are selling at $3.75. Washington shingles, 5 butts to 2 in. 16in., best grade, are worth about $3.75. Washington perfections are bringing $4.85 and Eurekas $4.30. These are prices delivered on Boston rate of freight.

Great Britain

The lumber trade a London has recently been enjoying a considerable increase in the volume of business, largely on account of extensive orders placed by the British Government. Most of the contracts call for early delivery and the result is a general improvement in the demand for certain "spot" sizes, followed by a sudden advance in prices. Importers, agents, brokers and merchants are all feeling optimistic. The market, however, does not present anything in the way of a stable appearance and quiet times and busy times are just as likely to succeed one another in the near future as they have for some time past. There has been a good demand for deals, especially for 4 inch, due to the shortage of White Sea goods. Eleven inch deals are selling at abnormally high prices. Spruce and whitewood are also in strong demand.

At Liverpool, trade has been rather quiet. Spruce arrivals have been in fair quantity and have come forward on easier rates of freight, so that good opportunities have been offering for holders to reduce their prices to a moderate average. The demand, however, has not been strong, and importers are not showing much of an inclination to increase their stocks. The easier freight rates did not hold for any length of time and they are now on the up grade again, showing every indication of reaching their former record heights. The probability is that liner parcels will be very scarce as so much more attractive freight is offering. The demand for floorings is poor and stocks are heavy, so that holders are satisfied to get out without any actual loss. A recent arrival of Miramichi pine to R. Cox and Company is reported. We learn that this stock reached Liverpool when the market was practically bare of these goods, so that a fair enquiry was expected. Spruce values have been improving. Prices quoted by merchants for goods on the quay vary slightly, the average running about £25 10s for 3 x 7 and 8 in., £27 10s for 3 x 9 and 10 in. and £30 for 3 x 11 in.

The trade at Manchester is quiet. Buyers apparently have decided not to take on stock until there is a more confident feeling all round, particularly as regards military requirements in the matter of men. There is, however, a steady consumption all the time in timbers used for munitions of war. Ocean freights have shown a tendency to increase, but for spruce to the west coast of Great Britain they were still at 250s, October shipment, at latest reports. Timber imports to all sections of the Manchester canal for the eight months ending August 31st, 1916, amounted to 205,525 loads, as compared with 259,328 loads for the corresponding period of 1915.

Business continues quiet at Glasgow. No alteration is reported in connection with spruce, although the sales recorded are at rather firmer prices than before and the general opinion is that prices have touched bottom and may be expected to stiffen up to some extent. The demand is very light, most of the sales reported being of a retail character.

United States

The car shortage situation continues to be the most important feature in connection with the lumber trade situation in the United States. No relief is reported as yet, and lumber shippers in all parts of the country are experiencing much difficulty. The scarcity of cars is most pronounced in the South, and comes at a time when manufacturers, after a long period of low values, are commencing to report a heavy demand at more satisfactory prices. On account of the car scarcity, however, they are not able to take full advantage of the improvement in the demand. Every railroad in the country is short of rolling stock, and never in their history have they experienced so great a demand for their services. Apparently there is no immediate improvement in sight. Retailers are finding it difficult to obtain stocks, and many of them are trying to anticipate their wants for the balance of the year so as to avoid further trouble if possible. Stiffer prices are likely to be the result.

The railroads are experiencing the greatest volume of business in their history, and practically all of them are showing handsome profits, thus making railroad improvements possible and additions to rolling stock. The car foundries all over the country are filled with orders for equipment. The lumber industry is commencing to benefit from this

View of Mills in Sarnia.

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situation. The demand for wood for car purposes is creating new business for manufacturers in all sections.

The Southern Pine Association's trade barometer for the last week in September indicated that shipments were less than production for the week by 10.69 per cent., while orders exceeded production by 9.66 per cent. The actual production of 153 mills for the week was 13.21 per cent. less than normal. Evidently the Southern pine manufacturers are continuing to curtail so as to prevent the accumulation of excessive amounts of stock in their yards. The trade barometer for the West Coast Lumbermen's Association for the week ending October 3rd showed that the production was 11.16 per cent. below normal. Orders were 2.87 per cent. below actual production and 14.98 per cent. below normal production. Shipments were .58 per cent. below actual production and 12.98 per cent. below normal production. Shipments exceeded orders by 2.30 per cent.

The trade in Northern pine at Buffalo shows an increase in some grades, and the best demand is for the intermediate and lower stocks. Arrivals by lake have not been so plentiful as was expected, and some yards are finding it necessary to place orders outside for much of their present requirements. Prices show a tendency to advance, and are expected to go up one dollar or more within the near future. The demand is good also at North Tonawanda, but wholesalers are having difficulty in filling orders on account of the scarcity of stocks. Some of the lower grades are very scarce, and, as vessel shipments have been light, some dealers are purchasing stocks for rail delivery. Prices have been advancing of late, and higher quotations all round are expected before the season is over. A better business is reported in Northern pine at Chicago. The demand has increased considerably, especially for Nos. 1, 2, and 3 in yard stock items. Prices are firm. There is an average demand for hemlock at Buffalo, and prices have been improving slightly, in sympathy with yellow pine. At North Tonawanda it is expected that the scarcity of hemlock on account of the reduced arrivals by vessels will result in higher quotations as the season advances. There has been a slight movement in hardwoods at Buffalo. The demand is chiefly for maple, ash, and oak. There is also a fair demand for birch.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Improved Trade at St. John, N. B.

St. John, N.B., Oct. 10th.—(Special to the Canada Lumberman.)—During the last two weeks the market has shown further signs of improvement. Although the demand is not improving, there seems to be a more optimistic feeling among the buyers of deals for foreign account, whether for private parties or some of the allied powers at war. Most likely the latter are the chief buyers, as most of the powers have stopped all selling to private individuals or firms within their boundaries, absorbing practically all stocks themselves. Evidently they are using large quantities again this fall, no doubt preparing for the winter campaign.

Prices for spot deals are firm. Contracts are being made quite extensively with rotary or portable mills through the interior of the province. It is said that there will be a very large number of portable mills operating during the coming winter. Many farmers who have small lots of logs are hauling them to the mills, having them sawn, and selling the deals, instead of floating the logs to St. John and then selling them to the mills. Stumpage is increasing very materially in price, and parties having wood lots of their own are asking almost prohibitive prices for the standing timber. Many of the stationary mills prefer not to buy at these prices, as they know it means loss, but many of the portable mill owners come along and pay these prices. Nine times out of ten they come out in the spring in debt, many times losing all they possess. As they are forced to give security to the deal buyers for advances, they put up their whole winter's labor and many times the fruit of their farms. So long as the purchaser of the deals is not called upon to pay more than the contract price, he does not care; rather it is the custom to spur on the portable mill men in this undesirable way of cutting. During the last ten years the failures in the business have been enormous. It is said that as high as $18.50 to $19 is being offered for winter-sawn deals, with scantlings, fourths, etc., at $16 to $17. Many are said to be going in to cut with these mills.

Entire plans for logging for the St. John mills during the coming winter have not as yet been arranged. The tremendous scarcity of help is a great drawback in getting started for the woods. Many of the men who are at home are digging the fall crop of potatoes, and Maine, which always calls away a good many province men, is this year offering higher wages than ever. It is hoped that as soon as the harvesting is over men will not be so scarce. Of course, it is a foregone conclusion that logs will cost more this year than before. With $10 to $15 per month extra wages, much higher price for provisions and horse feed, and inferior help, only a good winter will keep down the cost of logs within reason. Unless the operator can sell his deals during the coming year for a great deal more than in the past, he will have to face a loss. As yet no contracts for full 1917 cuts of deals from mills here have been made, but no doubt before long some sales will have been made with the St. John mills.

Stocks of deals held here are not heavy. Many of the mills have been idle all summer. Others have only had a short season; in fact, to-day only Randolph & Baker, Stetson, Cutler & Co., and Murray & Gregory are sawing at St. John, and will be the only mills to do so up to freezing, all the others being sawn out of logs.

Freight rates remain about the same as of late. Little or no change can be said to have taken place. Coastwise few vessels are offering, even though the freights are $6 per M feet to New York.

The American market has shown a vast improvement, especially in New England. Prices have advanced $3 per M during the last two months, and this does not seem to be the end. The demand is keen, with no signs of abatement. Enquiries are steadily coming to hand. New York, which has been quite dead during the summer, shows a sign of improving. Car shortage is causing the mills all kinds of trouble, with no chance of relief so far as the near future is concerned.

Large quantities of pulpwood moving from Northern points to the United States are taking a vast number of cars.

The rafting for the season has just been finished at the Fredericton booms, but the final statement has not been made to date. Somewhere from fifty to fifty-five million feet have been rafted during the past season.

Better Prices for Lumber at Ottawa

Ottawa, Ont., Oct. 10th.—(Special to the Canada Lumberman.)—In the last month a heavy movement in lumber has taken place in Ottawa, particularly in the middle or lower grades of white pine. Prices have advanced from $1.50 to $3 per thousand on the grades mentioned, and before spring it is confidently expected that there will be another sharp advance.

The cut of lumber throughout the Ottawa Valley and Georgian Bay districts will fall quite materially below normal.

One of the features of the situation is the lack of facilities for shipping, owing to so many embargoes existing, particularly where war munitions are being handled. There is a considerable shortage of labor, but this has been partly relieved of late on account of nearly all the mills in the Ottawa Valley being closed down for the season.

The wages of bushmen are higher than ever before, and difficulty is met in getting a sufficient number of men for the woods.

Quite a number of lumbermen are going into the woods much more extensively than last season, partly on account of the large number of fires that have occurred on different limits and by their desire to get the trees that were killed by fire cut this season and thus prevent worms from getting into the timber.

Throughout the summer the mills in Ottawa have only been fairly busy. Retail business has been rather poor, and not much building has been done. All the retailers now report conditions much improved and trade generally better.

Improved Trade Conditions at Montreal

Montreal, Oct. 10th.—(Special to the Canada Lumberman.)—There is a fair demand for lumber, trade having slightly improved since the C.P.R. raised the embargo on goods going to their Montreal terminals. Sales of box lumber have decreased. The Imperial Munitions Board has declined, for the time being, to take further deliveries from some firms making the smaller boxes, on the ground that there is an overproduction, although the firms are, as a matter of fact, behind with deliveries.

Some descriptions of lumber, particularly in spruce, are hard to obtain, and orders have been declined on this account. Wholesalers find great difficulty in getting delivery from the manufacturers, who have been handicapped by the scarcity of help.

The local yards are doing a quiet trade. Building continues to be slow, and, even were more contracts in hand, it is questionable whether the demand for lumber would be much brisker. Contractors are finding it very hard to obtain labor, and firms who are anxious to secure men, especially for out-of-town jobs, can only get a small percentage of their requirements.

Building permits for September show a decrease—the first, how-

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ever, for three months. The total of $205,456 is $145,440 below that of the corresponding month for 1915, while the aggregate for the year is $3,787,010, a loss of $725,248.

A moderate amount of lumber is going to the United Kingdom, a tramp having been loaded for an English port. In normal times at this period shippers have all they can do rushing goods forward, but there is no indication that the end of the season will see anything approaching this condition. British markets do not encourage any large shipments. Freight rates, too, are against any heavy deliveries.

Sulphite and ground wood pulp are very scarce, and it is difficult to get supplies for immediate requirements, most of the mills being sold ahead. Ground wood has been selling at $31 per ton. Some mills are considerably increasing their grinder equipment, although the production will not come on the market until next year. The sulphite position is very strong. The Riordon Pulp and Paper Company will commence making bleached sulphite at their Merritton mill at the end of this month.

North Shore News—Heavy Reduction in Cut

Thessalon, Ont., October 7th; (Special to the Canada Lumberman):—There will be a reduction of about sixty per cent. in the log output of the north shore this season. Some of the larger firms are not doing any logging at all and those that are operating are only taking out about fifty per cent. of their usual amount.

The Thessalon Lumber Company, which has been operating at Nesterville, Ont., for the last ten years, has been succeeded by the Bishop Lumber Company, Limited, with H. H. Bishop, the well-known Chicago lumberman as president, and A. E. Bishop, secretary and treasurer. Archie McGee, a veteran lumberman, is woods superintendent. The new firm are commencing business under the most favorable circumstances, with one of the finest mills in the province, and plant in the woods that is second to none. They have purchased a large limit of 36 square miles on the Mississaga River from the Georgian Bay Lumber Company, and are operating there at present.

Wages in the woods are very high, being $35 to $45 per month and board, and sometimes $20 for railroad fares. The majority of the men are coming from the province of Quebec.

The mills have been very busy this fall shipping lumber. Vessels have been scarce and rates high.—Algoma.

Halifax Market Report

The Halifax, N.S., Chronicle, in a recent issue says:—"Since our last report on this market English prices reacted somewhat for the better and then eased off again. A number of small cargoes offered at the higher prices and prices then declined. On the west coast of Britain the price now quoted is £22, but the south coast and London prices have improved a little, prices now quoted being £24. Since our last report freights went down as low as 200 shillings and then reacted to 250 shillings. In fact the last fixture for a Nova Scotia charter was as high as 275 to 300 shillings. Though our shippers were actually looking forward to a rise in freights in the hope that the market would respond, it has not done so, and the general situation in deals is by no means as bright as Nova Scotia lumbermen would wish for. There are at present too many cargoes offering on the English market and a lot of cargoes have been stored, on account of the prevailing low prices. Also the consumption has decreased, because of the enlistment in the army of so many workers. Deal shipments to the United States from Halifax have been fairly active and, though there are some pessimists on the subject, local shippers expect to see normally large shipments from this port. The American market lately has improved somewhat both in lumber and laths, hemlock scantling now bring $21.

Great Forest Fires in History

The Northern Ontario forest fire of July 29th last takes rank as the third mose serious fire catastrophe in the history of this continent. The Hinckley fire in Minnesota in 1894 was responsible for 418 lives and the burning over of 160,000 acres. The famous Peshtigo fire in Wisconsin in 1871 killed 1,500 and devastated 1,200,000 acres of timber. In 1825 occurred the Miramichi fire in New Brunswick and Maine, with a loss of 160 lives, six towns, 1,000 head of cattle, and damage to 3,000,000 acres of forest. The Clay Belt fire in Ontario, with 262 lives lost and 800,000 acres fire-swept, takes its place with the great disasters of history. The Porcupine fire in 1911 killed 84 persons.

It is noteworthy that Wisconsin, Minnesota, Maine, and New Brunswick have taken comprehensive measures to prevent further disasters by organizing their forest patrol systems on modern lines—building trails, lookout towers, telephones, etc., as well as carefully supervising settlers' clearing fires, one of the worst sources of danger. Ontario, which has given the continent its two more recent fire catastrophes, has made no such move to modernize her forest guarding system.

A Good Time to Create Business by Power of Suggestion

It is an old-time habit with lumber dealers to depend wholly on the trade that voluntarily comes to them. They have always indulged in the notion that when a man has made up his mind to do some building or repairs he would, of his own volition, come to the lumber yard and get the materials he needed for the job. This was, and perhaps is now, the attitude of the large majority of the lumber dealers of the country in both city and country places. The exceptions are those whose enterprise and ability prompt them to discard the waiting idea and push out and stimulate people to make improvements who didn't realize they needed them. I heard a preacher say, in his sermon last Sunday, that people generally do not use but a very small portion of their personality and mental ability. These enterprising dealers I speak of use a larger per cent. of their ability than the average dealer does, and hence their greater success in their business.

Some great writer has said that every human being has in his brain everything that another has. It is only a matter of stimulation and cultivation to develop it. Every mental faculty is inherent in every normal being, but more pronounced in some than in others, and hence we see the different degrees of business acumen and ability more developed in some business men than in others, and these naturally are farther along to the eminence of achievements. Now, if this is true, and I believe it is, that all men have the same inherent faculties, don't you think it would be a good idea to take an inventory of your mental faculties, particularly those that apply more directly to your business? Ask yourself if you are getting out of yourself all you are capable of. Don't you believe there is a possibility of your being able to develop your business to a greater extent than you have or are now doing? Is your ownly ambition to "lay down" on what is in you and wait for things to come your way? If it is, you'll never make a success in business or anything else. But if you have the ambition and purpose to make a success in your business take stock of yourself and see wherein you are deficient and then go to work and cultivate those very things that you feel the need of.

The majority of you who are reading this are in small towns where the spirit of improvement is listless and dull, which is generally attributable to a lack of means to do much of anything, but the real reason is from a lack of stimulation. Most everybody likes to see improvements going on, but generally at somebody else's expense, and yet, in many cases, these same folks are as well able to do something of the kind as those are who are doing it. It is the same way out among the farmers, who, curious to say, are usually ready and willing to spend money freely for any improvements in farm implements and yet are so prone to be niggardly in the matter of building improvements, especially anything for their dwellings and relative conveniences. Now, this is one of the greatest of the problems for the present-day dealer—how and by what methods to stimulate and cultivate his territory for the development of more business. It is not enough to go after a man and ask him to build and make improvements on his place when he don't see or appreciate the need of them. You are wasting your time on such a man, and at the same time discouraging yourself, which is the worst part of it, for it dulls the edge of your energy, and that is a serious thing for a business man.

On the contrary, the thing for you to do is to study out how you can make that farmer see for himself his need for those things you want to sell him the materials for, because, believe me, the first thing in a sale is to make the customer feel that he ought to have it and the next is to make him want it.

How to Increase Your Sales.

Now, all of the foregoing has been leading to what I wanted to say to you particularly at this time, and something, too, which, if you will act on it, will materially increase your sales. I presume that on my trip this summer I saw at least a thousand miles of farms. Of course, I had no opportunity to inspect any of them, but the vast amount of farm implements and machinery that I saw standing out without cover to protect them from the depreciating effects of the weather led me to conclude that this indifference and neglect of the farmers extended generally over the country through which I was passing. At the same time I couldn't help wondering what the lumber dealers were doing to counteract this indifference of feeling on the part of the farmers toward their own financial interests.

Now, we all know that, as a rule, the farmers are a thrifty class of people, especially in the smaller things. But in many of the larger it would seem they are blindly wasteful, and more on account of habit than anything else, which is a charitable way of putting it, for we cannot lay it to a lack of general intelligence. They are usually good buyers and sellers, as you have all experienced. But in caring for what they raise and their improvements they are, in the main, indifferent and neglectful. Experts in agriculture even go so far as to say that American methods of farming are the most wasteful of any civilized country in the world. Be that as it may, we all know that the average farmer is neglectful about caring for his farm buildings and the sheltering of his implements and machinery.

In going through the rich farming lands it looked to me as though the great majority of farmers were working for the landlords, and per-

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haps this is the main reason to account for the rusty, dilapidated appearance of the farm buildings and the small number of them on the places. Where many of you are doing business, however, the greater number of farmers are working a close-fisted landlord who has retired to live in the town and is spending his remaining vitality in kicking against improvements in the town. And therefore you lumber dealers who are running yards where the retired landlords are not so numerous have a better opportunity to cultivate your abilities for creating a demand and supplying it. And there is hardly one of you but who has a wide field for exercising himself in this respect by inducing farmers to purchase material for sheltering their farming tools and other machinery which they may have. I know you have the old habit of neglect to contend against, and this calls for a greater degree of intelligent effort on your part. It is not enough simply to call their attention to their leaving their stuff out to be damaged by the weather, but you have got to be able to figure it out for them what that damage amounts to in dollars and cents and what it will save them every year by caring for and putting it under shelter.

Get Together in the Campaign.

It would be well if you could enlist the co-operation of your competitor in this effort, for it concerns him as much as it does you, and if you can do this you can work together in planning a campaign for waking up the farmers in the locality to the great loss they are suffering every year from this one cause, which is preventable. You cannot, of course, get out and see every farmer on his home place, and therefore I would advise using the local paper to reach them. If you are an advertiser there is no doubt but that the editor will freely publish something every week bearing on this subject. A constant reiteration of it in this way will attract the farmer's notice, and before long it will "get under his hide" and set him to thinking about his own neglect of his implements. When they become convinced that this is a losing game for them they will begin to do some figuring themselves and go to the lumber yard to see what it will cost for a building to shelter their implements.

When they do this you must be prepared to show them the plans and the cost of the cheapest form of a shed to something of a better character and costing more. The idea of having these different plans and estimates is to show each enquirer something that will be within his means to build at that time. Some of you who are not much acquainted with the details of building construction may call in one of your best carpenters to assist you in making out the bill of the items. He will readily do this for the chance of getting the job of doing the work. These several plans I would put a definite price on for the structure complete. Then the customer will know just what it will cost him. When the farmer is too busy with his work to stop it for building I would even contract to do the whole job, including the delivery of materials. This will apply as well to putting up other buildings on the farms, because there are lots of farmers whose intentions in the spring are to do some building in the fall. But when fall comes something has happened or conditions are not what were expected or they are too much occupied to do what they can get along without till another year. This latter reason is often the more prevalent, and is one that the lumber dealer should have the enterprise to take advantage of by saying:

"Here, Jim, if you haven't time to attend to it, I'll put that building just where you want it, and it will cost you complete just so much and no more."

This is what the future lumber dealer is going to do—sell buildings complete, just as the ready-cut and some lumber concerns are now doing.

Should Also Know Farming.

And, while I am on this point, I want to say to the younger men in the business, both dealer and his second man, that along with the knowledge of the lumber and building business should go a knowledge of the farmer's business as well, so that you can talk intelligently with any farmer about it. The taking of one or more of the farm papers would materially assist you in doing this. It would be more valuable to you than you may imagine, for your business is intimately connected with that of the farmer.

For a few years when I was running a country yard I was a correspondent of the Department of Agriculture for a certain part of my county, and I sent in regularly reports on the crop conditions in my district. To get a fair average I had to obtain information from a good many farmers. It made me a little extra work, but one can always find time for what he really wants to do. Don't forget that what I did in this proved of great value to me, for it led me to seek and obtain a lot of other information about the business of agriculture throughout the country. In time I got so I was well posted, and many of the more progressive farmers around there used to come to the office and talk with me on these things I was posted on. It doesn't hurt a lumberman's business any to have a good knowledge of the farming business and to be headquarters for all such information. Every young man now in the business who has the desire and ambition to be a man among men and a leader of thought and information in his community can be all this if he is not afraid of the work necessary to attain this position.

I some time ago arrived at the belief that a young man is fortunate who is running a yard in a country town, because nowhere else is there such an opportunity to develop himself. He has not a particle of competition in this respect. His business touches upon nearly every other business in the town and his opportunities for personal acquaintance in the town and roundabout are limited only by the population. It does not require a large town to develop a big man. The smaller the town the better it is for him, if it is above the size of a hamlet. His opportunities lie all around him for him to grasp, and in developing them he develops himself. That which a man does himself is the only true development, because it comes from within and works outward, like the germ in a kernel of corn. If your town is small there are as many people in the surrounding country as there are in the territory of the larger towns for you to get acquainted with and cultivate. These are the potential buyers of the commodities you handle. When I speak of the farmers I mean also the farmers' families, and their good-will is as essential to you as that of the men folks. I am giving you young men this little preachment because I know it is common among young fellows in business in the country towns to think they are living in a contracted sphere for their abilities, and their ultimate ambition is to get into a large place, where they imagine they can spread themselves to greater advantage. This may be true in some lines of business, but it is different with the lumber dealer, for his business calls for a wider range of knowledge and information than almost any other, and the possibilities for personal development are practically unlimited, to say nothing of increasing his business.

Now Is the Proper Time.

There is no time of the year that people think so much of building and making repairs as they do in the early fall, for the near approach of winter compels them to turn their attention to preparing for it, and therefore they are more open and amenable to suggestions of this nature. Then, again, most people have a little more money at this time than they do in the spring. And, taking these two considerations together, gives the lumberman his greatest opportunity, and he should do his greatest stunt in advertising instead of letting his efforts decrease in this regard. It is the greatest mistake lumbermen can make to lessen their advertising efforts because trade is good at the yard, for, as I've said, this is the time to make suggestions, and as you can't get out to make a personal call on everybody, you want to make a lead of a lot of suggestive advertising that will reach and act upon those who are out of the range of your personal contact. For, let me tell you something: Every individual is constantly subjected to and is influenced by the power of suggestion. You don't think of a thing to do anything that is not the result of suggestion, either from outside influences or from your own thought. You know if you think of something it is almost sure to lead you to think of something else. Every one of your five senses is a constant source of suggestion. So if you read something about those things that relate to your personal interests you become interested, and it sets you to do more or less thinking of what you would not have thought of had not the medium of your eyesight suggested it.

This is the centre and core of all we term advertising—simply a medium for conveying suggestion through the eyesight to the mind, which never fails to respond, either consciously or unconsciously, and the degree of action resulting therefrom depends on the force and character of the suggestion. People with money in their pockets are more susceptible to the influence of suggestion. Therefore, farmers at this season of the year are more liable to act on suggestion than at other times. Not only are they in need of shelter for their machinery, but there are many other things in the way of improvements that they know they would like to have, but they lack the initiative that a strong suggestion would give them to act for obtaining them. It devolves on the lumber dealer, and should be his particular interest these days, to give out suggestions for these things in a manner that will start the farmer to thinking and looking around to see what he needs in the preparation for winter. Don't be satisfied with what trade people voluntarily bring you, but cultivate your territory for more.—C. H. Ketridge, in the Mississippi Valley Lumberman.

Poor Box Planing—Cause and Remedy

Too many people persist in clinging to the idea that any old kind of a planer will do for box factory surfacing and that any kind of knife grinding and setting will answer just so lots of lumber is put through the machine that will pass as having been planed.

The original cause for this whole family of wrong ideas for box factory planing comes from the fact that most of the lumber used in this country for boxes is low grade lumber and many of the boxes are cheaply made. In some other countries, down in Brazil, for example, a good grade of white pine is used for boxes and shipping cases, so the lumber and the work is on a somewhat higher plane. With us, while the idea of using low grade lumber helps in making a timber clean-up, it too often leads to indifference in the work. Really

"I'll Stand Back of It"

—Says Ye Old Miller

The only way you can test the baking merits of

Cream of the West Flour

The hard wheat flour that is guaranteed for bread

is to give it a trial in your camp. The full-flavored, nutritious, body building loaves Cream of the West makes, will instantly captivate every member of your camp. They will give them a sense of satisfaction after every meal, and be an incentive to them for the production of more and better work.

Prompt shipment guaranteed on all orders

THE CAMPBELL FLOUR MILLS CO., LIMITED

TORONTO **PETERBORO**

MONTREAL—W. J. McAuley, B-24 Board of Trade Bldg.
QUEBEC—Paul F. Gauvreau, 84 St. Peter Street.

HALIFAX—H. E. Rains, 112 Lawrence Street.
C. E. Chote & Company.

Jenckes Boilers

We make a Specialty of

Horizontal Tubular Boilers

for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

Sherbrooke Montreal Cobalt So. Porcupine St. Catharines Toronto Vancouver Nelson

the right idea is to refine the low grade lumber and eliminate the defects so that the finished stock in a good packing box is good material of high grade. Also it should be well dressed.

For the better grade of boxes good planer work is essential to neat appearance and good printing, and even for the cheaper boxes where defects remain in the lumber a good order of dressing serves to improve the appearance enough to enhance the value of the package materially, and in that way to justify even a little extra cast. The fact of the matter is, however, that good dressing need not cost more, and frequently does not cost as much as poor dressing.

The two factors of importance in box factory planer work are smoothness and even thickness. The smoothness of the surface is desirable; first for the improvement it makes in the appearance, and second for the sake of good printing. Our best packing boxes have some very artistic printing done on them. The box sides and ends are made to do advertising service as well as serve the prime purpose of protecting goods in shipment.

It is the box printing that makes the other factor important, that of giving a positive, even thickness to the finished stock. The makers of box printing machinery have long complained that one of the trying problems comes from the fact that too often box stock coming from planers will vary in thickness, which makes it difficult to do good printing. The box boards not only will vary a little in thickness as compared to each other but some will be thick on one edge and thin on another, some will be thin on the end and thicker in the body and some will be wavy. All of these shortcomings make for poor printing; consequently every maker of box printers is persistently arguing for better planer work to the end that more artistic printing may be produced.

Some of the unevenness in planer work comes from stock that is dressed at different times. When the knives are fresh and sharp and cutting freely the machine is set up to a given thickness. By and by as they become dull and wear away a little the stock becomes slightly thicker. Then they are sharpened and set up again and may be adjusted to the original thickness and maybe to a thicker thickness from part of the recent run. So there is need to have some positive standards for thickness and to adhere to them religiously in order that box stock when it reaches the printer may vary but slightly in thickness.

One of the most common and troublesome faults in planing box stock lies in the careless adjusting of knives to bed plate which results in making stock thicker on one edge than the other. This makes proper printing very difficult, especially if the lumber is hard and unyielding, because to get an impression the dye or type must imbed itself on one edge or the printing will be very dim on the other.

Taking it altogether box factory planer work is really more exacting than cabinet work, or house trim. The surface of box factory lumber should be as neatly and smoothly finished as casing and base or as furniture stock, and in the matter of thickness it is more important to have exactness in the box factory than in millwork, because of the requirements for good printing.

Therefore, instead of regarding box factory planing as a line of work in which anything will answer so that it gets the stock through, we should really consider it as a work calling for the most up-to-date planers and the best order of planer service. Appearances count for quite a lot in box making as well as in other work and requirements of box printing make it essential to guard carefully the matter of thickness, and really in the end with modern machines it is no more trouble and expense to get good results than it is to do indifferent planing. It is simply a matter of good machines, kept in proper order, and this is one of the essentials to successful business anywhere.—Yates Quality.

Waste Tanbark Now Used to Make Roofing

A method for using waste hemlock tanbark to replace to some extent the use of expensive rag stock in the manufacture of felt roofing has been developed at the Forest Products Laboratory, Madison, Wis., and is now being used commercially by co-operating mills. It is stated that, in these mills, from 20 to 30 per cent. of the rags is being replaced by waste bark, and that the quality of the finished product is equal to that manufactured solely from rags. Members of the Forest Service who have been conducting the experiments say that the utilization of the bark will make it possible to effect a considerable saving in the manufacture of felt roofing.

In addition to the use of the bark for roofing, papers made at the Forest Products Laboratory on the basis of 80 per cent. tanbark have been successfully printed on a commercial twelve-color wall-paper printing machine, and give promise of being entirely satisfactory. Other paper of the same make-up has been made into fibre conduits by a commercial manufacturer.

Other possible uses of waste bark which suggest themselves are the use of bark mixed with ground wood for the production of wall board, or with sulphite screenings in the manufacture of car liners. Studies already made at the Forests Products Laboratory indicate that it may be possible to use waste hemlock and oak tanbark in making sheathing paper, carpet liners, bottle wrappers, deadening felt, and the like.

Original "Dunbar" Machines

We are the original and the only makers of "Dunbar" Shingle Machines, Lath Machines, Clapboard Machines, Steam and Gasoline Logging Engines. Each is the best for its particular work. Are you using the best?

Lath Machine

From our many years of experience we evolved this "Dunbar" Original Lath Machine. Every improvement that could be suggested, every time-tested idea for the betterment of product and for greater speed, has been incorporated in this machine. We believe it has no equal, and there are a great number of mill men throughout Canada who share this belief with us. Carefully constructed of high grade materials and designed to work steadily under the hardest conditions.

Steam and Gasoline Logging Engines

Conditions in Canada necessitate an engine that will stand any amount of strain and hard work in the lumber industry. With this idea in mind we have brought out the "Dunbar" engines perhaps a little stronger than is really needed. They do their work easily and willingly, and stand a great amount of hard usage. Built entirely in Canada for the Canadian lumber trade.

Clapboard Machine

You will need no excuse for the quality of your product if you use the original "Dunbar" Clapboard Machine. Expert in every detail. This machine will give you the very best service under most trying conditions. It will turn out work without delays. It will need practically no repairs and will increase your output. We cannot recommend it too highly because it is giving this very service to lumbermen in all parts of this country.

Send for catalogues of any or all of these machines.

Dunbar Engine & Foundry Co.

WOODSTOCK, N.B.

Eiderdown Robes and Bags

SMART-WOODS QUALITY

Keep You Warm,
Last Indefinitely,
Are Light to Carry,
Always Sanitary.

Cost No More Than Ordinary Sleeping Robes Do.

WRITE FOR PRICES

Smart-Woods LIMITED

OTTAWA
TORONTO
MONTREAL
WINNIPEG

Saw Gumming is an All Important Job

And the success of this job in many a saw mill depends upon

Aloxite Saw Gumming Wheels

For the reason that they cut cool and clean and fast, even when forced to the limit—and they hold their shape—show long life.

There is nothing superior to Aloxite for steel grinding—it is hard, sharp and of just the right degree of toughness and Aloxite Saw Gumming wheels are

The Right Wheels in the Right Place

Suppose you let Carborundum service help you to better grinding service.

THE CARBORUNDUM COMPANY
NIAGARA FALLS, N. Y.

New York Chicago Philadelphia Pittsburgh Boston Cleveland Cincinnati Grand Rapids Milwaukee Manchester, Eng.

The EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS-DIEU-RIEN
MONTREAL - Canada

Head Office at Montreal.

SPRUCE
ROUGH or DRESSED

Saw Mills at
MONT LAURIER, QUE.
STE. MARGUERITE, QUE.

Dressing Mills at
ST. JEROME, QUE.

"Sound Wormy White Pine"

We have accumulated the following Wormy Pine, which we offer at special prices. It is a regular grade of Mill Run except that it is wormy.

2 cars	3 x 6	and wider	10 to 16 feet.
1 car	4 x 5	" "	10 to 16 feet.
3 cars	4 x 6	" "	10 to 16 feet.
3 cars	4 x 8	" "	10 to 16 feet.
2 cars	4 x 10	" "	10 to 16 feet.
1 car	4 x 12	" "	10 to 16 feet.
2 cars	6 x 6	" "	10 to 16 feet.
1 car	8 x 8	" "	10 to 16 feet.

Also some 2 inch.

Write or phone for prices.

Herman H. Hettler Lumber Co.
Midland, Ont.

LATH

Campbell, MacLaurin Lumber Co.
Limited
Board of Trade Building, MONTREAL

Pine, Spruce
Hemlock
Hardwoods, Lath

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber. Lath and Shingles
Offices—500 McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

The sawmill belonging to J. G. Stanley, Glencolin, Ont., was recently destroyed by fire.

John L. Focler, Philipsburg, Ont., has bought out the business of the Baden Lumber Company at that place.

The planing mill belonging to J. E. Butler & Sons, Vittoria, Ont., was totally destroyed by fire. The amount of the loss is estimated at $3,000, and there was no insurance.

The R. Laidlaw Lumber Company's plant at Sarnia, Ont., suffered a slight loss by fire recently as the result of a fire which wiped out the plant of the Ontario Canning Company.

The plant of the Canadian Woodenware Company, St. Thomas, Ont., which was recently destroyed by fire, will be rebuilt at a cost of $15,000. The manager of the company is Mr. A. J. Voege.

Ontario Toys Limited, which was recently incorporated, will manufacture a wide variety of toys in order to secure the Canadian market which has formerly been supplied very largely from Germany. The company also expect to be able to develop an important export trade. The incorporators include Wm. Webber, M. Swedlove, H. Paulin, A. C. MacNaughton and L. A. Maldaver, all of Toronto.

The Bishop Lumber Company, Limited, have succeeded the Thessalon Lumber Company, Nesterville, Ont., having taken over their mill and plant in the woods. They have secured also a limit of 36 square miles of virgin timber on the Mississaga River, in the Township of Otter, which was purchased from the Georgian Bay Lumber Company. H. H. Bishop, Chicago, is president, and A. E. Bishop secretary and treasurer.

A report from Port Arthur, Ont., states that an agreement has been signed between the city and an Eastern Ontario syndicate under which a pulp mill will be established in Port Arthur on the north waterfront, work to be started immediately. The mill is to have a capacity of 150 tons per day. The first unit of fifty tons will, it is expected, be producing next June. The company gets its site and buys its power from the municipality.

Between eight and nine hundred men employed by J. R. Booth in his pulp and paper mills at Ottawa were recently thrown temporarily out of employment owing to low water in the Ottawa River. The level of the river was lower than it had been for many years, and Mr. Booth had to close down all his pulp mills during the day time and could run only a small shift all night, owing to there not being enough water to cover the pulp grinders.

Eastern Canada

The Delisle Lumber Company, Montreal, P.Q., has been registered. The chief party interested is Mr. J. O. Delisle.

F. E. Jones, St. John, N.B., has been awarded a contract for a large electrical installation to be made in their Great Salmon River mill by the Pejepscot Lumber Company.

The East Coast Lumber Company, Mr. Roberts, manager, have erected a mill at Campbells, N.B. (near Eastern Head), for the purpose of manufacturing shingles, laths, boards, etc.

Fire recently destroyed the saw and planing mill belonging to Alric Archambault, St. Martine, P.Q. The amount of the loss is estimated at about $9,000, which is partly covered by insurance. The owner will probably rebuild and will require machinery for steam power.

Geo. A. Chappell and Claude C. Chappell have purchased from W. F. Beatty a tract of timber land at Second River, Colchester County, N.S., containing 2,300 acres, upon which there is a stand of 20,000,000 feet of spruce timber. The price paid was about $55,000. The Chappell's are starting operations at once with two mills and will cut between four and five million feet this season.

A report from Bangor, Me., states that the Partington Pulp and Paper Company, St. John, N.B., are disposing of their property both at St. John and throughout the province of New Brunswick to Maine and New York capitalists headed by Hugh Chisholm, president of the Oxford Paper Company, Rumford Falls, and Maynard S. Bird, of Portland, Ore. The price mentioned is more than $2,000,000. The sale is to include 500,000 acres of valuable timber lands. It is expected that the new concern will extend the plant at Union Point, St. John, and that they may install newsprint manufacturing machinery.

Western Canada

The Prairie Pulp & Paper Company, Limited, Winnipeg, Man., have been incorporated.

The 'Nag' Paint Company, Limited, has been incorporated with head office at Victoria, B.C., and capital stock of $30,000, to carry on business, among

other things, as timber and lumber merchants, sawmill and pulp mill proprietors and to buy, sell, manufacture and deal in saw logs, timber, lumber and wood of all kinds.

The Woodland Lumber Company has been incorporated with head office at Edmonton, Alta., and capital stock of $20,000.

Application has been made by Mr. Knox Walkem on behalf of the Western Logging Company, Vancouver, B.C., for a winding up order, with the unanimous consent of the shareholders.

J. S. Deschamp is considering plans for the erection of a mill near Slocan City, B.C., to cut lumber from limits on Goat Creek. It will also be necessary for him to construct a flume in connection with his operation.

H. M. Ellis Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $50,000, to carry on business as timber and lumber merchants, sawmill, shingle mill and pulp mill owners, loggers, etc.

The B. C. Trading and Transportation Company, Limited, has been incorporated with head office at Kamloops, B.C., and capital stock of $100,000, to carry on business as manufacturers and dealers in timber, lumber, logs, etc.

Farm Lands Investment Company, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $50,000, to carry on business as manufacturers and dealers in timber, lumber, shingles and all sawmill products.

The Coast Copper Company, Limited, has been incorporated with head office at Trail, B.C., and capital stock of $1,000,000, to carry on business as timber and lumber merchants, and as manufacturers and dealers in lumber, timber, saw logs, poles, etc.

The Quatsino Trading Company, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $20,000, to carry on business as foresters, loggers, timber merchants, shingle mill, sawmill and planing mill proprietors and as manufacturers and dealers in wood pulp, etc.

D. B. McDonald, who is the promoter of the Manitoba Power, Pulp and Paper Company, has announced that plans have been completed for the erection of a plant at Grand Rapids, on the Saskatchewan River. The scheme will represent an outlay of $2,000,000 and, according to Mr. McDonald, will include a sawmill, paper factory, pulp mill and hydro-electric plant. The pulp and paper mill will have a capacity of 100 tons a day.

The Prairie Pulp & Paper Company, Limited, has been incorporated with head office at Winnipeg, Man., to construct and operate pulp and paper mills. The incorporators include S. H. J. Montgomery, O. Montgomery, A. E. Hilder, C. Graham and B. Dixon, all of Winnipeg. The capital stock of the company is $200,000.

The sawmill at Sperling, Langley, B.C., owned and operated by B. John, a prominent Hindoo, and a company of his fellow countrymen started operations on September 21st, with a capacity of 35,000 feet per day. The plant is one of the most up-to-date small mills in the Fraser Valley. It is driven by electricity and the various machines are run by direct motor power. This method is employed at one other mill on the coast.

The Western Canada Lumber Company, with head office at Lethbridge, Alta., have sold ten of their southern Alberta yards to the Beaver Lumber Company of Winnipeg. The yards concerned are located at Garnum, Claresholm, Parkland, Stavely, Nanton, Cayley, Brant, Champion, Carmangay, and Barons. Mr. Peter Lund is the principal owner of the Western Canada Lumber Company. This company retains control of its yards at Macleod, Lethbridge, Medicine Hat and intermediate points along the Crow's Nest Railway. W. J. Gourlay is general manager of the Beaver Lumber Company, with head office in the Bank of Toronto Building, Winnipeg.

Barbados Market Report

S. P. Musson, Son & Company, Bridgetown, Barbados, in their market report under date of September 15th, write as follows:—Lumberstuffs—White pine—The position of the market is the same as last advised, no arrivals have taken place, and there is a good enquiry for later shipments which should sell to advantage. Spruce—There have been no arrivals in this either, and, as supplies are wanted, we can recommend shipments. Shingles—The S.S. "Chignecto" brought a small lot of 87,500 Selected Long Gaspe, to our address, which we sold at $8.19 duty paid, and we can recommend further shipments, as shingles of good quality are wanted. In cedar laying the market is temporarily supplied from recent shipments. Shooks and wood hoops—We note the receipt of 1,070 bdls. wood hoops by London steamer for dealer's account.

At a recent meeting of the Board fo Governors of the Hardwood Manufacturers' Association of the United States, at Cincinnati, it was decided to hold the fifteenth annual meeting of the association in Cincinnati on Tuesday and Wednesday, January 30 and 31, 1917, at the Sinton Hotel.

Canada's exports of forest products for the twelve months ending August were as follows:—1916, $55,044,835; 1915, $45,658,916; 1914, $42,593,099.

We Saw Wood

and say nothing when someone claims that all lumber is alike. We know different and we know he doesn't know any better. But ask any experienced builder about our lumber and other kinds. Let his experience be your teacher, which means you will buy your next lumber here.

The McLennan Lumber Co.
LIMITED
Wholesale and Retail
21 Dorchester Street W. - MONTREAL, QUE.
Telephone Main 8636. Private exchange to all departments

H. BOURGOUIN
Dominion Express Bldg., 145 St. James St., Montreal
Wholesale Lumber and Timber
SHELL BOX STOCK
White and Red Pine, Spruce
Hemlock, Birch, Maple
Railway Ties, Fence Posts, Etc.
Prompt shipment. Satisfactory stock. Good service Write for Prices.
A. F. B. AUSTIN, Manager

Your Blower System

If you contemplate installation of a new blower system or an extension of your present one, write us, as we have a unique proposition to offer. There is no heating, clogging or shaking with our system.

Prices on application

The Toronto Blower Co.
156 Duke St., Toronto

These men wake up refreshed and ready for hard work, because they sleep on comfortable, sanitary ALASKA Double Deck Steel Bunks.

Sanitary Steel Bunks for Your Men Mean Dollars in Your Pocket

You know the economy of good tools, and you doubtless make a practice of buying on a quality basis, because the best is the most economical in the long run.

Are you just as particular about the equipment of your men's sleeping quarters? If your men sleep on old-fashioned, vermin-infested, hard, wooden bunks, you cannot expect them to go at their work with energy.

"Alaska" Sanitary Steel Double-Deck Bunks are absolutely vermin-proof; they are just as comfortable as a Pullman berth, because of their twisted-link fabric springs that "give" BUT NEVER SAG; and they are as rigid in frame as a steel bar.

Easily knocked down for shipping, and as easily set up. Light, yet strong. Guaranteed to give satisfaction. With Alaska sanitary mattresses and pillows, they make the ideal combination for sleep comfort in camp.

Ask Us for Further Particulars About Our No. 171 D. D. Bunk

The Parkhill Manufacturing Co., Limited

MONTREAL — WINNIPEG
GUARANTEED
ALASKA
BEDDING
TRADE MARK REGISTERED

Successors to
ALASKA FEATHER & DOWN CO., LIMITED
Makers of Steel Bunks, Bedsteads and Bedding
400 St. Ambroise St. :-: MONTREAL
"ALASKA on an article means HIGH-GRADE EVERY PARTICLE"

WHY WHEREFORE

THE P.T. GENDRON SHOE PACK CO. MIDLAND GENDRON MIDLAND ONT. CAN.

Anything that makes for a longer wear, ensuring comfort, **Foot Comfort we mean,** makes for economy.

That's why the **"GENDRON" Draw String Shoepack** is economical, because of its 100 per cent. **QUALITY,** and **HAND MADE** for **Foot Comfort.**

All our Shoepacks carry this guarantee. We will cheerfully replace any that may prove defective.

Catalog and Prices for the asking

The P. T. Gendron Shoepack Co.

Midland, Ont.

Canadian Made Locomotives

There is no need to go outside of the Canadian market in order to obtain the best logging locomotives. We have been specializing in this line for fifty years. You will find the design of our locomotives complete and the sturdy construction equal to every test of the severe service of logging operations.

Repair parts can always be had on the shortest notice.

This engine is 13½ ins. x 18 ins. and weighs 35 tons.

Grey Iron Castings—any size or shape—ordinary or intricate—made promptly. New foundry, splendidly equipped We would be pleased to quote on castings—singly or by contract. We also make drop forgings of all descriptions.

MAY WE SEND YOU SPECIFICATIONS?

Canadian Locomotive Company, Limited, Kingston, Ont.

Taylor and Arnold Ltd., Sales Agent, Montreal and Winnipeg

"Maple Leaf" Brand

Stitched Cotton Duck Belting

A trial Belt will convince you. Write for prices and samples.

Excels all others in economy, strength, efficiency and true running, whether for transmission of power or conveying. A test recently made at McGill University, Montreal, of a 6-ply **"Maple Leaf"** belt, a light double leather, and a 6-ply rubber belt, showed that our **"Maple Leaf"** Belt stood a breaking strain 50 per cent. greater than the leather, and 25 per cent. greater than the rubber belt.

"Maple Leaf" Main Drive Belts
Are the Best on the Market

"Maple Leaf" Belt Dressing is the best for all kinds of belts

Dominion Belting Co., Limited
HAMILTON - ONTARIO
Branch: Montreal—Office 51 Duluth Building

Planing Mill Improvements

Every Manufacturer in the Lumber Industry realizes that to be "up-to-date" their Factory should be installed with **Shaving Exhaust Fans.**

The Sheldon Shaving Exhaust Fan
is especially designed to suit your particular requirements giving greater efficiency and independence than any other on the market.

See our New Catalogue

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Messrs. Walker's Limited, 259-261 Stanley St. Winnipeg, Man.
Messrs. Gorman, Clancey & Grindley, Ltd., Calgary and Edmonton, Alta.
Messrs. Robt. Hamilton & Co. Ltd., Bank of Ottawa Bldg., Vancouver, B.C.

CROWN BRAND CORN SYRUP

Cheaper and Better than Molasses

Barrels, about 700 lbs.	Pound	.4
Half Barrels, about 350 lbs.	Pound	.4¼
Quarter Barrels, about 175 lbs. ...	Pound	.4½
2 Gallon Wooden Pails, 25 lbs. each,	Per Pail	$1.50
3 Gallon Wooden Pails, 38½ lbs. ea.,	Per Pail	2.10
5 Gallon Wooden Pails, 65 lbs. each,	Per Pail	3.35

Prices subject to change without notice.

FREIGHT PAID

to all Steam Railroad Stations in Quebec and in Ontario East or South of Sault Ste. Marie, Sudbury, North Bay and Mattawa inclusive, to all Lake Ports during season of open navigation.

Any Wholesaler will Supply You

The Canada Starch Co., Ltd.
MONTREAL

The Glue Book

What it Contains:

Chapter 1—Historical Notes.
Chapter 2—Manufacture of Glue.
Chapter 3—Testing and Grading.
Chapter 4—Methods in the Glue Room.
Chapter 5—Glue Room Equipment.
Chapter 6—Selection of Glue.

Price 50 cents

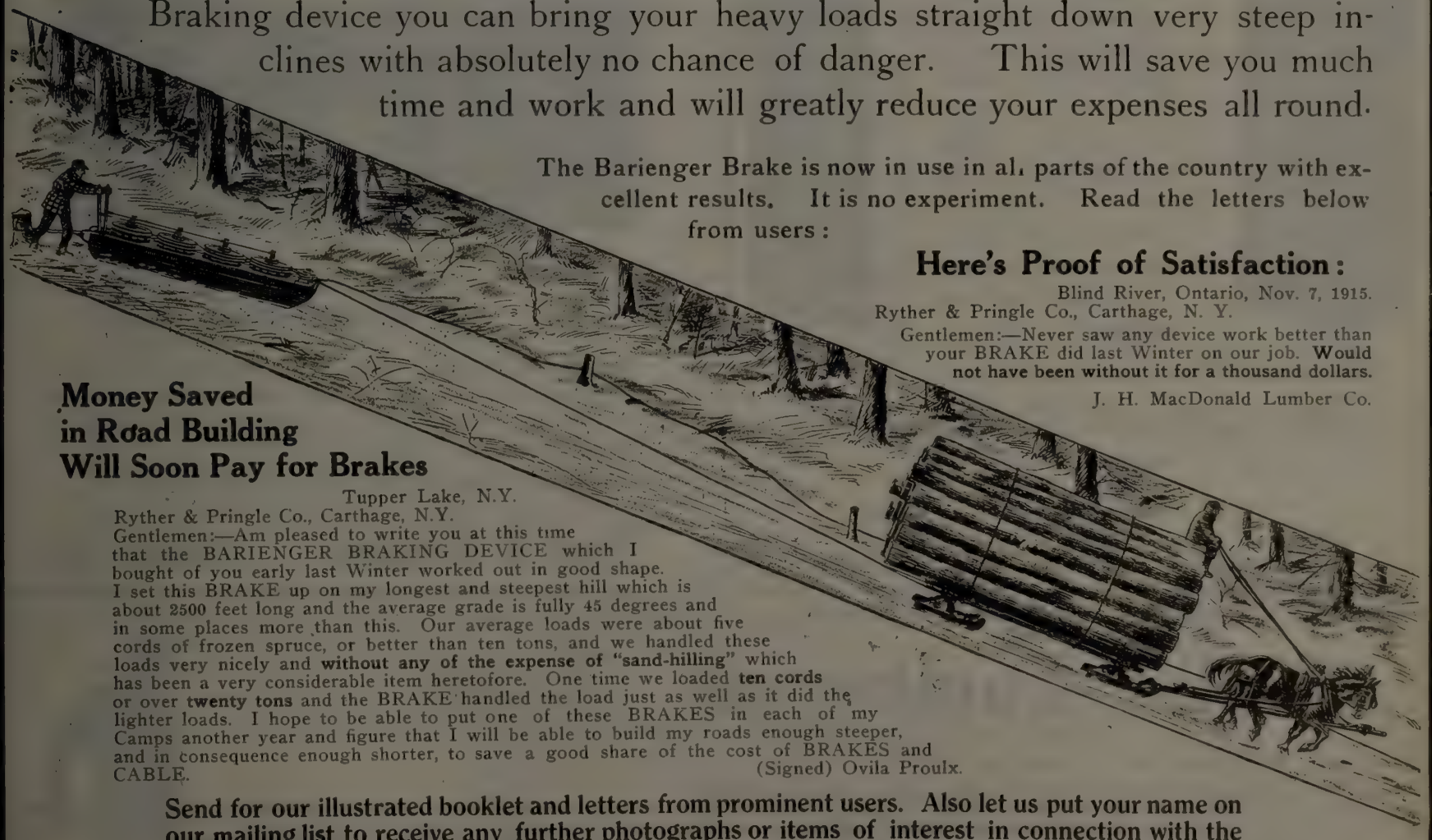
Canada Lumberman & Woodworker
347 Adelaide St. West, Toronto

Overcome Labor Shortage

The present labor shortage is going to seriously affect every lumberman in Canada. Costs of logging and all camp work will be much higher than ever before. Now is the time for Camp Superintendents to look after every little economy possible and every idea for more work with fewer hands. One big step in the right line would be the installation of a

BARIENGER BRAKE

If you work in hilly country or have any upland logging to do you will be counting on some extra expense for winding roads or on sand hilling, straw hilling or whatever means you propose using to bring your loads safely to shipping points. Any of these methods are costly and slow and require much labor. Not only that, but the chance of accidents to men and horses is ever present. With a Barienger Braking device you can bring your heavy loads straight down very steep inclines with absolutely no chance of danger. This will save you much time and work and will greatly reduce your expenses all round.



The Barienger Brake is now in use in all parts of the country with excellent results. It is no experiment. Read the letters below from users:

Here's Proof of Satisfaction:

Blind River, Ontario, Nov. 7, 1915.
Ryther & Pringle Co., Carthage, N. Y.

Gentlemen:—Never saw any device work better than your BRAKE did last Winter on our job. **Would not have been without it for a thousand dollars.**

J. H. MacDonald Lumber Co.

Money Saved in Road Building Will Soon Pay for Brakes

Tupper Lake, N.Y.

Ryther & Pringle Co., Carthage, N.Y.

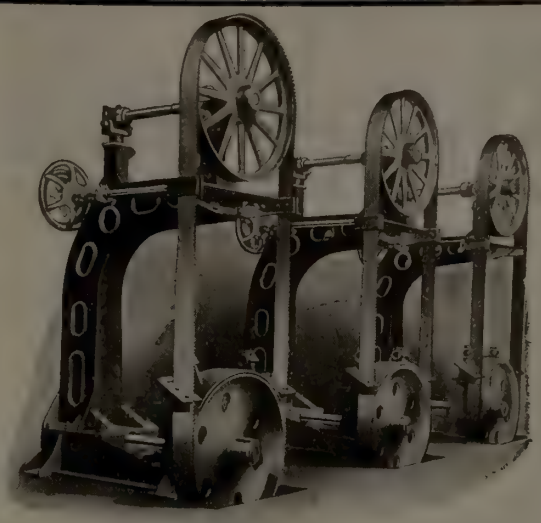
Gentlemen:—Am pleased to write you at this time that the BARIENGER BRAKING DEVICE which I bought of you early last Winter worked out in good shape. I set this BRAKE up on my longest and steepest hill which is about 2500 feet long and the average grade is fully 45 degrees and in some places more than this. Our average loads were about five cords of frozen spruce, or better than ten tons, and we handled these loads very nicely and **without any of the expense of "sand-hilling"** which has been a very considerable item heretofore. One time we loaded **ten cords** or over **twenty tons** and the BRAKE handled the load just as well as it did the lighter loads. I hope to be able to put one of these BRAKES in each of my Camps another year and figure that I will be able to build my roads enough steeper, and in consequence enough shorter, to save a good share of the cost of BRAKES and CABLE.

(Signed) Ovila Proulx.

Send for our illustrated booklet and letters from prominent users. Also let us put your name on our mailing list to receive any further photographs or items of interest in connection with the famous Barienger Brake. Booklet is free and there is no obligation whatever in writing for it.

Ryther & Pringle Company

CARTHAGE, N.Y.



48" Slasher

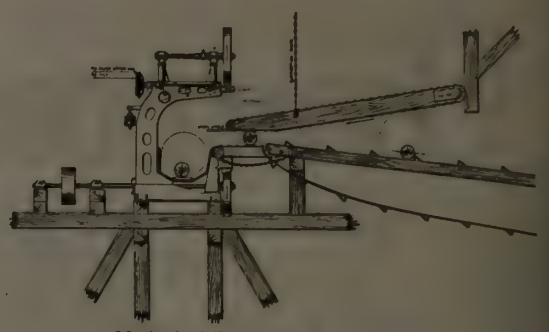
The Clark Band Saw Slasher for Cutting Pulpwood

Made for either 24" or 48" Wood

The Band Saw has 3/32" Kerf and Cuts SMOOTH.

Your saw has 3/8" to 1/2" Kerf and leaves end of wood torn and rough.

The Band Slasher takes only 1/3 as much power to drive as a Circular Saw Slasher.



Method of Feeding Logs into Slasher

Let us give you drawings and estimates for one to fit your plant

CLARK BROS CO., Olean, N. Y.

Garlock Packings

Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

Style No. 777

Style No. 150

The Garlock Packing Co.

Hamilton, Ontario

Branches: Calgary, Montreal

Branches: Toronto, Winnipeg

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

Pink's Lumbering Tools

The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

Long Distance Phone, No. 87

Send for Catalogue and Price List.

Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants.

The Thomas Pink Company, Limited

Manufacturers of Lumber Tools

PEMBROKE - - - - - ONTARIO

MADE IN CANADA

It's a Pink anyway you take it, and it's the best Peavey made

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Deputy Minister.

Department of the Interior, Ottawa,
December 20th, 1912.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	27 00	28 00
1 x 6 common and dressing ...		28 00
1 x 8 common and dressing ...	27 00	29 00
1 x 10 common and dressing ..	31 00	32 00
1 x 12 common and dressing ..	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		28 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		29 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		23 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ...		17 00
1 x 6-in. x 9 to 16 ft.		21 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		23 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft. ...		16 00
2 x 4 to 12, 10 and 16 ft. ..		20 00
2 x 4 to 12-in., 12 and 14 ft. ...		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet: 8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain..		31 50
Fir flooring, 1 x 4, edge grain..		35 00
Fir flooring, 1 x 4, flat grain ..		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 35
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60	00
Ash, white, No. 1 common	45	00
Ash, brown, 1sts and 2nds, 4/4	50	00
Ash, brown, common and better	40	00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60	00
Birch, 1st and 2nds, 4/4	44	00
Birch, No. 1 com. and bet., 4/4	35	00
Birch, 1st and 2nds, 6/4 and 8/4	46	00
Birch, 1st and 2nds, 10/4 and 12/4..	60	00
Birch, 1st and 2nds, 16/4	62	00
Basswood, 1sts and 2nds, 4/4	42	00
Basswood, No. 1 com. and bet., 4/4..	35	00
Basswood, No. 2 and 3, common	18	50
Basswood, 6/4 and 8/4, 1sts and 2nds.	45	00
Basswood, 6/4 and 8/4, com. and bet.	38	00
Basswood, 4/4, No. 2 com. and bet...	30	00
Soft elm, 1sts and 2nds, 4/4	40	00
Soft Elm, No. 1 com. and bet., 4/4	33	00
Soft elm, No. 2 and 3 common	17	50
Soft elm, 6/4 and 8/4, 1 and 2	42	00
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55	00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37	00
Soft maple, 1sts and 2nds, 4/4	33	00
Soft maple, com. and bet., 4/4	25	00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35	00
Hard maple, 1st and 2nds, 4/4	40	00
Hard Maple, common and better, 4/4	33	00
Hard maple, 12/4 & 16/4, 1sts and 2nds	50	00
Red oak, plain 1st and 2nds, 4/4 ...	60	00
Red oak, plain, No. 1 com., 4/4	42	00
Red oak, plain No. 2 com. 4/4.....	32	00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68	00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75	00
White oak, plain 1sts and 2nds, 4/4	60	00
White oak, plain, No. 1 com., 4/4...	42	00
White oak, plain, No. 2 com., 4/4....	32	00
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	60	00
Red and White oak, plain, No. 1 com. 5/4 and 6/4	45	00
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35	00
Red and White oak, plain, 1sts and 2nds, 8/4	70	00
Red and White oak, plain, No. 1 com. 8/4	50	00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80	00
White oak, ¼ cut, 1sts and 2nds, 4/4.	89	00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92	00
White oak, ¼ cut No. 1 common	57	00
Hickory, 1sts and 2nds, 4/4	70	00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75	00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up $52 00	54	00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ...	29 00	30 00
Pine, No. 1 dressing shorts ...	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ...		24 00
Pine, 1-in. x 5-in. s.c. strips ...		25 00
Pine, 1-in. x 6-in. s.c. strips ...		27 00
Pine, 1-in. x 6-in. s.c. strips ...	24 00	25 00
Pine, 1-in. x 7-in. s.c. strips ...	27 00	28 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	27 00	28 00
Pine, 1-in. x 10-in. M.R.		
Pine, s.c. sidings, 1½ and 2-in.	30 00	32 00
Pine, s.c. strips 1-in.	24 00	25 00
1¼, 1½ and 2-in. 26 00		28 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00	22 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x 10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-77'	18 00	19 00
1" x 3" to 6 ", 11'-16'	21 00	22 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	22 00	24 00
Pine, mill culls stock, 1 x 12 ..		22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16' ...	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet.....	80	85
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Quebec Spruce Deals		
12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00
Cuts and Better	
4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00
No. 1 Cuts	
1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00
No. 2 Cuts	
1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide 62 00	65 00
No. 3 Cuts	
1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00
Common and Dressing Mill Run	
1-in. x 4-in.	27 00
1-in. x 5-in.	27 00
1-in. x 6-in.	28 00
1-in. x 8-in.	28 00
1-in. x 10-in.	30 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00
No. 1 Barn	
1 inch	33 00 45 00
1¼, 1½ and 2-in.	36 00 45 00
2½ and 3-in.	45 00
4 inch	50 00
No. 2 Barn	
1 inch	28 00 36 00
1¼, 1½ and 2-in.	30 00 36 00
2½ and 3-in.	38 00
No. 3 Barn	
1 inch	26 00 30 00
No. 1, 1, 1¼, 1½, 2-in.	26 00 30 00
Box	
No. 1, 1, 1¼, 1½, 2-in.	22 00 25 00
No. 2, 1¼, 1½, 2-in.	24 00 25 00
Mill Culls	
Mill run culls, 1-in.	19 00
1, 1¼, 1½ and 2-in.	20 00
No. 2	17 00 18 00
Lath	
No. 1, 32-in. pine	1 85
No. 2, 48-in. pine	4 50
No. 1, 48-in. pine	5 00
No. 3, 48-in. pine	4 00
Hemlock Lath 48 in.	4 00

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1. E. 6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8..	15 00	18 00	21 50	22 50
2 x 10	19 00	19 50	22 50	23 50
2 x 12	19 00	20 00	24 50	24 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension	
2 x 4, 8, 12, 14, 16	22 50
2 x 4, 10, 18, 20	24 50
2 x 6, 8 to 16	22 50
2 x 8, 8 to 16	22 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	30 50
2 x 10 and 2 x 12; 8-16 ft.	27 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	29 50
2 x 10 and 2 x 12; 24, 26, 28, 30, 32 ft.	31 50
No. 1 Common Boards	
4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50
Flooring	
4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00
Shiplap—Finished	
6 inch	23 00
8, 10 and 12 inch	24 00
Siding	
6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00
Lath	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50
PINE—ROUGH TIMBER	
3 x 6 in.; 8 to 16 ft.	28 10
3 x 8 in.; 8 to 16 ft.	25 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	28 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	30 00
BRITISH COLUMBIA COAST FIR	
Dimension S1S & E	
2 x 4 in.; 6 and 8 ft.	21 50
2 x 4 in.; 12 and 14 ft.	22 50
2 x 4 in.; 10 and 16 ft.	23 50
2 x 4 in.; 18 and 24 ft.	24 50
2 x 4 in.; 22 and 24 ft.	25 50
2 x 4 in.; 26 to 32 ft.	27 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.....	24 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.....	26 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.....	27 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.....	29 00
2 x 14 in.; 10 to 16 ft.	29 00
2 x 14 in.; 18 and 20 ft.	31 00
2 x 14 in.; 22 and 24 ft.	32 00
2 x 14 in.; 26 to 32 ft.	34 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	25 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	26 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	27 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	28 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	30 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	28 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	28 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	29 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	29 50
FLOORING	
Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	
SHIPLAP	
B. C. Fir, 6 in.	22 50
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No. 2 Shiplap, 6 in.	22 50
No. 2 Shiplap, 8, 10 and 12 in.	23 50
FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.	
Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00
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LATH	
Fir lath, ¾ x 1½ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ¾ x 1½ in. x 4 ft.	5 00

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Uppers 4/4 ....$100	00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00

(Continued on page 60)

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No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	44 - 46	28 - 30	14 - 16
5/4 to 8/4	46 - 48	30 - 32	16 - 18

SAP BIRCH

4/4	39 - 41	26 - 28	16 - 18
5/4 and up	39 - 41	26 - 28	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

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White pine uppers, 1 to 2 in...	98 00
Selects, 1 to 2 in.	88 00
Fine common, 1 in.	68 00 70 00
Fine common, 1¼ to 2 in.	72 00 74 00
No. 1 Cuts 1 in.	55 00
No. 1 Cuts 1¼ to 2 in.	60 00 64 00
No. 2 Cuts, 1 in.	40 00
No. 2 Cuts, 1¼ to 2 in.	48 00 50 00
Barn Boards, No. 1, 1 x 12	48 00 50 00
No. 1, 1 x 10	38 00 40 00
No. 1, 1 x 8	37 00 38 00
No. 2, 1 x 12	38 00 40 00
No. 2, 1 x 10	37 00
No. 2, 1 x 8	35 00
No. 3, 1 x 12	31 00 32 00
No. 3, 1 x 10	30 00 31 50
No. 3, 1 x 8	30 00 31 00
Canadian spruce boards	25 00 27 00
Spruce, 10 in. dimension	28 00 30 00
Spruce, 12 in. dimension	29 00 31 00
Spruce, 9 in.	29 00
Spruce, 8 in. and under dimen.	28 00
10 and 12 in. random lengths, 10 ft. and up	29 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	22 00 24 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00 22 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50 23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	22 00
1⅝-in. spruce laths	4 25
1½-in. spruce laths	3 80 4 00

New Brunswick Cedar Shingles

Extras	3 50 3 60
Clears	3 30
Second clears	2 30 2 40
Clear whites	2 00 2 20
Extra 1s (Clear whites in)	1 60
Extra 1s (Clear whites out)	1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.	4 00
Red Cedar Eurekas, 18-inch 5 butts to 2-in.	4 25
Red Clear Perfections, 5 butts to 2¼	4 80
Washington 16-in. 5 butts to 2-in extra red clear	3 65

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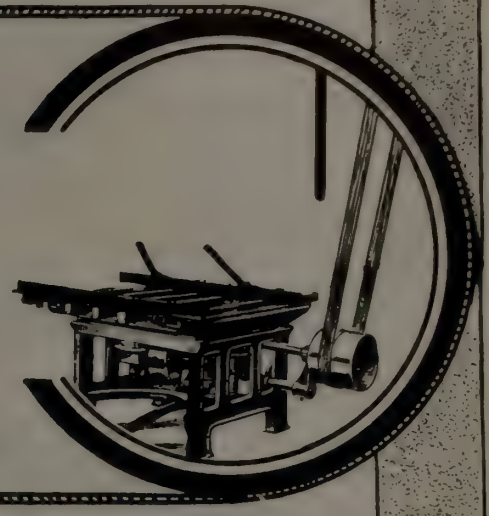

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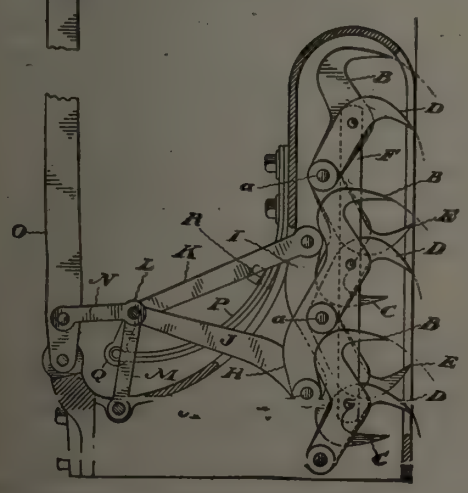

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Arkansas Soft Pine Bureau
Canadian Western Lumber Company
Chicago Lumber & Coal Co.
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Muir, Kirkpatrick & Sharpe
Southern Lumber Company
Stout Lumber Company
Terry & Gordon
Valley Lumber Company
Wilson Bros.
Wisconsin & Arkansas Lumber Co.

KNIVES
Disston & Sons, Henry
Peter Hay Knife Company
Simonds Canada Saw Company
Smith Company, R. H.
Waterous Engine Works Company

LATH BUYERS
Cannon River Lumber Company.

LATH
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Arkansas Lumber Company
Arkansas Soft Pine Bureau
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Bartram Bros.
Beck Mfg. Company, C.
Chicago Lumber & Coal Co.
Christy-Moir Company
Cotton Belt Lumber Company
Crossett Lumber Company
Eagle Lumber Company
Edgar Lumber Company
Fesserton Timber Company
Fraser Limited
Fraser-Bryson Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Graves, Bigwood & Company
Harris Tie & Timber Company
Long Lumber Company
McGibbon Lumber Company
Miller Co. Ltd., W. H.
Muir, Kirkpatrick & Sharpe
Murray & Gregory
New Ontario Colonization Company
River Ouelle Pulp & Paper Co.
Southern Lumber Company
Stout Lumber Company
Spencer, C. A.
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Union Lumber Company
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LOG SKIDDERS
Canadian Allis-Chalmers

(Continued on page 66)

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Once there was a man who had what was reputed to be an exceptionally valuable tract of timberland — no matter where — which he bought on an old-fashioned "timber cruise" plus his personal inspection.

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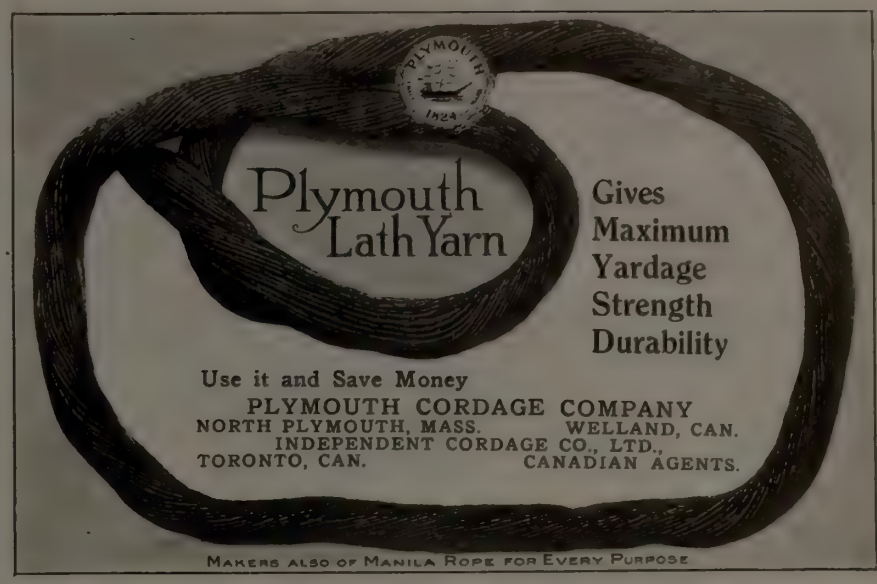

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(Continued on page 68)

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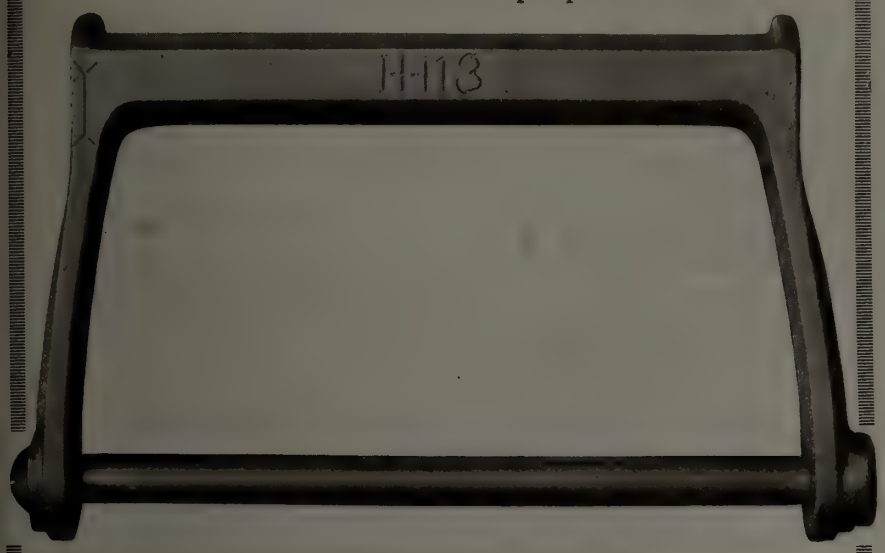
Standard for handling sawdust or refuse. Types and sizes to suit the requirements of any mill. Attachments for all purposes.



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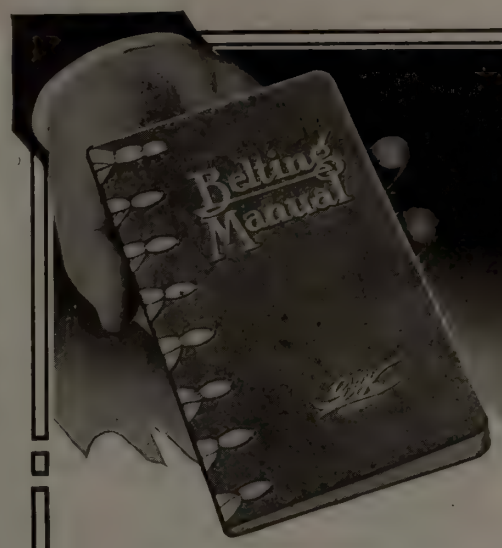

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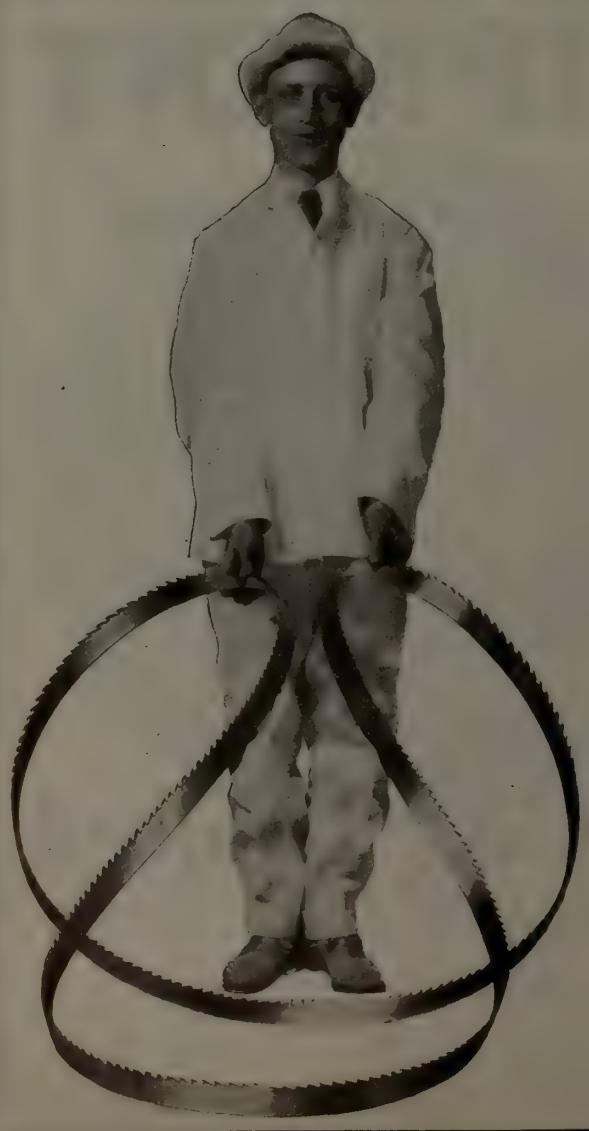

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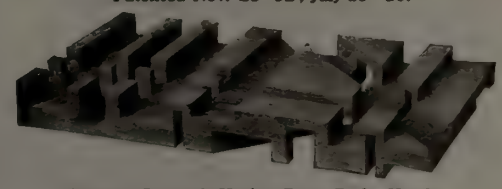

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Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

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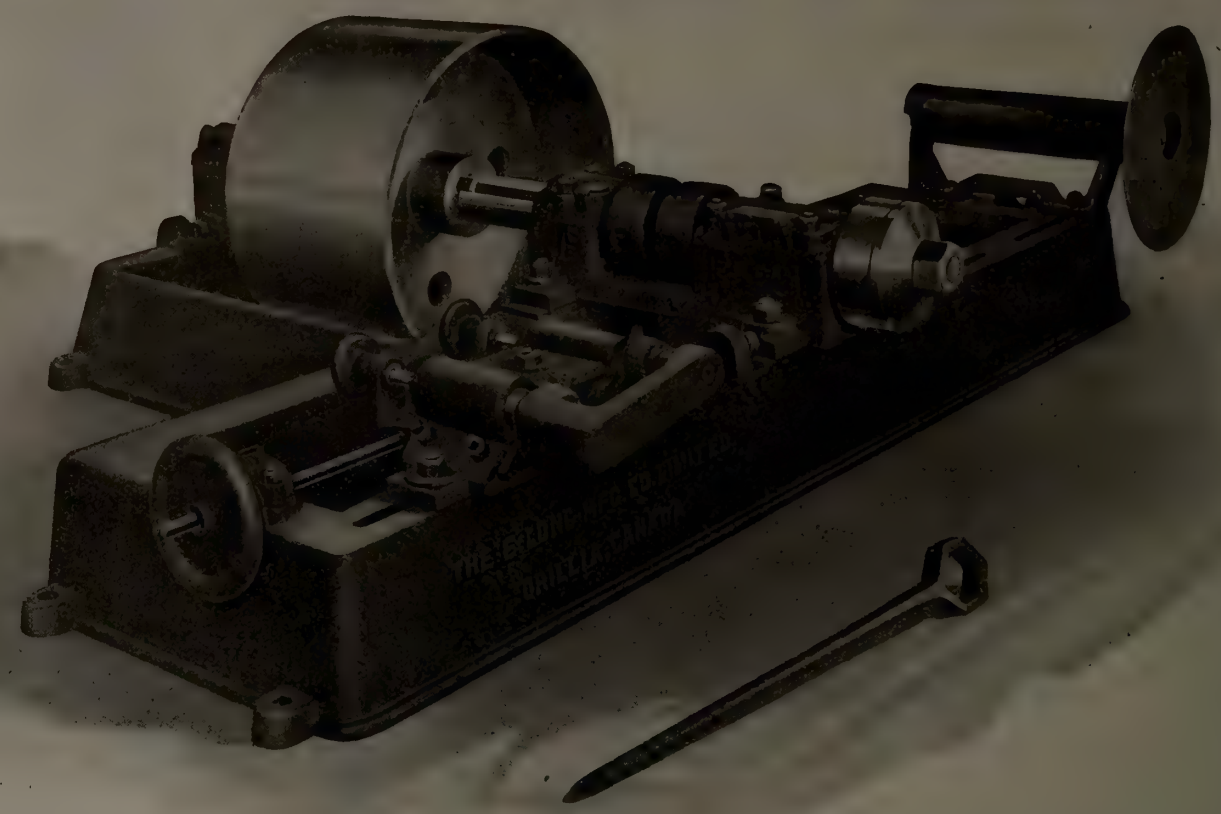

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For a simple, substantial machine that will stand up under long service and a heavy lumber production, we have no hesitation in commending the machine herein described and illustrated, as having made good under the severe tests of actual service.

Note particularly the simplicity of design, the accessibility of every part, and the full adjustment provided for.

The frame, or bed, of the machine is made in a single casting of the hollow box section, heavily ribbed and absolutely rigid. This facilitates the installation of the machine and insures a proper relation of parts being maintained. All the parts of the machine rest on planed surfaces and are bolted through the top of the bed casting. To get at these bolts, large hand holes are left on the inside of the machine; one of which can be seen above.

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Built to take a 6-inch cant and it will, easily. Opening 40-in., 48-in., and 56-in.

'NEW CHAMPION' EDGERS

Have 3 Points of Superiority—that *mean* something

1—***A Locking Device***—that crowds the saw guides into correct position automatically and locks them there.

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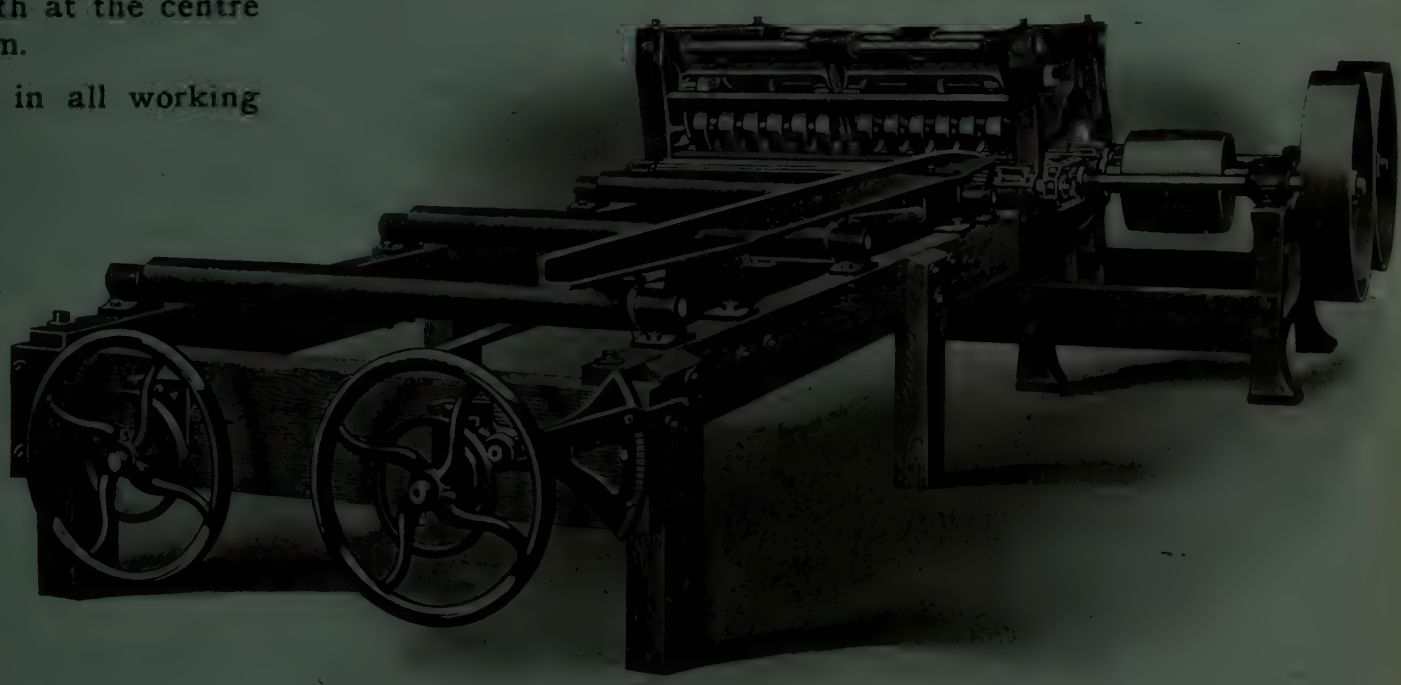
3—***Extra Strength*** in all working parts.

These three features mean—correctly edged lumber, smooth edged lumber, and lots of it.



A 6-inch cant will go through this machine as easily as a 2-inch plank, and will come out edged to a hair.

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Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

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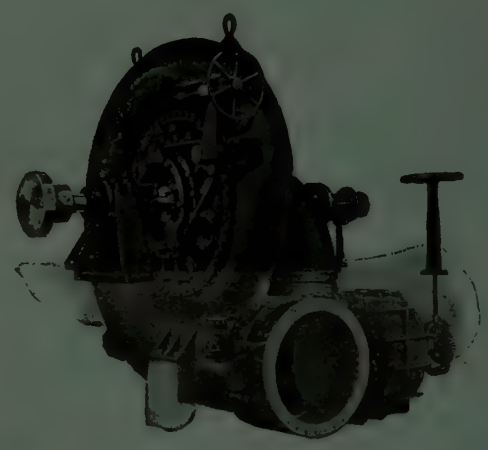

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TORONTO, CANADA

Vol. 36 Toronto, November 1, 1916 No. 21

Canada Lumberman & Wood Worker

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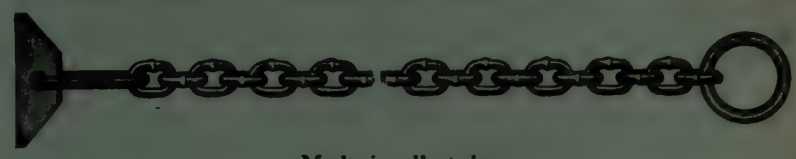

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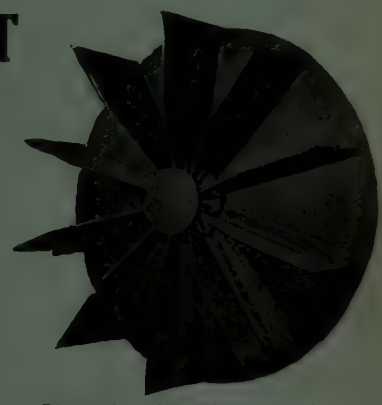

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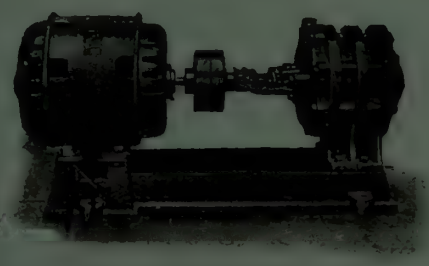
Turner Bros. Canada Limited
Montreal



We are building a complete line of

Pumping Machinery

and know that we can supply your particular requirements.

Let us show you.

The Smart-Turner Machine Co., Ltd.
HAMILTON CANADA

BUY EMPIRE GOODS WHEN EFFICIENCY IS GUARANTEED.

J. M. T. Reducing Valves

PATENTED

We offer the one successful valve that will positively reduce the steam pressure from boiler to required power and keep the lower pressure even, continuously. In constructing this latest type reducing valve we have gone over every previous good idea along this line, and our present type has proven absolutely reliable under all conditions. We sell the J. M. T. Reducing Valve under a positive guarantee. Send for illustrated folder, giving method of operation, prices, installations, etc., of this valve.

The James Morrison Brass Mfg. Co., Limited
93-97 Adelaide Street West, TORONTO

MADE IN CANADA.

Alphabetical Index of Advertisers, Page 58 Classified Directory to Advertisements, Page 64

We are the Largest Manufacturers of

HYDRAULIC PUMPS, PRESSES and ACCUMULATORS

in Canada

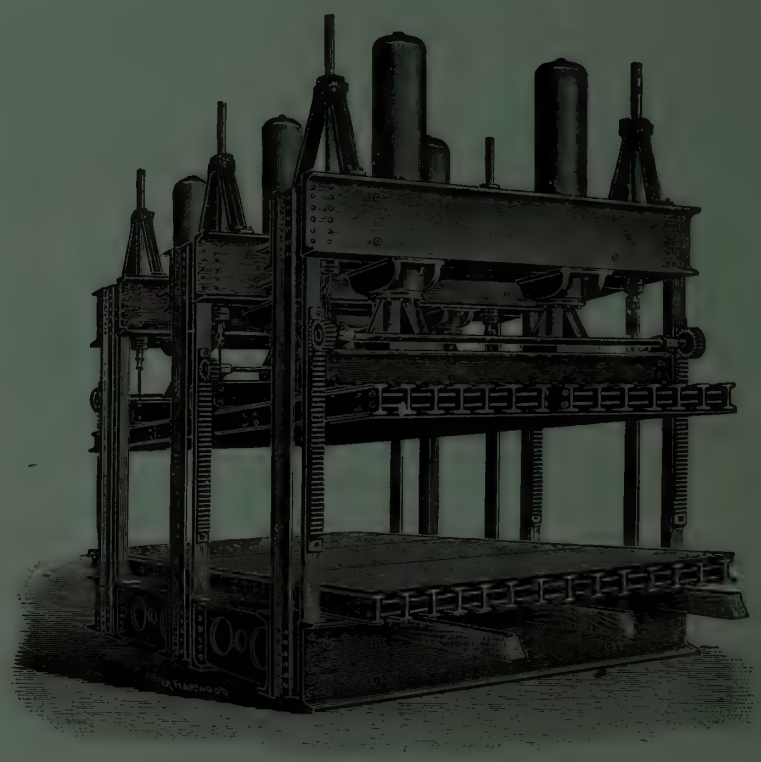
Veneer Presses - Pulp Presses - Tannery Presses

Packing House Presses - Baling Presses

Vulcanizing Presses - Forging Presses

Belting Presses and Tire Applying Presses

This cut represents one of our



Large Veneer Presses 100" x 180" 1000 tons pressure

We also make them for as low as 60 tons pressure

Full specifications and quotations on request

Canadian Boomer & Boschert Co., Ltd.

18 Tansley Street - Cable Address "PRESSCO" - MONTREAL

Bartram Brothers

Limited

Ottawa, Canada

Wholesale Lumber

SPECIAL

Merchantable Spruce

1915 Sawing

2 x 4 x 10/16	122,000 ft.
2 x 5/6 x 10 16	393,000 ft.
2 x 7 x 10/16	76,000 ft.

1916 Sawing

2 x 4 x 10/16	150,708 ft.
2 x 5 x 10/16	165,169 ft.
2 x 6 x 10/16	167,244 ft.
2 x 7 x 10/16	109,530 ft.

Hemlock

Send us your enquiries—we have dry stock and can furnish your requirements.

Birch, Ash and Maple

We have a few cars in stock and can make prompt shipment.

British Columbia Shingles

10 Cars 3X T&G. Quality Brand, in transit.
3 Cars containing 40 M 2X 6/2in. 8in Clear Butts.
Balance 3X T&G. Quality.

Douglas Fir

Flooring, Ceiling, Trim, and Mouldings

Send us your enquiries

Vancouver Branch
852 Cambie St.
F. W. Gordon, Mgr.

Terry & Gordon

Wholesale Lumber Merchants

Montreal Branch
23 La Patrie Building
Leon Gagne, Jr. Mgr.

HEAD OFFICE—704 Confederation Life Bldg., Toronto, Ont.

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

Spruce

Bone Dry, 1915 Cut

50,000	1x4&5	No. 1 Spruce
25,000	1x8	"
40,000	4x4	"
35,000	3x6	"

Hemlock *1915 Cut*

70,000	2x4—14	No. 1 Hemlock
30,000	2x6—10	"
25,000	2x6—12	"
10,000	2x6—14	"
1,013	2x9—14	"
18,000	2x10—14	"
12,000	2x10—16	"

3 Cars 3 x B.C. Shingles in Transit

Left Vancouver October 1st

The Long Lumber Company

HAMILTON, ONT.

FOR SALE: Machinery and Timber

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, Shawanaga, Burpee, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Burpee, Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 8-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Automatic Grinding Machine for 8-in. S.C. band saws.

1 Hand Machine for cut-off saws.

1 Lap Grinder.

1 Set Band Saw Rollers and levelling blocks, with necessary swedges, a number of second-hand band, gang, edger and slash table saws.

POWER PLANT

2 Double Duplex, high pressure Water Pumps.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Mitts & Merrell Hog.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 Edger for ripping dry lumber, not installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

HIGH GRADE

MUIR, KIRKPATRICK & SHARPE

HEAD OFFICE
1325-6-7-8 Traders Bank Bldg., Toronto, Ont.

WESTERN OFFICE
1007 Dominion Bldg., Vancouver, B. C.

SEND US YOUR ENQUIRIES FOR SPRUCE

We have a Complete Stock of 1 in., 2 in. and 3 in. in all grades

ALSO

A Nice Stock of Exceptionally Good Spruce Lath

Put up in both 50 and 100 p.c. bundles

A Very Complete List of

WHITE PINE - RED PINE - JACK PINE and HEMLOCK

British Columbia Red Cedar and New Brunswick White Cedar Shingles
British Columbia Fir Flooring, Ceiling Siding and Timbers
Spruce and Cedar Silo Stock

We also have about 200M feet, 2 in., 2 1/2 in., 3 in. & 4 in. Log Run Birch (Dead Culls out)
Exceptionally Choice Stock

SEND US YOUR FALL ENQUIRIES

LUMBER

Murray & Gregory, Limited

Head Office:
ST. JOHN, N. B.

Established 1868

Quebec Office:
ST. CAMILLE, Bellechase Co., P.Q.

SAW MILLS

St. John, N.B., St. Camille and Lake Frontier, Que., cutting SPRUCE and PINE Lumber for British, United States and Canadian Markets.

Also

LATH, SHINGLES, PULPWOOD and RAILWAY TIES

Manufacturing and Grading Right

Trade *Mark*

Address all enquiries to our Head Office, ST. JOHN, N. B.

Horse shoes for luck

The extra good quality of our Horseshoe Logs is not the result of luck but of good management and careful selection. Nevertheless, they have proven lucky for us and will bring good luck to you.

White and Norway Pine

We make a specialty of Boxes, Box Shooks, Wooden Pails and Tubs, Pine Lath, and Cedar Posts. In all these lines you will secure from us the product of the latest machinery and equipment and experienced workmen.

Write for prices

C. Beck Manufacturing Co., Limited

Penetanguishene, Ont.

"WE AIM TO SERVE YOU WITH THE BEST"

RUBBER GOODS FOR LUMBERMEN

Belting Our long experience in the making of Rubber Belts enables us to specialize on this line. "P.M.S.," "Special Drive" and "Lion" are our leading brands for power transmission.

Packings "Redstone" High Pressure Sheet Packing has proved by test that it will outlast any other similar packing on the market. We make Spiral and Ring Packings, etc., that are equally reliable.

Hose for Steam, Water, etc., in various grades, made especially to give satisfactory and economical service under different conditions.

Fire Hose One or more of our twenty brands of Fire Hose will be found, not only in the best equipped Factories, Mills, etc., but in almost every Fire Department in the Dominion.

Gutta Percha & Rubber, Limited

TORONTO MONTREAL WINNIPEG REGINA SASKATOON CALGARY EDMONTON VANCOUVER

Watson & Todd Limited
OTTAWA

DRY NORWAY

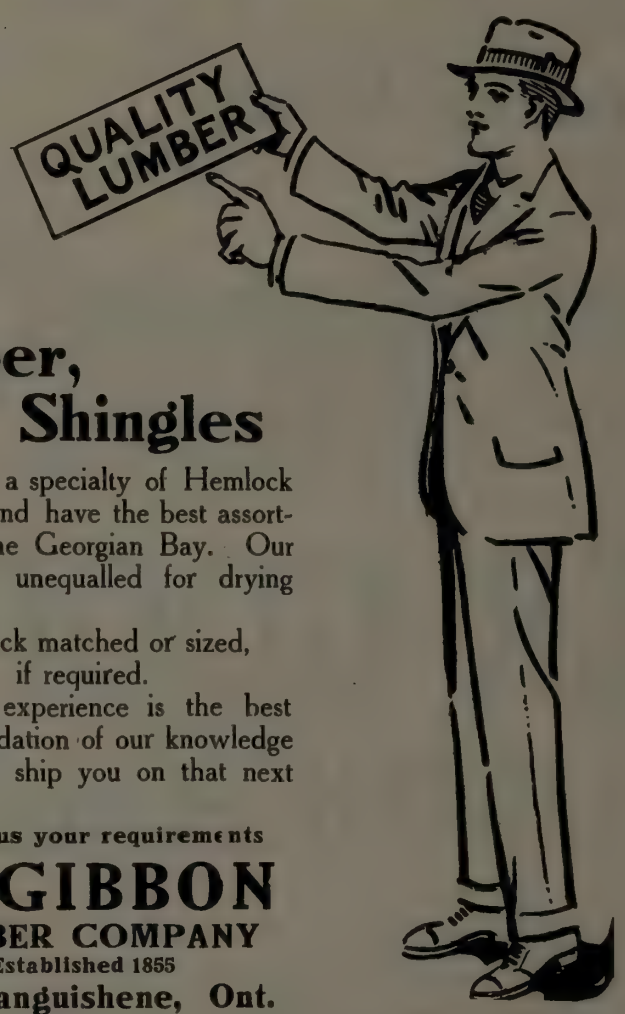
2 x 4 — 10/16 feet	2 x 8 — 10/16 feet
2 x 5 — " "	2 x 9 — " "
2 x 6 — " "	4 x 6 — " "
2 x 7 — " "	4 x 7 — " "

Send us your enquiries

The
Harris Tie & Timber Co.
Ottawa - Canada

Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

WE SELL YOU



Lumber, Lath, Shingles

We make a specialty of Hemlock Billstuff, and have the best assortment on the Georgian Bay. Our yards are unequalled for drying lumber.

All stock matched or sized, if required.

Our long experience is the best recommendation of our knowledge of what to ship you on that next order.

Phone us your requirements

McGIBBON
LUMBER COMPANY
Established 1855
Penetanguishene, Ont.

Fraser Bryson Lumber Co., Ltd.

Office, Castle Building 53 Queen St. Ottawa, Can.

Wholesale Lumber Dealers and Selling Agents for

Fraser & Co.

Mills at
DESCHENES - - - QUEBEC

White Pine
Red Pine
Spruce
Lumber and Lath

River Ouelle Pulp & Lumber Co.

Manufacturers of

SPRUCE

Lumber Lath Pulpwood

Head Office and Mills at:
St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of Quebec City

Also Mills at:
Crown Lake, Powerville Riv. Manie
On Nat. Transcontinental Ry.

JOHNSON'S
Veterinary Remedies

are the surest, the most economical and the best medicines with which to equip your stables. They have been on the market for twenty-five years and still retain their superiority over all others.

Johnson's Horse Liniment No. 1	Per Gal.	$5.50
Johnson's Horse Liniment No. 1	Quarts, Per Doz.	16.00
Johnson's Horse Liniment No. 1	Pints, Per Doz.	9.00
Johnson's Horse Colic Remedy	Per Gal.	6.00
Johnson's Horse Colic Remedy .. Quarts (8 Doses each)	Doz.	17.00
Johnson's Horse Colic Remedy Pints (4 Doses each)	Doz.	9.00
Johnson's Veterinary Healing Ointment (Gall Cure)		
....2 lb Tins ... ... each 2.25	Doz.	24.00
¼ lb. Tins	Per Doz.	3.50
Johnson's Concentrated Condition Powders, 1 lb. Pkgs.	Doz.	4.00
Johnson's Horse Worm Powders, 1 lb. Pkgs.	Per Doz.	2.50
Johnson's Purging Balls	Per Doz.	2.50
Johnson's Antisepting Dusting Powder (For Drying and Healing Sores)	Per Doz.	8.00

Our Family Van Remedies are as follows:—

Pine and Tar Cough Syrup	Big 4 Liniment
Purgative Pills	X Ray Liniment
Little Liver Pills	Cholerine Mixture (Diarrhoea)
Porous Plasters	Headache Powders
Stomach Bitters	Sarsaparilla
Laxative Cold Tablets	All Healing White Ointment

All Drugs and Patent Medicines at Market Prices.

Mail orders solicited — Prompt shipments made.

A. H. JOHNSON WHOLESALE DRUGGIST

Collingwood, Ontario

COMPLETE STOCKS

The fact that our stocks are complete and well assorted assures you of **Satisfactory Service, Good Grades** and **Right Prices.** We want your inquiries and orders when in the market for

Railway Ties and Pulpwood
Rough and Dressed Lumber and Lath

We specialize on cutting to order all sizes of

Dimension Timber

Also in Dressing in car or mixed lots 1", 2" and 3" to customers' specifications.

Complete stocks always ready for prompt shipment.

We are the Largest Producers of Railway Ties in the Dominion

Austin & Nicholson
Chapleau, Ontario

Chicago Lumber & Coal Co.
Manufacturers

General Offices: EAST ST. LOUIS, ILLS.

In dealing with us you secure the following ***advantages:***

The finest long and short leaf Yellow Pine.
Genuine Louisiana red gulf Cypress and Arkansas White Oak.

Up-to-date mills and unsurpassed ***SERVICE.***

We are ***prepared*** to fill orders—try us.

California White Pine
California Sugar Pine
and Arizona Soft Pine

Best Stock for Factory and Pattern Lumber

Ask LOUIS WUICHET

Room 716 Railway Exchange, CHICAGO, ILLINOIS

We offer for Immediate Shipment

BASSWOOD

1" and 1½" Dry Basswood

DRY BIRCH STOCK

We offer in Birch End Stock—1 x 8½" 1 x 9" and wider
1 x 6 and 7" 1½" to 4"

Spruce, Basswood, Ash, Hemlock and Pine

HART & McDONAGH, 513 Continental Life Bldg., **TORONTO**
Phone Main 2262

QUALITY HARDWOOD

Birch
Beech
Maple

If you are interested in Hardwoods, you will be interested in us.

We are manufacturing high quality Hardwood Lumber, sawing and grading according to National Hardwood Association Rules.

The Logs are cut from our own soil-right Lands, and particular attention given to quality.

Our Mills are located on Canada Eastern Branch and Transcontinental Branch of the Canadian Government Railway, and in the heart of the best forests in New Brunswick.

Our Head Office in St. John will answer all enquiries.

Edward Partington Pulp & Paper Co.

ST. JOHN **Limited** **N. B.**

Ten Band Mills to Serve You

Mills and Railway Connections

Fredericton, N.B.	Railway connection		C. P. R.
Plaster Rock, N.B.	"	"	C. P. R.
Nelson, N.B.	"	"	I. C. R.
Edmundston, N.B.	"	"	C. P. R. or Temiscouata Ry.
Baker Brook, N.B.	"	"	Temiscouata Ry. and N.T.R.
Glendyne, Que.	"	"	N. T. R.
Escourt, Que.	"	"	N. T. R.
Cabano, Que.	"	"	Temiscouata Ry.
Whitworth, Que. (No. 1, No. 2)	"	"	Temiscouata Ry.

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ROUGH AND DRESSED SPRUCE, WHITE CEDAR SHINGLES, SPRUCE LATH, PIANO SOUNDING BOARD STOCK.

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Wholesale Lumber

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Grant & Campbell

Manufacturers of
SPRUCE, HEMLOCK TIMBERS AND PILING AND LATH

Prices promptly given on all enquiries.

New Glasgow, N. S.

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WHOLESALE LUMBER

B.C. FOREST PRODUCTS

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PRESSES

Hydraulic and Screw for
VENEER
VENEER DRYERS
PULP
Special machinery made to order

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Being next door to the Patent Office, we have personal interviews with Examiners, thus earlier allowance of your Patents. We have access to all Records and solicit the business of Manufacturers, Engineers, and others who realize the advisability of having their Patent business transacted by Experts. Send for our Booklet, etc.

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LATH TWINE

Tie your lath with Laidlaw wire. It saves you money. It means satisfaction to the dealer and contractor.
Write for Quotations.

LAIDLAW BALE-TIE CO., Ltd.
HAMILTON, ONT.

CANADIAN OFFICE & SCHOOL FURNITURE CO. LIMITED
PRESTON ONT.
FINE BANK, OFFICE, COURT HOUSE & DRUG STORE FITTINGS.
OFFICE, SCHOOL, CHURCH & LODGE FURNITURE
SEND FOR CATALOGUE

Lumber

Good Grades **Right Prices** **Prompt Shipments**

Canadian Hardwood. National Grading Rules

Birch
Basswood
Maple
Elm
Beech
All Thicknesses

Also full line in

White, Red
and
Jack Pine
All grades and sizes.

Get in touch with us for prices

C. G. Anderson Lumber Company, Limited

Manufacturers and Strictly Wholesale Dealers in Lumber

705 Excelsior Life Building
Toronto

WE Buy, Sell and deal in all kinds of Lumber and Timber in Canada and United States: Spruce, White Pine, White and Basswood, Ash, Cedar, Douglas Fir, Beech, Birch, Walnut, Cherry, Chestnut, Cottonwood, Hemlock, Maple, Norway Pine, Short and Long Leaf Yellow Pine, Oak, Redwood, Birch, Maple and Oak Floorings, Pulpwood Ties, and Cedar Poles.

AUGER & SON
QUEBEC

HAEBERLE LUMBER CO.
LUMBER AND TIMBER
White Pine, Norway, Yellow Pine, Hemlock
Oak Mouldings, Doors, Sashes and Blinds, Cedar Poles and Ties,
Yellow Pine Timber a Specialty,
Interior Trim Mill Work
NIAGARA FALLS, N.Y.

WHOLESALE DEALERS

Eastern and Southern Lumber

We are at all times in the market for dry
WHITE PINE, DIMENSION SPRUCE, SPRUCE BOARDS, HEMLOCK BOARDS, LATH and CLAPBOARDS.

Advise us of your Market Prices and Stocks

A. H. Richardson Lumber Co.
176 Federal Street, BOSTON, MASS

SPRUCE BIRCH HEMLOCK

Merchantable 100,000′ 1″ Spruce
" 100,000′ 2 x 4 Spruce
" 300,000′ 2 x 5 and up to 8″ Spruce
100,000′ 1″ Birch
300,000′ 3″ Birch
100,000′ 1″ Hemlock

Prompt shipments

J. A. LAFERTÉ
Room 38-9
55 St. Francois Xavier Street
MONTREAL

Tea that is all genuine leaf and produces the greatest quantity of flavoury satisfying infusion

"SALADA"

Send for samples and prices.
SALADA TEA CO. TORONTO

SPECIALTIES

Sawed Hemlock
Red Cedar Shingles
White Pine Lath
Bass and Poplar Siding

James Gillespie

Pine and Hardwood

Lumber

Lath and Shingles

North Tonawanda, N.Y.

Timber Estimates

Our reports are the result of the honest work of experienced men. We deal in facts.

JAMES W. SEWALL
OLD TOWN, - MAINE

Lt.-Col. L. J. D. Marquis
FOREST ENGINEER
Timber Estimates and Valuations.
Topographical and Logging Maps.
Forest Management and Operations.
TRANSACTIONS ON TIMBER LANDS
111 Mountain Hill, QUEBEC

A. D. McINNIS
Is prepared to make reports, and estimates on all classes and kinds of Timber, together with Maps, and cost of operating, also sell or buy for you.
25 years practical experience in woods operations and cruising.
CACHE BAY, ONTARIO

PHILIP T. COOLIDGE
FORESTER
Technical training and ten years' experience. Timber Estimating and Mapping. Supervision of Lumbering Contracts. Surveying. Forest Planting.
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Timber Brokers
Cable Address, "Tectona," Glasgow
A1 and A B C Codes used

FARNWORTH & JARDINE
Cable Address: Farnworth, Liverpool
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2 Dale Street, Liverpool, and Seaforth Road, Seaforth, Liverpool, England

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Hardwood Lumber
Handles
Staves Hoops
Headings
James WEBSTER & Bro.
Limited
Bootle, Liverpool, England
London Office
Dashwood House 9 New Broad St. E. C.

"Well Bought is Half Sold"

Please Examine These Two Bunches of Lath

AT SPANISH:

5 Cars 3/8 x 1½ in., 4 ft. No. 1 White Pine Lath.
7 Cars 3/8 x 1½ in., 4 ft. No. 2 White Pine Lath.
6 Cars 3/8 x 1½ in., 4 ft. No. 3 White Pine Lath.
3 Cars 3/8 x 1½ in., 32 in. White Pine Lath.
100 M. 3/8 x 1½ in., 4 ft. No. 1 Nor. and Spruce Lath.
38 M. 3/8 x 1½ in., 4 ft. No. 2 Nor. and Spruce Lath.

AT MILNET:

3 Cars 3/8 x 1½ in., 4 ft. No. 1 White Pine Lath.
2 Cars 3/8 x 1½ in., 4 ft. No. 2 White Pine Lath.
4 Cars. 3/8 x 1½ in., 4 ft., No. 3 White Pine Lath.
Well made, carefully graded, and dry

ALSO THESE LUMBER SPECIALS

3 Cars 3 in. Winter-cut Hard Maple, heavy to 1st and 2nd.
2 Cars 6/4 in. No. 1 Com. and Bet. Hard Maple.
2 Cars 6/4 in. No. 2 Com. and Bet. Basswood.
1 Car 5/4 in. No. 2 Com. and Bet. Basswood.
2 Cars 4 x 6 in. Birch Hearts.
1 Car 3 x 6 and up Birch Hearts.
2 Cars 4 x 4 in. Sound Cedar.
1 Car 4 x 6 in. Sound Cedar.
¼ Car each 4 x 4, 4 x 6, 5 x 5, and 6 x 6 Sound Cedar.

In wood we have:—
4 ft. Dry Hardwood.
4 ft. Dry Hemlock Slabs.

YOUR ENQUIRIES WILL HAVE PROMPT ATTENTION

Graves, Bigwood & Co.

MANUFACTURERS OF

Pine
Hemlock
Hardwood
LUMBER

1026-32 Traders Bank Bldg., Toronto, Ont.
Mills: Byng Inlet, Ont.

PETRIE'S
MONTHLY LIST
of
NEW and USED
WOOD TOOLS
for Immediate Delivery

Mortisers
No. 5 New Britain, chain.
M 190 Cowan hollow chisel.
Galt upright, compound table.
Fay upright, graduated stroke.
Smart foot-power.

Sanders
24" Fay double drum.
12" C.M.C. disk and drum.
18" Crescent disk.
8" belt sanders (wood frames).

Moulders
13" Clark-Demill four-side.
12" Cowan four side.
10" Houston four side.
6" Cowan four side.
6" Dundas sash sticker.

Wood Planers
36" American double surfacer.
30" Whitney pattern single surfacer
26" revolving bed, double surfacers.
24" Major Harper planer and matcher
24" revolving bed, single surfacers.
24" single surfacers, various makes.
20" Dundas pony planer.
18" Little Giant planer and matcher.

Saw Tables
Preston variable power feed.
Ballantine variable power feed.
M138 Cowan power feed.
No. 5 Crescent sliding-top.
No. 3 Crescent universal.
No. 2 Crescent combination.
Ideal variety.
12' Defiance automatic double cut-off.
Champion combination, wood top.
MacGregor Gourlay power feed cut-off.
6 ft. Crescent iron frame swing.
6½' Williams heavy wood frame swing.

Band Saws
42" Fay & Egan power feed.
38" Atlantic, tilting frame.
36" Crescent pedestal.
32" Crescent pedestal.
26" Crescent pedestal.
20" Crescent pedestal.

Clothespin Machinery
Humphrey No. 8 giant slab re-saw.
Humphrey gang slitter.
Humphrey cylinder cutting-off machine.
Humphrey automatic lathes (6).
Humphrey double slotters (4).

Miscellaneous
MacGregor-Gourlay 12-spindle dovetailer.
Fay & Egan 12-spindle dovetailer.
Improved Tyrrell dovetailer.
Oelschlager handle and rod machine.
M80 Cowan dowel machine
Bench dowel machines, hand feed.
M85G Cowan post boring machine
M23 Cowan post boring machine
MacGregor Gourlay 2-spindle shaper.
Elliott single spindle shaper.
No. 51 Crescent universal woodworker.
Rogers vertical resaw.
New Britain drawer lock machine.
M137 Cowan sash clamp.
Galt blind-slat resaw.
Galt blind-stile borer and mortiser.
Egan sash and door tenoner.
16" Ideal wood lathes (3).
No. 6 Lion universal wood trimmer.
6-Nail box nailer, Meyers patent.
20" American wood scraper.
4-head rounding machines.
24" wood frame equalizer.
M63 Cowan spindle carver.
16 Cowan veneer press screws.
Iron frame, 3-block sawmill.
Dunbar automatic shingle machine.
48" 3-saw edger.
No. 1 Hart saw filer.
Allis-Chalmers-Bullock log loader.

Prices, Descriptions and full particulars on request.

H. W. PETRIE, LTD.
Front St. West
TORONTO, ONT.

Mason, Gordon & Co. 80 St. Francois Xavier Street, **Montreal, Que.**

Everything in Timber and Lumber

Car and Cargo lots only

Douglas Fir, Pine, Hemlock, Spruce, Yellow Pine and Oak

Western Fir Doors

Sales Agents for Eastern Canada for Wheeler Osgood Co., Tacoma, Wash.—Doors, Turned Stock &c.

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Hugh A. Rose, Representative

Vancouver Office: 411 Pacific Building
H. C. Gordon, Representative

I HAVE IT

All Grades in White Pine

Lath A Specialty

Milling in Connection

E. J. MOORES, Jr.

MIDLAND CANADA

LET'S GET TOGETHER

JOHN DONOGH & CO.

Wholesale Dealers

White Pine - Jack Pine

Spruce - Hemlock

1914 Cut

1205 TRADERS BANK BUILDING, TORONTO

Let me quote you,
On your requirements for—

Pine Spruce Hemlock

and

Hardwoods

Also Lath and Shingles

Orders filled carefully and promptly shipped

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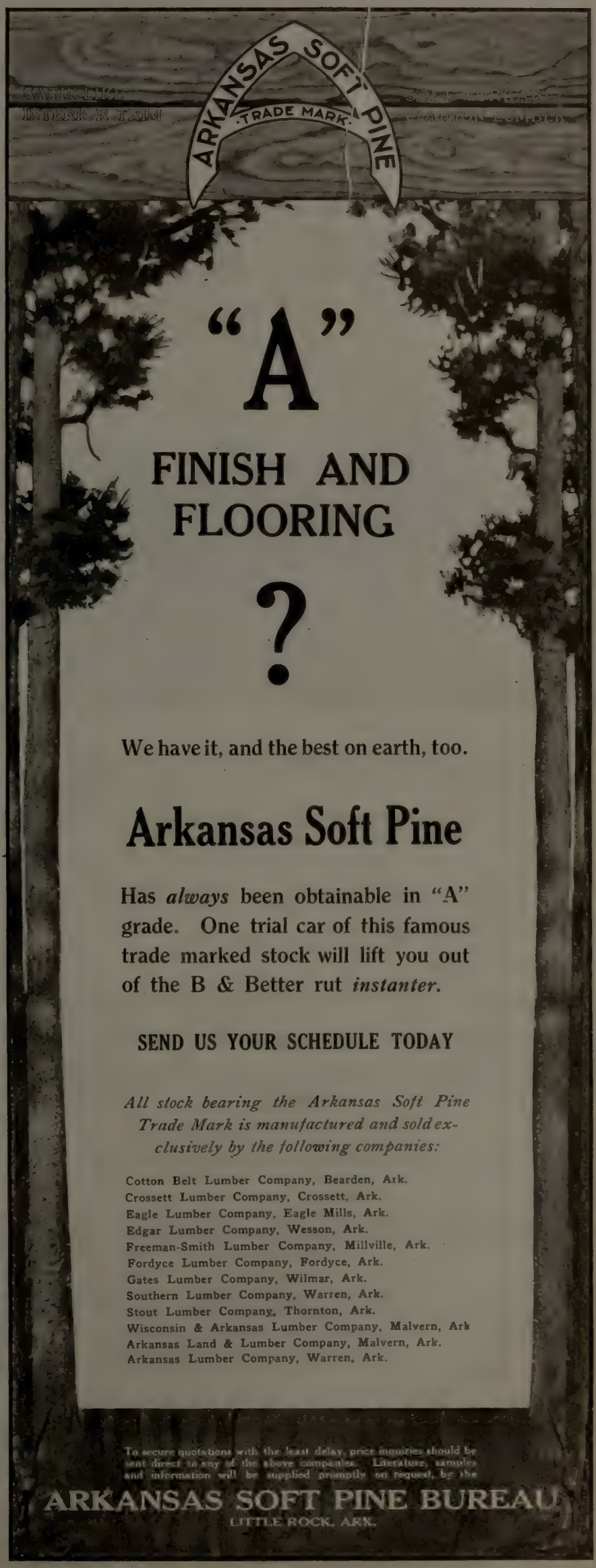
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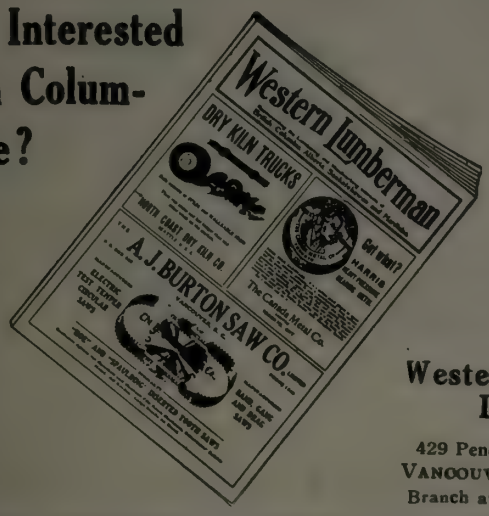

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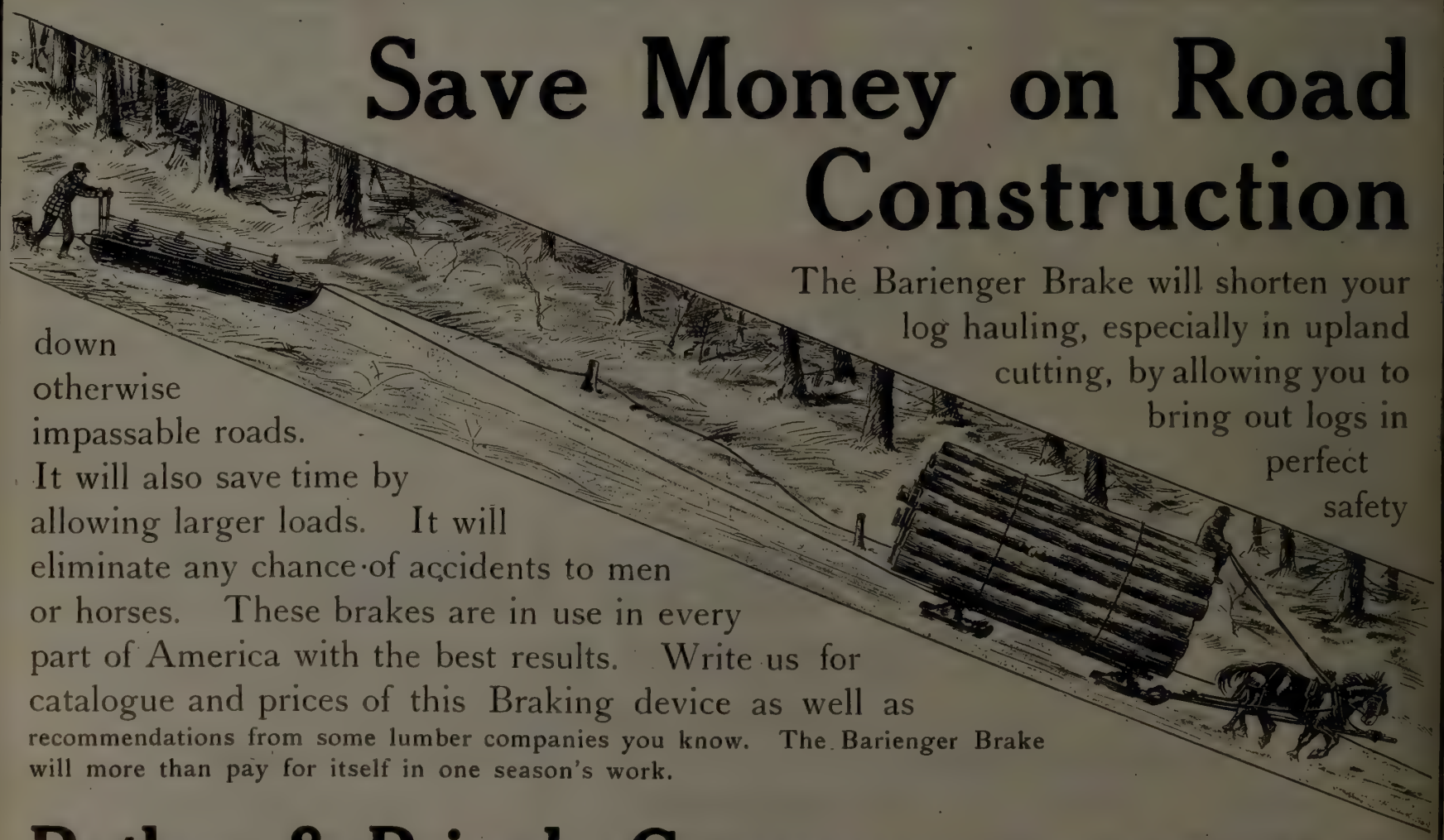

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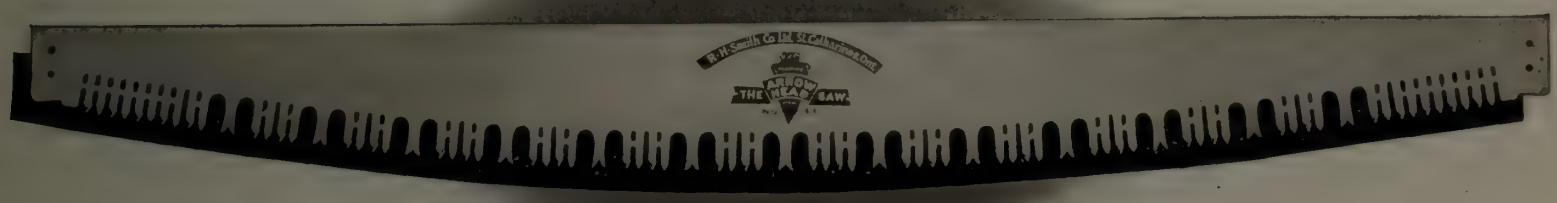

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Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

Authorized by the Postmaster General for Canada, for transmission as second class matter.

Entered as second class matter July 18th, 1914, at the Postoffice at Buffalo, N. Y., under the Act of Congress of March 3, 1879.

Vol. 36 Toronto, November 1, 1916 No. 21

Fostering the Timber Trade—Science and Tariffs

An address upon "The Empire's Timber Trade" was delivered recently before the Timber Trade Federation of the United Kingdom, by Professor Groom, M.A.D.Sc., in the course of which several references were made to subjects of interest to lumbermen in Canada. After a reference to the importance of co-operation between technical science and industry, the speaker said it was now widely accepted:—

(1) That our industries shall be fostered or protected by some means of tariff or duty.

(2) That the British Empire shall utilize its resources to the maximum possible, which may involve a tariff policy known as Colonial Preference, for trade within the Empire.

(3) That whether or not tariffs are introduced there must be the closest co-operation between scientific and practical work.

There was the question as to whether timber grown within the Empire should receive a preference. No doubt most of the countries within the Empire would agree upon some form of preference. At the present time the nation was generally in favor of utilizing the resources of the Empire. The trade should set about preparing its case at once so as to be ready with a propaganda after the war. The trade had already experienced how the government tackle timber affairs, and would know whether they wanted that to continue in the future. If the trade decided to take action the time had arrived to set about carrying it into effect, and a strong committee should be appointed to deal with the matter.

The question then arose as to how technical science could assist industry and contribute to the fullest utilization of the timber resources of the Empire. A piece of wood in the forest was worth 3s. per cubic foot. When turned into mechanical pulp, it was worth 7s 6d. Turned into chemical pulp, it was worth 15s. Turner into paper, its value was 35s, or in wood pulp yarn 45s, but when turned into artificial silk it was worth £7 10s. That would afford them some idea of the value of technical science. In 1913 we imported coniferous wood sawn into logs amounting to £23,000,000, pitwood £4,500,000, woodpulp £5,500,000, oak logs £1,750,000, manufactured wood of various kinds £4,500,000, hardwood £4,000,000, making a total of £43,000,000. Of that £43,000,000 the country lost most of the wastage in cutting the wood. Researches had shown that the waste material could be utilized to great advantage. Another large portion of the timber was lost by decay, such as in pit-props for coal mines, and timber used for building. Increased preservation of timber would save a large amount of money. The British Empire lost a considerable amount of money every year through importing timber not grown within the Empire.

The British Empire included a wider range of woods than was possessed by any other empire in the world, and research was urgently needed into the qualities of the lesser-known woods grown within the Empire. Some were very light in weight, and others were very heavy. Some might be regarded as useless for timber, through being unobtainable in sufficient quantity. At the present time Great Britain imported huge quantities of coniferous timber, some of which might be grown at home, although it would take forty years to do anything in that respect by means of afforestation, but the fact remained that a large amount of money could be saved by simple research into the preservation of timber, in order to prevent premature decay, either in coal mines or in buildings. In 1913 they imported woodpulp to the extent of 5,500,000 pounds, most of which should have been manufactured at home.

Douglas fir when fumed with ammonia assumed a most artistic brown color, and in fact it was a good method of treating this wood. Until now the wood-dyeing industry had almost exclusively been carried on abroad, so that when a man wanted certain kinds of false ebony he bought them in France or Germany, whereas they could produce it from applewood of about 3s per foot, but when it had been converted into false ebony abroad it usually realized about 25s per foot. The making of false ebony was an extremely cheap and simple process.

A comprehensive scheme required the services not merely of the timber technologist, and the practical timber merchant, but also of engineers, chemists, and the practical workmen connected with the industry. The work required not only the laboratory, but also the results from the workshops. The government had recently published a White Paper in regard to their views of scientific research as affecting the industries of the country. He thought an Imperial Bureau should be established in London, having not merely a timber department, but a well-staffed, well-equipped chemical, physical, engineering, and fuel departments, as well as workshops. The bureau would be in the closest touch with the various countries of the British Empire, and every facility for obtaining technical advice and practical advice. Probably various works would co-operate by allowing their plant to be used for carrying out practical tests, and by co-operation a well-thought-out scheme would not only be of national benefit, but of Imperial benefit.

Finance Minister Takes a Hand in Price of Paper Controversy

At a recent conference between Sir Thomas White, Minister of Finance, representatives of the Canadian pulp and paper industries and the Canadian publishers, a discussion took place regarding the price of paper which has been advancing rapidly with the prospect of still further advances. Sub-committees of the pulp manufacturers and the publishers were appointed and these met at the call of R. W. Breadner, the Dominion tariff expert, to endeavor to reach some basis of contract price for the coming year. At the conference the news print men quoted figures for renewed contracts at from 50 to 60 per cent. higher than those now obtaining. It was admitted that the figures were not based on the present cost of production, but the anticipated cost, and the conditions under which the pulp industries expected to operate. Sir Thomas White asked the publishers what they had to say regarding the matter. Their reply was to the effect that their worst fears had been realized, which showed that the home price was not below the obtainable foreign market price. The Minister of

Finance suggested that representatives of the two industries should get together and hold a conference. He intimated that if the conferences were not successful the government would be forced to take the matter up and deal with it. Sir Thomas pointed out that the newspaper industry was at all times a semi-national institution and that in times such as the present it was more than ever essential to the country as a whole.

As the Canadian publishers see the situation it resolves itself into a matter of giving them, as Canadians, the right to keep prices at a reasonable level, allowing for a fair profit above the cost of production, instead of permitting paper to be exported so extensively to the United States as to enhance the price in Canada to levels which they consider unjustifiable. During the fiscal year ending March 31st, 1916, Canada increased her exports of paper by about $5,000,000. During the twelve months ending June, 1916, Canada's exports of paper were valued at $21,250,296, of which $17,759,018 went to the United States and the balance to Great Britain. During the previous year the exports were valued at $16,200,635. Exports of news print paper from Canada to the United States during July, 1916, were valued at $1,534,795, where as in July, 1915, the value was $1,218,321. In addition to paper Canada exported to the United States pulp wood valued at $6,102,170 and wood pulp to the value of $10,793,647.

That these exports constitute an important source of supply of raw material for United States publishers is unquestionable and is clearly shown by a reference to the subject in an editorial in "The Paper Mill," of New York, which says:—

"The Canadian newspaper publishers have exerted their influence on the Canadian Minister of Finance to compel the Canadian paper makers not only to amply supply them with paper, but also to do so at a fixed price, and the Minister of Finance has instructed the paper mills to that end. Canadian paper mills must first supply the home requirements. This means that American newspaper publishers who have succeeded in securing Canadian paper now face the prospect of having that source of supply cut off. This is but one of the difficulties that are in prospect. English publishers have been casting ravenous glances at Canadian paper going into the United States and are planning to secure that paper for their own needs. Arrangements whereby the entire Canadian output would be turned over to the exclusive use of Canadian and English publishers at a price set by the British and Dominion governments are within the realms of possibility.

"With American newspaper publishers depending on Canada for more than 1,000 tons of paper a day, the loss of this avenue of supply would be a severe blow. The American mills are unable to supply more than 60 per cent. of the country's need, and while the clamor for print paper now is insistent and loud, one can imagine what will be the case should Canadian mills be compelled to abandon selling paper to this country."

A further conference has been held since the above was written and the paper manufacturers have held out for for the minimum price of three cents a pound which they quoted formerly. The publishers conceded that some increase might be necessary but that a minimum of 3 cents a pound would be prohibitary. No agreement could be reached, and the request of the publishers for a government investigation into the matter stands.

Optimism on the Loose But Well Meant

The Peterboro Review, Peterboro, Ont., in a recent issue contained the following interesting editorial:

"A Boom in Lumbering:—Labor agents of the big lumbering companies of Ontario are offering men $45 a month to work in the woods, with the prospect that the pay will be increased to fifty or sixty dollars before the end of the season. One company in Parry Sound district intend to operate six camps during the winter. This would call for nearly seven hundred men to fill all the camps. So far the company have not been able to secure the services of more than twenty, although they have agents out in every part of the province.

"The condition of the lumber trade is always at this time of year an excellent barometer of the business situation. If that industry is depressed, the same is likely to be the case in every other line. Only one year ago the operations were limited and wages did not exceed $22 a month, as men for that work were plentiful.

The present boom in the lumber business is cheering, indicating as it does a revival in the building trade, practically dead since the beginning of the war, next summer. Normal industrial conditions are likely to be restored, a satisfactory assurance, in view of the fact that even if the war is continued, labor will be employed less and less in the manufacture of munitions.

The scarcity of labor and the consequent abnormally high rate of wages means that the price of lumber when the mills start on the cut for 1917 next spring is likely to be higher than ever."

While we would like to look at things through the same rosy glasses as the "Review," we are not quite sure enough of the situation to do so. We rather imagine that the "Review" is confusing cause and effect to some extent. The high wages paid to the men in the bush is the result of their scarcity, not of an exceptional demand for their services. In fact the extent of operations in the Northern Ontario woods during the coming winter will be reduced by from 25 to 60 per cent., according to reports we have received from many quarters; so it is "going some" to speak of "a boom in lumbering," and to argue from it that the building trade is on the eve of a revival, and industrial conditions about to become normal. The "Review" has allowed the wish to father the thought. All of us would be glad to agree with its conclusions if we could, but the best that a lumberman in Ontario can do at present is to agree that, even with a dull market next year, prices of lumber must advance, because of the increased cost of labor, of food, and of everything else contributing to the cost of manufacturing logs and lumber.

Canadian Crops for 1916

The Canadian Census and Statistics Office has published the second or provisional annual estimate of the yield of the principal grain crops of Canada in 1916. The reports indicate that the areas estimated to be unproductive of grain are, if anything, larger than those already deducted; but, pending further enquiries, no change has been made in the harvested areas as reported last month. The results now provisionally estimated are a total yield of wheat of 159,123,000 bushels from a harvested area of 10,085,300 acres, a yield per acre of 15.78 bushels, as compared with 29 bushels last year and 15.67 bushels in 1914. The total yield of oats is now placed at 338,469,000 bushels from 9,795,000 acres, a yield per acre of 34.55 bushels, as against 45.76 bushels last year and 31.12 bushels in 1914. The yield of barley is 32,299,000 bushels from 1,328,800 acres, or 24.31 bushels per acre, and of rye 2,058,500 bushels from 101,420 acres, or 20.30 bushels per acre. For the three prairie provinces the estimated yield of wheat is 138,542,000 bushels, of oats 232,409,000 bushels, of rye 659,000 bushels, of barley 22,862,000 bushels, and of flaxseed 7,707,000 bushels. The yields of remaining crops are reported for the first time this year as follows: Peas, 2,166,000 bushels from 150,280 acres; beans, 541,400 bushels from 32,500 acres; buckwheat, 6,720,000 bushels from 341,500 acres; flaxseed, 7,759,500 bushels from 710,000 acres; mixed grains, 10,333,000 bushels from 397,770 acres, and corn for husking 6,271,000 bushels from 173,000 acres. For peas, beans, buckwheat, mixed grains, and corn for husking these acreages represent the areas actually harvested after deduction from the areas sown in Ontario and Quebec of proportions estimated to have been entirely unproductive through drought.

Correspondents were asked to report on the quality of the grain crops at the time of harvest, as measured against a standard of 100, representing grain well headed, well filled, well saved, and unaffected to any appreciable extent by frost, rust, smut, etc. The average results

for the whole of Canada are as follows: Fall wheat, 78; spring wheat, 68; all wheat, 70; oats, 75; barley, 72; rye, 84; peas, 66; beans, 74; buckwheat, 71; mixed grains, 74; flax, 76, and corn for husking, 67. In Manitoba the quality of spring wheat is 44 per cent.; in Saskatchewan it is 60, and in Alberta it is 73. The estimates of quality are high in the Maritime Provinces and in British Columbia, the average for Canada being reduced by rust in Manitoba and Saskatchewan and by drought in Quebec and Ontario.

The condition of root fodder and crops is about the same as a month ago, the average points in percentage of a standard or full crop ranging for all Canada from 71 for potatoes and sugar beets to 77 for fodder corn.

Wooden Freight Car Regaining Favor

The rapid substitution of steel freight cars in the place of wooden cars, which was taking place up to a few years ago has apparently been checked by the great demand for steel for other uses and the consequent difficulty in getting delivery. A return to the wooden freight car is being reported by many of the large railroads, and, now that they have had a good trial of the steel car the wooden car is likely to get a better reception than formerly.

Railroad companies, after several years use of steel cars have commenced to wonder whether there is any profit in pulling a 60,000 pound car around the country when a 30,000 pound car will serve equally well. Investigation based upon actual operation has proved that wooden freight cars, with properly distributed metal parts, would save the railroads millions of dollars annually in coal consumption, wear on wheels and other parts of the under portion, and in avoiding the hauling of unnecessary weight. This statement is made on the authority of Ralph Budd, assistant to the president of the Great Northern Railroad. Mr. Budd adds that a few years ago, practically all freight cars of every type were almost entirely built of wood, but with the advent of the steel car, the demand for wood for certain types of cars received a severe setback. However, during the last six or eight months there has been an increasing demand for lumber for freight cars, possibly as a result of the shortage of steel or the difficulty of obtaining it for several months after orders. It is now generally believed that the wooden car had again come back into favor. On this subject Mr. Budd says: "From an operating standpoint a locomotive will handle 100 cars weighing 30,000 pounds empty as easily as it will fifty cars each weighing 60,000 pounds empty. There is no reason why cars should be built to weigh 100,000 pounds for goods of which you could not possibly load more than 20,000 pounds. Cars should not weigh more than the load they carry. General merchandise averages only five to eight tons per car, and to build cars of 80,000 pounds capacity to carry five to eight tons seems absurd."

It will mean much to the lumber business if Mr. Budd's ideas prove to be correct.

Editorial Short Lengths for Busy Readers

The Forestry Branch of the Department of the Interior have sent out a large number of blotters for distribution in schools and elsewhere. These blotters bear printed warnings as to the danger of fire and the value of timber, arranged in various appropriate forms for different classes of people, including a set of Simple Simon rhymes for the children. Incidentally the blotters are the product of the Forest Products Laboratory of Canada.

The Board of Trade of the city of Toronto are making an effort to alleviate the difficulties arising out of the scarcity of freight cars by urging their members to do everything they can to assist the railway companies in making prompt shipments. They have sent out a circular addressed to shippers and receivers of freight in which they say that Toronto is suffering from the effect of embargoes placed by the Canadian Pacific and Grand Trunk Railways against less than carload traffic from all points consigned to Toronto, as the result of the accumulation of freight within the terminals awaiting delivery. They urge shippers and receivers to assist in the following ways:—(1) by promptly loading and unloading all freight; (2) by cancelling any orders given railways that freight will not be accepted on certain days or at certain hours, and arranging to receive freight at any time during the working day; (3) by notifying railways and cartage agents, through the Board of Trade, that they will accept and ship freight on Saturdays until 4,30 p.m. The railways and cartage agents are prepared to handle freight on Saturday afternoons if merchants will so arrange. The Board is satisfied that much relief can be obtained by carrying out these recommendations.

The Dominions Royal Commission held several days' sessions in Toronto recently. On the concluding day one of the witnesses under examination was Prof. B. E. Fernow, Dean of the Faculty of Forestry at the University of Toronto. Dr. Fernow advocated federal jurisdiction over the licenses for cutting timber in Canada. At present, he said, each province regulated its own licensing system, and as a result there were wide differences between the laws of the various provinces. For instance, in Ontario a licensee could cut without limit, whereas in Quebec the operations were subject to a number of important restrictions. Dr. Fernow commended the work of the Forest Branch of the Department of the Interior in organizing fire protection on the Dominion Forest Reserves, and drew attention to the fact that Ontario had fallen far behind in its forest protection policy. Ontario was badly in need of a system of protection similar to that of British Columbia, which included lookout towers, telephones, trails and organized fire fighting forces. He said that Canada's total stand of commercial timber was between 500,000,000,000 and 600,000,000,000 feet, and that the cut in any one year had never exceeded 5,000,000,000 feet, so that the supply might be considered inexhaustible or at least reproducible, by merely keeping fire out of the forests.

An official statement by the Secretary of the National Lumber Manufacturers' Association, on the United States lumber production for this year, based on the comparative production and shipments of over 500 firms, in 1915 and 1916, is as follows:

The totals for the first eight months of 1916 compared with the same period in 1915 show the following:

Increase in softwood cut	13.4 per cent.
Increase in hardwood cut	14.2 per cent.
Increase in total cut	13.5 per cent.
Increase in softwood shipments	9.2 per cent.
Increase in hardwood shipments	30.0 per cent.
Increase in total shipments	10.5 per cent.

These reports indicate 13½ per cent. more lumber produced and 10½ per cent. more lumber shipped by the end of August, 1916, than at that date in 1915. Since car shortages and less favorable market conditions may result in a somewhat smaller production during the last four months of 1916 than during the last four months of 1915, it is possible that by the end of the year the total production will be in the neighborhood of 10 per cent. greater than in 1915.

The best estimate of the United States Forest Service is that the lumber production of the United States did not exceed 38,000,000,000 feet in 1915. On the basis of the statistics received by the Association it looks, therefore, as if the total production in 1916 would be in the neighborhood of 42,000,000,000 feet.

When Peace Comes—What About Trade?

Will We Be Prepared or Groping in the Dark?—The Situation as It Appears to Prominent Lumbermen and Bankers

No one subject is being more widely discussed by lumbermen to-day than the present trade situation and what it may be expected to develop into after the war. Realizing the great interest taken in this subject, particularly in the latter part of it, we have secured from a few prominent Canadian lumbermen and from one of the greatest authorities upon financial affairs in Canada their views upon the question. Every lumberman will be interested in these interviews and letters, and will benefit by reading them carefully. We would like to hear from others on the same subject. It cannot be discussed too much.

Sir Edmund Walker—An Interview With the President of the Canadian Bank of Commerce.

I THINK the surprising thing to-day is not so much what we are accomplishing as what we have accomplished in contrast to the position when the war broke out. You will remember that we were only a few months past the point of greatest expansion in the history of Canada, and that the difference between our exports and our imports and the interest of our indebtedness abroad had, at the end of our fiscal year, March 31, 1913, put us on the wrong side in international affairs to the extent of at least $425,000,000. When the war began it was perfectly evident that Great Britain must lend us the cost of the war, which, as a matter of fact, she did for part of the first year. At the end of the first year, however, we had improved our international position by about $130,000,000, and by the end of the second year we had reached a point where we were able to pay the interest on our foreign indebtedness and also pay the cost of the war, without much, if any, outside aid. Of course, we had some loans in the United States for ordinary capital expenditure, which could not be stopped suddenly; but, without any further help from Great Britain for our own war expenses, we began to lend money to Great Britain to cover part of the cost of the munitions we were making for her. That transition was a great accomplishment.

At the present moment we have been able to take up the second Canadian war loan issued in Canada for $100,000,000, and it has been subscribed practically twice over. That really means that outside of the banks there were subscriptions for one and a half times the amount, and in addition to that we have agreed to make a further loan for munitions, making a total of $150,000,000 from the banks, besides sums from the Canadian Government direct, which have not been disclosed to the public.

An Amazing Accomplishment.

Taken as a whole, this is is an accomplishment that amazes us all. You will, however, hear a certain amount of complaint from Great Britain that we do not take so large a percentage of Imperial obligations against munitions made here as we should. Now, if we were a neutral country, not at war ourselves, we could take perhaps 70 or 80 per cent. of the cost of the munitions made, in Imperial obligations, but it is only out of the proceeds of munitions made that we can pay the cost of our own war debt, and it is only what is left after doing that, which can be taken in Imperial obligations. The British public should understand that better than they do.

Let us consider the effect of making munitions from another point of view. When the war is over we shall have a great many factories equipped with plants which did not exist before. We shall have a great many existing factories which were more or less struggling with debt before the war, but which will now be free from debt and will be in possession of capital. In a word, we shall have a great accumulation both of money made and of plants created as a result of the munition contracts. That means that whatever industrial work we have to do when we face the peace conditions we will be infinitely better equipped in plant, in capital, and in experience of the working man than we ever were before.

The Transition Period.

What the period of transition will be from the moment the war contracts stop and the soldiers begin to come home until the time farther on, when our plants are employed to a normal extent, I do not know, and I think no one should trouble himself too much about an uncomfortable time that we must all pass through, the length and the weight of which we cannot any of us guess.

When the American War was over I think the national debt of the United States was about $3,000,000,000 and the private debt was about $3,000,000,000, making in all about $6,000,000,000 of foreign debt. I think about one and a half million men were to be let loose upon the labor market, and, clearly, in the view of almost everybody, the United States was ruined financially. There was apparently no possible way of meeting such a terrible situation as that. That was in 1865. It was about 1868 that business began to be talked of as pretty good, and it was in 1873 that the expansion of business reached the point that brought on the biggest panic that the country had ever known. So, you see, it took eight years in the United States to pass from the terrible moment of ruin following the war to a panic brought about by an orgy of business and high prices.

I frankly do not know how difficult our own situation is going to be, but I do know that we shall be able to face it better than ever before; and when immigration does commence to move it will go to that country which is the best specimen of modern democracy, which has the best climate and the largest available area of cultivable land in the world. The only other country to compare with Canada in this respect is Siberia, and it is not a modern democracy. People say that immigration will not come quickly to Canada after the war. It will certainly come from the United States when their time of depression arrives. In the United States they have been making a huge amount of money, and labor is already at a dangerously high point. When they stop making munitions they will have a surplus of population. Of course we shall only want those who are willing to go upon the land, but we shall represent opportunity in that respect. The United States has no land for settlement.

My own feeling is that when the war is over we may, of course, have to face a lean time; not a bad time, but a lean time, for some years, until we have adjusted all these plants and all this labor to our new conditions. We shall not be building on a great scale as we have in the past—that is to say, constructing transcontinental railroads, canals, great public buildings and other public and private works, and we may be slow, therefore, in getting up to a normal state, but we shall have behind us an accumulated wealth, and the West, which has got largely over its troubles and which is well on the way to prosperity, will go ahead, whether Eastern Canadian manufacturers are in the best of shape or not.

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Conditions To-day and After the War, by Angus McLean, Bathurst, N.B.

It is a comparatively easy matter to write with reference to trade conditions as they exist to-day, but what they will be after the war it is hard to prophesy. So much depends on circumstances beyond our control, and also on circumstances which should be guided by the powers that regulate our foreign and domestic trade policy.

As to present conditions, all industries, including that of lumber production, are suffering from a shortage of labor, and there does not appear to be any relief in sight unless more female help can be utilized and the average efficiency of the present-day male laborer increased. Many concerns are now employing increased numbers of female operatives, with good results, and we believe that a further movement in this direction will help out very considerably. Although we are not aware that the experiment has been tried, we fully believe it possible for women and girls to make good even in lumber mills, where they could be put on work of a lighter nature. Experience shows that the female operative can do many things which have hitherto been counted beyond her skill and strength, and that she is really capable of outclassing the male in many fields where he has imagined himself supreme and unassailable. In shops where both sexes are working together, the girls' ability has been demonstrated, and this fact is having a very beneficial effect. The movement should be encouraged, and the female given every encouragement and opportunity to tackle any job she can prove herself capable of handling. The present inefficiency and indifference of the men-workers, due to the unprecedented conditions of the labor market, all in their favor, are notorious, and something should be done to teach the "sterner" sex a much-needed lesson. The crying need of to-day is for efficiency, so that we can produce to our utmost, and any movement to promote this end should be helped along. The lumber market at present is good, and a very large amount of stock would be moving at good prices if labor to handle it were available.

Owing to the foregoing, the cut of logs this winter is going to be much below the average, and, in addition to this shortage, the cost of production is going to be fully 25 per cent. above normal. Almost every article used by the lumberman has increased tremendously in price, as well as the cost of labor, and, unless the manufacturer can get

25 per cent. to 30 per cent. more for his product during 1917, he is going to be in a bad way.

There is every indication of a car famine this winter. The railways are not making anything like prompt movement of freight, and we fear a very serious condition will prevail as soon as winter is on us.

"After the war conditions" is a very different problem. No one knows when the war will end, or what is going to be the condition of the warring nations when peace arrives. So far as Canada is concerned, there is only one thing to do, and that is to prepare for the end by making the most of the present. The war is teaching us many lessons, some of which we seem slow to learn. One thing is sure, and that is our participation in the conflict is adding a heavy burden on our taxpayers which it will take years to discharge. We must, therefore, buckle to in real earnest, and make the very most of our natural resources, as well as train ourselves to the highest point of efficiency. There need be no fear as to the outcome if we only do our best and make such preparations now, so that when our boys return from the war they will find our house in order, and our government prepared, if necessary, to give employment on public works and improvements.

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A Toronto Wholesaler's Views on the Situation After the War.

After the war we may look for a general slump in the prices of agricultural products and manufactured articles—in fact, probably a shrinkage of values all round; but not likely much shrinkage in the value of pine lumber. In ordinary times of depression there has generally been a diminished demand for lumber. The feature has been a lack of trade rather than a falling off in prices. Sales under such conditions would hang fire for a period of probably a year or two, but ultimately come back to former levels when better financial conditions warranted the consumption of lumber in improvements.

The chances are that those lines of business will suffer most after the war which have benefited most by the war. Lumber is not one of the commodities that have benefited unduly by the war, and I think we may safely say there has been no increase in price consequent upon the war. There may have been a larger demand than otherwise, but since lumber has not been enhanced in price in consequence of the war, it would seem reasonable to suppose that it will not depreciate in price after the war. These remarks refer chiefly to red and white pine, which are not subject to the same fluctuations as hemlock and yellow pine.

There is bound to be a shortage in the output of logs during the coming winter, for the reason that men are scarce, wages 50 per cent. higher, and supplies nearly 50 per cent. more expensive. These features will add to the cost of production at least $4 per thousand.

Now, even if peace should be declared suddenly, it is not likely that the men at the front could be returned to Canada in time to make up for the deficiency of labor in the near future. In the event of peace being declared, the soldiers will probably be kept under arms until peace negotiations are well under way, which is likely to take a year, and then, even by taxing shipping accommodation to the utmost, it would be almost impossible to bring all the men back to Canada within a year. It seems, therefore, that after peace is declared it will take one and a half to two years to restore labor to pre-war conditions. Thus the outlook for cheaper production of lumber for the next year or two does not seem promising. Of course, the demand may not justify the market price going up proportionately to the cost of production, but increased cost of production should bolster up the market value of the product.

Another feature tending to curtail the output is that manufacturers are hesitating to put large gangs into the woods this winter for fear that, even if they get the logs out, labor next spring may be so scarce that they will be unable to turn the logs into lumber. This would mean an investment lying idle for an almost indefinite period, with the added danger of depreciation in value of the logs.

Trade, Taxation, Dominion Federation and Canadian Shipbuilding

By Edward Harper Wade, Quebec, P.Q.

RESPECTING the conditions that will obtain after the cessation of hostilities, and the declaration and establishment of peace, there are many and widely differing opinions. It is quite impossible to predict with any degree of certainty when the war will end, or under what conditions peace will be declared, but one thing is already very evident, that the liabilities incurred during the war will remain without reasonable probability of their being reduced by indemnity. The interest on wasteful and unproduction expenditure will have to be paid by nations with lessened resources, or at best diminished capital. This can only be done out of increased revenue, which cannot be raised without heavier taxation. In many cases the merits or faults of direct or tariff taxation will not be worth discussion under the dire necessity of applying both to their highest possible productive limit. In tariff adjustment all questions of free trade or protection will receive little attention, when the main object is to obtain the largest possible revenue, which does not necessarily result from the highest scale of taxation. In direct taxation such a rate as encroaches on capital gradually dries up the spring at its source, or to use a homely illustration, kills the goose that lays the golden eggs. A high tariff and a low one are alike in being poor revenue producers, whatever else may be said in favor of either. There is a point at which the customs duty will yield the highest obtainable revenue, but it is not the mose desirable one from either a protectionist or free trade point of view, though the future Chancellor of the Exchequer or Finance Minister will have to seek diligently, and unswervingly apply it, regardless of representations or pressure from either side.

Future trade will inevitably be hampered by the tariff taxation of ourselves and others, yet it is from the results of increased foreign trade we can have the best assurance of meeting our future obligations and increasing the wealth of our country.

Our present foreign trade may be divided under three heads, that with the United Kingdom, that with foreign countries, and that with other portions of the Empire. Our trade with both the former is large and well established, and such further development as it is capable of has the attention of our business men, but our trade with the last is comparatively small, and although it has received special government consideration and attention does not increase very rapidly. The customs revenue from it is not so large as to be a matter of very great consideration or of the first importance. It is a business that seems capable of great expansion if due encouragement be given it, and specially if all obstacles to its growth be removed.

Dominion Federation

The present Dominions were formed by the drawing together under federal government of the provinces that now form integral portions of them. Each of these provinces formerly had its own customs boundary with the right of levying tariff duties. A great impetus was given to integral trade by the inclusion of the provinces in the common customs boundaries of the Dominions. Would it not be possible and advisable to go one step further in the same direction and adopt free trade between the Dominions, with some general exceptions, such as spirituous and fermented liquors, for example? The exceptions would be a matter of detail for discussion and adjustment, if the principle were agreed upon and adopted.

Would it not be possible to form a Dominion council to discuss such matters, the council to meet in London, so as to work closely in connection with the home government, but to consist entirely of representatives of the self-governing colonies in the first place? Such a body might find it possible for the Dominions, while detaining full power over their own tariffs, to give the United Kingdom a uniform customs preference, under whatever tariffs they severally adopted, of one-quarter, one-third, or one-half, as might be found satisfactory to all, and agreed upon. This would have the great merits of simplicity and uniformity without interfering with individual action.

With free trade between the Dominions not only would business increase, but the sentimental tie would be supplemented by that of mutual interest, not an undesirable thing, even to those who, like myself, believe sentiment is stronger than any other consideration. The loss of revenue would not be comparatively great. Our business men, and through them our entire communities, would get to know each other better and be more closely drawn together, while increased trade, advantages and wealth would benefit all, and that without any great loss of present revenues, or even of prospective revenue under present conditions.

Shipbuilding in Canada—A Great Opportunity

It is evident that for some time after the end of the war the present scarcity of tonnage will continue, enhanced rather than diminished, till matters adjust themselves. Troops and refugees will have to be sent home, building and repair material, especially timber, deals and lumber will have to be transported to devastated countries. Emigration will have to be provided for, and food supplies taken to various points. Not only this, but stocks of all kinds will have to be replenished.

Now Canada is doing very little to provide for such business.

While the United States and Japan are turning out merchant tonnage as never before, while all shipowners, especially neutrals, are reaping a golden harvest in spite of losses of vessels, we are building some schooners and an odd steamer. This is not because there is any scarcity of orders. It would not only be possible, but easy, to get these here as elsewhere, and get them readily on equal terms, but such shipyards as we have are generally busy, and not long ago congested with work, according to Sir George Foster. There is, however, an initial difficulty in the impossibility of obtaining the necessary steel for shipbuilding in any reasonable time.

Two Canadian companies own the finest deposit of hematite iron ore in the world, accessible for tide water shipment. One hundred and forty-four thousand tons of this were shipped to Germany and Holland in 1912-13. There are also at tide water enormous beds of coal in Nova Scotia, within a short voyage of the iron ore deposits. Why then should we not have an abundant supply of steel, and a shipbuilding industry similar to those of the Clyde and Belfast, in the Maritime Provinces or elsewhere?

Though the advantages or disadvantages of protection are debatable, yet it must be admitted that under certain conditions and properly regulated it may have its value to serve a special purpose. The defects of bonusing are obvious, but it may have its possible advantages under proper restrictions, such as a sliding scale, and the exaction of the return of the bonus on such goods as are exported, but either or both might be justifiable and even desirable if no other way can be found to utilize our national position and establish a great Canadian shipbuilding industry. Possibly government assistance in obtaining capital would be more efficacious than either, or might supplement one or the other or both.

Surely the problem admits of solution as the necessary raw materials are available under most favorable conditions, and at the close of the war employment must be found for present munition factory workers.

It is for the government to take immediate action, and for everyone to do his part in the development of so great an industry, each according to his ability.

Short Stocks and High Prices for Lumber

Good Trade for Those Who Have the Goods

By C. W. Wilkinson, Union Lumber Company, Toronto

My opinion is that freight rates will hold up for at least a year after the war. My reason for thinking so is that there are twenty vessels in the North Atlantic service. These twenty vessels, if they were all used for the carriage of troops, would take about 1,000 men to the vessel—that is to say, 20,000 men to a trip. They would make a return trip in about three weeks, and that would mean that carrying troops alone, they would require a year to bring back 240,000 men. Unquestionably they will be used for the bringing back of troops in preference to engaging in the freight or passenger business.

After the war business will be good in the export line from Canada, so far as the lumber trade is concerned, because the large majority of lumber used in Great Britain—in fact, in Europe—has formerly been produced by Russia—considerably more than one-half of the total consumption. If the war stopped to-morrow, Russia would have to disband her enormous army, and it would be a difficult matter to get enough men into the woods in Russia now to produce any lumber during the coming winter. If the war stops during the winter, the woodsmen could not go into the bush until next fall, and it would be the summer of 1918 before they had any lumber cut which could be placed upon the market.

In Russia there were large stocks of lumber before the war. At Riga, one of the most important shipping ports, there were 400,000,000 feet of lumber in stock when the war broke out. Some time ago over 200,000,000 feet of that had been commandeered by the Russian Government and used. Possibly by next spring the balance will be used up for local consumption. So much for what Russia produces; that country, however, will be the scene of much reconstruction after the war. Russia has been run over by the enemy, more than any other country, and therefore it will have to be looked after to a great extent.

Another large European lumber producing country is Sweden. Although not a large country, Sweden manufactures and exports a great quantity of lumber. In competition with Swedish goods, Canadian lumber gets the preference. Our red pine is worth more than Swedish reds. With anything like an even break, I would not be at all surprised if Sweden finds the competition of Canadian lumber a much more difficult proposition in the future than it has been in the past. Besides, it is not unlikely that Sweden will find a higher tariff against her among the allied countries.

Then, of course, there is the enormous trade that will develop in France. France was always supplied with lumber from other countries. She bought practically nothing from Canada, most of her supplies coming from Sweden and Russia.

It looks to me, therefore, as though the export lumber business after the war ought to be pretty good for those who have the goods.

Another thing that must not be overlooked is that it is becoming harder each year to take out lumber. Man power is becoming scarce and the cost of production is advancing. Even if the war were to end to-day, it would be two years before it would be possible to over-produce in Canada.

So far as local conditions are concerned after the war, I am under the impression that we will pass through a stage exactly like that which we experienced when the war started. Business was very bad at that time. There is no doubt that the country to-day is living practically on war business. The consumption of lumber to-day is, directly or indirectly, connected chiefly with something relating to the war. All of this business will come to an end when peace is declared, or shortly afterwards. No doubt the Government will not cancel all its contracts immediately. It will do what it can to smooth over the period of transition. A certain amount of time will be necessary, however, in order to equip plants for the old lines of business that we had before the war started. I do not expect, however, that we will have as much of a setback as we had when the war started. We will probably get our plants back to the regular channels quicker than we made the change into the new channels when the war started. After the war is over we will stop making shells, etc., and will take on the business of producing the ordinary requirements of life. Four hundred thousand men returning to Canada will then have to be fitted out with shoes, collars, ties, hats, and everything else they require, to say nothing of the houses they will occupy and the food they will eat. Their shoes, collars, ties, hats, etc., are all shipped in boxes, so there ought to be a good demand for boxes and lumber. As to the building business, it is pretty hard to come to any conclusion at present. You can hardly say what the outcome will be, because it all depends upon whether the other countries restrict emigration, a course which possibly they may adopt. The building situation will depend very largely upon the volume of immigration coming to Canada after the war.

I do not think that for years the ocean freight rates will get back to where they were before the war. The chances are that they will run for a year or a year and a half at pretty near the existing rates, with possibly a small falling off to somewhere about 75 per cent. of the going rate to-day. However, this situation is a hard one to analyze. It is even possible that the Government may take the matter in hand and establish rates, in order to prevent the development of a panic.

I expect that after the war stocks will be scarce for a year or a year and a half. It is only reasonable to believe that we will have some kind of a reaction that will affect us during the next two, three, or four years, and this might be expected to affect prices and demand in a number of lines. But for at least a year or a year and a half the lumber situation will be different, because of the shortage of stocks.

I think it is going to take a long time to get anything in the nature of over-production of lumber stocks in Canada after the war, because stocks to-day have been cleaned up so completely. To understand this point better, take, for instance, the engineering and building trades, which are the two biggest trades in Great Britain. These are practically at a standstill to-day. When the war is over these trades are going to take good-sized supplies of raw material, including large quantities of lumber and timber. When the war broke out these trades were well supplied with large stocks, but freight rates increased to such an extent that the commonest lumber soon reached the price of clear lumber before the war, and in many cases clear lumber was used for purposes for which formerly common only would be considered. I may illustrate this by a couple of examples. Before the war 3-in. white pine No. 1 deals were selling at £36 in Manchester for stock of average width. Last winter they were paying £36 for 3-in. spruce at Manchester. All the big stocks of good lumber in Great Britain have been absorbed, and as soon as the engineering and shipbuilding trades become active again they will have practically no stock on hand.

Moreover, it seems to me rather probable that there will be a preference for Canadian goods in Great Britain after the war. I would not be at all surprised to see Great Britain put in force a tariff the effect of which would be that other countries, whether enemy or neutral, will not be able to compete with us in the markets of Great Britain.

Advancing Prices—Will They Be Permanent?

Trade conditions with us have been fair this year. The demand has not been large, but prices have been firm and well maintained. It would appear to us that whether the volume of business be large or not, prices of lumber and lumber products must advance, as under present conditions no lumberman is able to estimate what it will cost him to replace any stocks he now has in his yard.

During the last twelve months the costs of production have increased to a much greater extent than lumber prices. We figure that labor and supply costs have increased on an average of at least 30 per cent., and that the efficiency of the labor we are getting has decreased at least an equal amount, whereas lumber prices have shown an average increase of not more than 12½ per cent.

We would not care to express any views as to what is likely to develop after the close of the war in the way of volume of business, but it would appear to us that there can be no reductions in lumber prices, and that there must be an increase, if present conditions continue, and at the present time it would appear that we can expect no reduction in supply and labor costs for some time to come.—Keewatin Lumber Company, Ltd., Keewatin, Ont.

Little Known Forest Products Widely Used

In addition to the ordinary uses of wood with which we are familiar, mankind is dependent upon the forest for a variety of products whose appearance does not indicate their origin, say members of the United States Forest Service. Numerous as these products are, and as extensive as is their use at the present time, science is constantly learning new constituents which enter into the makeup of wood, and is finding new uses to which these constituents and those already known can be put. Powder for munitions or blasting, disinfectants for protection against contagious diseases, and artificial silk for clothing are among the products obtained in whole or in part from wood.

Charcoal, as everyone knows, is essential for the manufacture of black powder. All of the acetone used as a solvent in making nitrocellulose powders is derived from acetic acid, a product of hardwood distillation. Great Britain, it is said, is dependent upon the United States for acetone used in making cordite. Black walnut is a standard for gunstocks, and has been so much in demand for the past two years that the supply of this valuable wood has been considerably reduced, and other woods, notably birch, are being substituted. From Europe comes the complaint that there is a shortage of willow for making wooden legs.

Pure wood alcohol is the only substance which can be converted commercially into formaldehyde, which is universally used for disinfection against such contagious diseases as smallpox, scarlet fever, and tuberculosis. The experts at the Forest Products Laboratory have conducted extensive experiments on the production of grain or ethyl alcohol from wood, and have been successful in experimental work in raising the yield and lowering the cost of production. If this process can be put on a commercial basis, the foresters say, it will result in putting the millions of tons of coniferous sawdust and other material which is now wasted every year to a profitable use.

By converting cellulose, one of the elements of wood, into a gelatinous material, known as viscose, a wide field is opened up for the utilization of wood waste, and a new line of products, varying all the way from sausage casings to tapestry, is added to the already lengthy list. Many of the so-called "silk" socks, neckties, and fancy braids now on the market contain artificial silk made from wood.

About nine-tenths of all the paper which we use is made from wood. Besides the detailed investigations of the methods of making newsprint paper, and of the production of paper from woods hitherto unused for that purpose, which have been conducted, kraft paper, which compares favorably with the best on the market, has been produced experimentally at the Forests Products Laboratory from longleaf pine mill waste. This kraft paper is brown in color and is very much stronger than ordinary papers. It is used for a variety of purposes, and, cut into strips, is spun or twisted into thread, which is then woven into onion and coffee bags, matting, suitcases, and wall covering, similar to burlap, and furniture closely resembling that made from reeds, as well as other articles of common use.

Within the past year the Forest Products Laboratory has, by cooperating with manufacturers, succeeded in getting a dye made from mill waste of osage orange put on the market as a substitute for fustic, which is imported from Jamaica and Tehuantepec.

Shipments of lumber east bound through the Sault Ste. Marie Canals during the six months ending September, were as follows:—U. S. Canal, 1916, 240,703,000 feet B.M.; 1915, 318,819,000 feet B.M.; Canadian Canal, 1916, 10,696,000 feet B.M.; 1915, 34,249,000 feet B.M.

F. E. Miller, an extensive lumber dealer of Grand Rapids, Mich., recently made a business visit to a number of British Columbia points to enquire into lumber trade conditions. Mr. Miller reported good trade conditions generally throughout Michigan.

From the Canada Lumberman of Thirty-five Years Ago

Consumption of Lumber in Toronto.—(From our own correspondent.)—I have been endeavoring to collect a few statistics relating to the retail lumber trade in this city, but find it exceedingly difficult to procure figures that can be fully relied upon. The reasons for this may be explained as follows: Upon interviewing A, he gave me a long column of figures purporting to be a correct statement of his sales from the yard during the year 1880. Upon enquiry, however, I found that included in this statement are sales by car load, made by him to B and C, who are also yard men, but had bought several cars from A to retail from their yards, A happening to have the particular kinds of lumber they needed. Upon making application to B and C, they in turn informed me they had also sold considerable by car loads to other retailers, all of which was comprised in the figures handed me as being yard sales. Other retailers informed me they could not give me the quantities they had sold, but could give the figures in dollars and cents, so that to obtain figures that may be taken as reliable is simply impossible.

Another serious disadvantage under which the retailers labor here is the want of organization or cohesion amongst themselves. They seem to view each other with a kind of suspicion and distrust, so that each man, so to speak, runs on his own track, heedless as to what his brother chip may be doing. As witness the following experience when visiting a few of the yards: Questioning the first I called upon as to what price he obtained for joisting and scantling up to 16 ft. lengths, his answer was $11 per M; on repeating the question to No. 2, his reply was $11.50 per M, and No. 3 stated he would not sell under $12 per M, so that it virtually seems to be a matter of go-as-you-please amongst them. Now, this is certaintly not as it should be, and nothing tends more to demoralize the trade than such want of unity; but if a lumbermen's exchange was once in proper running order, so that grades could be properly established, prices regulated, and dead-beats shown up, and, in short, a thorough interchange of ideas take place between one another, it would certainly be greatly to the advantage of all concerned.

Another evil under which retail men are laboring here, and one which could easily be abated by acting in concert, is the custom in vogue amongst mill men of supplying consumers by the car load, at rates as low, or nearly so, as that charged to the retail trade, even going the length of bringing down half a car for a consumer and disposing of the remaining half car to the retailer. Now, this is certainly unsatisfactory, both in principal and common justice, to the retail men, and the yard men could soon apply the remedy if thoroughly in earnest. Doubtless some of your readers will remember the tactics used by the retailers in Chicago to remove the same trouble, and in which I believe they were thoroughly successful. It operated in something like the following manner: After notifying the wholesale men that hereafter they (the retailers) would demand a royalty of $— per car, according to grade, on all lumber sold to consumers, they calmly waited and watched. Some of the wholesalers laughed and derided at the demand as something preposterous, but those who disregarded the demand soon found to their cost that they had not all the laugh to themselves. The retailers simply blackballed all such, which meant nothing more or less than this: We purchase no more lumber from you until you accede to our demands; and in this way the remedy was prompt and efficient, and there is no reason why the same means could not be adopted and carried out here, and to the ultimate benefit of all concerned. The lumberman is generally termed the prince of good fellows, but sometimes there crops out amongst the best of them a slight disposition to grasp at all the trade within their reach, and this is more often the case among wholesale men, so that, in dull times especially, the course taken by them in the matter of selling to consumers has driven many of the retailers to the wall and has ultimately been the cause of considerable loss to themselves.

During the year 1880 there has been sold from the yards here, in round numbers, 30,000,000 feet lumber, 13,000,000 shingles, 15,000,000 sawn lath, and, in addition to this, there has been sold by car loads to consumers, direct, as much more, besides a considerable quantity sold by the factory men, who all do more or less of a retail lumber business, and the sales of the present year bid fair to far outstrip those of its predecessor, as buildings are springing up in every direction; and it is much to be regretted for the future of Toronto that many buildings now being erected by speculators are of such material and workmanship as not to add to the future glory of this, the Western Metropolis. Still, there are a number of quite pretentious and substantial buildings now going up; and one thing to be noticed is, that the architects are now demanding that all lumber used in the construction of good buildings shall be fairly dry, so that this will necessitate a much larger stock of lumber to be kept on hand by retailers to meet the demand in this respect.

Cost Finding for Millwork Factories

A Standard System Worked Out in Co-operation by a Large Number of Plants—Applicable to Large and Small Manufacturers Alike

Most of the articles that we have been able to publish of late in regard to cost accounting have related to the retail lumber business. We have seen very little in the way of information about millwork cost accounting. Lately, however, we have received a copy of a booklet entitled "Standard Cost Finding System," issued by the Millwork Cost Information Bureau, 1309 Lumber Exchange Building, Chicago, which contains a description of the system of cost finding adopted by the bureau in connection with millwork factories. There are so many varieties of millwork cost accounting that anything in the form of a definite and practical system which can be applied alike to all millwork factories, whether large or small, must be valuable, as it will help to produce uniformity of methods and enable millwork factories to analyze their costs according to scientific business principles.

The system adopted by this bureau is the result of the co-operation of all its members. It does not represent anyone's individual ideas, but the best features of all systems have been studied and a new system drawn up upon the most modern and practical lines. The bureau has not only adopted the system for the use of its members, but also undertakes to furnish accountants for the installation of the system, having found that the help of their accountants is necessary in order to start a firm off properly, and that it is really cheaper to install it thoroughly in this manner than to attempt to do so without such assistance.

The introduction to the description of the system states that, in addition to actual expenditure, allowance is made for interest on capital at 6 per cent. If the turnover is three times per year, this only amounts to 2 per cent. of sales. It also allows for depreciation on buildings and equipment. If proper depreciation has been allowed prior to the time of installation, or if buildings and equipment are new, it allows the following amounts per year: 3 per cent. on brick buildings, 5 per cent. on wood buildings, 10 per cent. on equipment.

Any method of distributing expense to individual orders or operations that accounts for every item of expense incurred in the running of a business is worthy of much respect. On the other hand, no matter how fair the distribution may be to the various classes of product, a system that does not account for every dollar spent is very misleading, and, therefore, a dangerous proposition.

Many cost systems charge direct material and direct labor to the individual job and distribute all the balance of the cost (burden) equally to all classes of product. There are four methods commonly used.

Method I.

Burden Equals 200 Per Cent. of Direct Labor.

Example No. 1.

1,000 lineal feet Moulding.

Direct material Y. P.	$15.00
Direct labor	3.00
Burden at 200 per cent. of labor	6.00
Cost	$24.00

Example No. 2.

1 Book Case Pedestal.

Direct material	$ 1.00
Direct labor	4.00
Burden at 200 per cent. of labor	8.00
Cost	$13.00

By this method the burden on one pedestal using $1 worth of material is more than on 1,000 feet of moulding, using $15 worth of material. Suppose example No. 1 used mahogany in place of yellow pine, material would value approximately $75, and the burden would still be $6.

Method II.

Burden Equals 50 Per Cent. of Material Value.

Example No. 1.

1,000 lineal feet Moulding.

Direct material Y. P.	$15.00
Direct labor	3.00
Burden at 50 per cent. of material	7.50
Cost	$25.50

Example No. 2.

1 Book Case Pedestal.

Direct material	$ 1.00
Direct labor	4.00
Burden at 50 per cent. of material	.50
Cost	$5.50

By this method if the moulding (example No. 1) is mahogany the material would be approximately $75.00 and the burden $37.50, in place of $7.50. The pedestal (example No. 2) is ridiculously low. This is not an extreme case of cabinet work. Practically all cabinet work would be too low.

Method III.

Burden Equals $50 per M of Material Used.

By this method moulding and all machine work would be high and cabinet work low. The small footage in example No. 2 (pedestal) would result in a burden as ridiculously low as Method II.

Method IV.

Burden Equals 40 Per Cent of Direct Material and Direct Labor.

Example No. 1.

1,000 lineal feet Moulding.

Direct material Y. P.	$15.00
Direct labor	3.00
Total	$18.00
Burden at 40 per cent. of material and labor	7.20
Cost	$25.20

Example No. 2.

1 Book Case Pedestal.

Direct material	$ 1.00
Direct labor	4.00
Total	$5.00
Burden at 40 per cent. of material and labor.	2.00
Cost	$7.00

If the moulding were mahogany (example No. 1) the material would be approximately $75, and the burden, 40 per cent. of $78 equals $31.20, or $24 more than Y. P. Thus we see that the more expensive the material the more the burden, and where the material is a small factor of the cost (example No. 2) the burden is low. This method makes cabinet work too cheap.

From the above it is apparent that no method of distributing all the burden in one operation is correct for all classes of product.

General Outline.

There are two classes of material. Direct material is that material which is practical to charge "direct" to the individual order, such as lumber, glass, etc. Indirect material is all other material, such as nails, glue, screws, sandpaper, etc., and is included in burden, as explained later.

There are two classes of labor. Direct labor is that labor which is practical to charge "direct" to the individual order, and, as explained later, should be separated as to "machine" and "bench." Indirect labor is all other labor, such as oilers, foreman, office, etc., and is included in burden, as explained later.

"Material burden" is all indirect labor, indirect material, and expense that the material uses up to the time it is sold or is "work in process."

"Machine burden" is all indirect labor, indirect material, and expense that the machinery operation uses, as explained in Chart No. 3.

"Bench burden" is all indirect labor, indirect material, and expense that the bench operation uses, as explained in Chart No. 3.

"Commercial burden" is all expense of every nature not already charged to the above three burdens, but does not include freight allowance on outgoing shipments and credits allowed (which should be deducted from the price realized). It includes delivery or shipping expense.

Direct material, plus material burden, direct machine labor and direct bench labor, and any other labor charged directly to the individual job, makes "prime cost."

Prime cost, plus machine burden and bench burden, makes "factory cost." Factory cost, plus commercial burden, makes total cost.

The sizes of the areas of the various items of cost in Chart No. 1 show the relative values of the burdens. Of course, material and labor areas would vary for different factories, but the purpose of Chart No. 1 is to show the principal factors in cost and the approximate relation burden bears to material and labor.

Material Cost.

There are two classes of direct material—lumber and other direct material.

"Lumber Burden."—Every item of expense that lumber occasions up to the time it is taken to the saws (or sold) is the lumber burden.

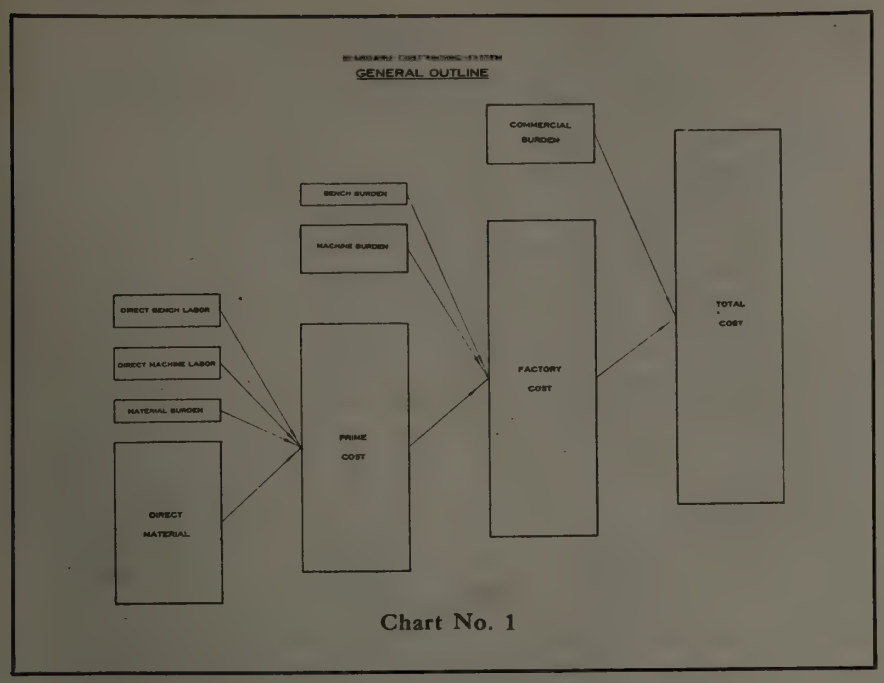


Chart No. 1

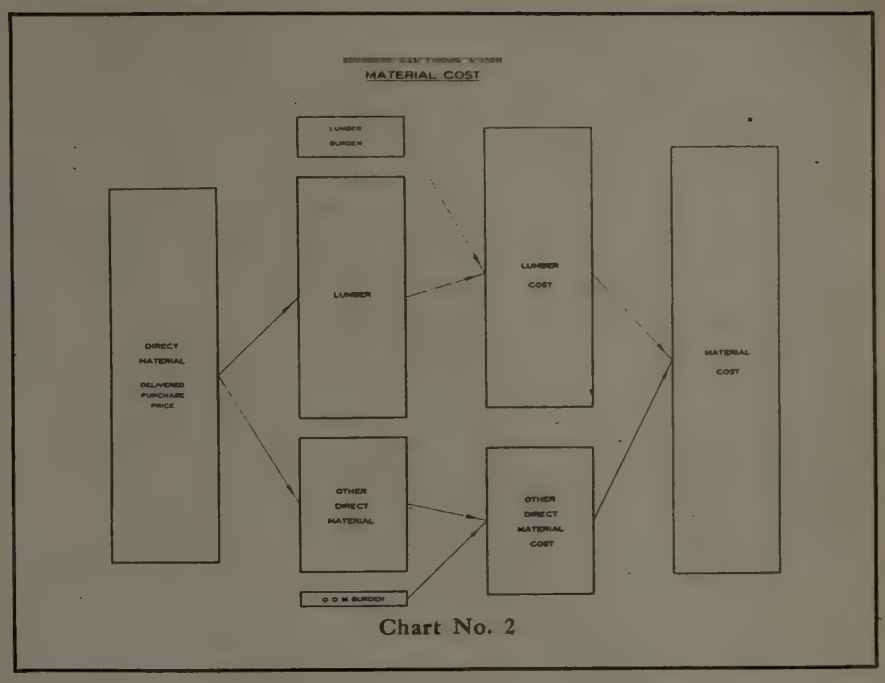


Chart No. 2

Lumber burden, divided by the number of feet of lumber handled, equals the average amount per thousand to add to lumber. As explained later, the burden on yellow pine, which costs approximately $30, and may not have to be kiln dried, is much less than on mahogany or quartered oak costing four or five times as much and requiring kilning.

Lumber burden includes the following:

All labor in yard and kiln and liability insurance for same.

Interest, taxes, and insurance on value of average stock carried.

Interest and taxes on ground occupied by yard, sheds, and kiln.

Interest, taxes, insurance, and depreciation on shed, kiln, and equipment.

Maintenance and repairs on shed, kiln, and equipment.

Such part of power plant expense properly chargeable to kiln.

Such part of barn expense used in handling lumber.

Such part of office expense used in purchasing lumber.

The delivered purchase price of lumber and lumber burden equals the factory cost of lumber.

"Other Direct Material Burden." — Other direct material is of three classes—glass, stock, and material ordered special for the individual order. This burden is arrived at in the same way as lumber. Stock would include a carrying charge on the value of the average stock, in addition to the items of expense that special material would carry. The burden on glass, in addition, should absorb certain supplies, such as putty and points. Glazing time is direct labor.

In small mills where it is impractical to divide the stock in this way, and where there is very little stock carried, it would be more simple and very nearly correct to consider all direct material, other than lumber, to require a carrying charge of, say, 10 per cent. of the invoice price of same. Do not forget that the direct material does not include office material, repairs, and supplies, and also do not forget that the factory cost of material, as shown by Chart No. 2, is not the total cost, as it does not include the commercial burden.

Labor Burdens.

"Machine Burden."—Machine Burden is the amount you have to add "per hour" to each direct machine man's wages to equal the sum of the following:

1. All of the expense that the machinery operation directly occasions (or machine expense).

2. Machine man's portion of such other factory expense not occasioned directly by the bench operation (or factory expense).

"Machine expense" is that expense peculiar to the machinery operation. It includes the following: Such part of power plant expense properly chargeable to machinery, carrying charges on machine investment, indirect machine labor, maintenance and repairs on machines, and depreciation. This is the cost per hour of running each machine (not including wages paid machine man). Floor space is taken into account in the factory expense. Depreciation of machinery is included at 10 per cent. In planing mills making special work we do not recommend different machine burdens. Although all machines do not occasion an equal amount of the machine expense, we recommend not to exceed two machine burdens in the odd-work factory. In planing mills where any machinery operation is specialized it may be necessary to use more than two classes of machine burdens, according to conditions, as explained later. In factories manufacturing both stock and odd work it is necessary to use "department burdens," in which case each department is treated as a separate factory and the machine burden determined for that department, exactly the same as Chart No. 3, and distributed "equally" to all machines in that department.

"Factory expense" is all factory expense that cannot be charged "direct" to the machinery or bench operation. We recommend that factory expense be distributed to machine and bench burdens on a basis of "direct hours." Machine expense plus machine men's portion of factory expense equals machine burden.

"Bench Burden."—Bench burden is the amount you have to add

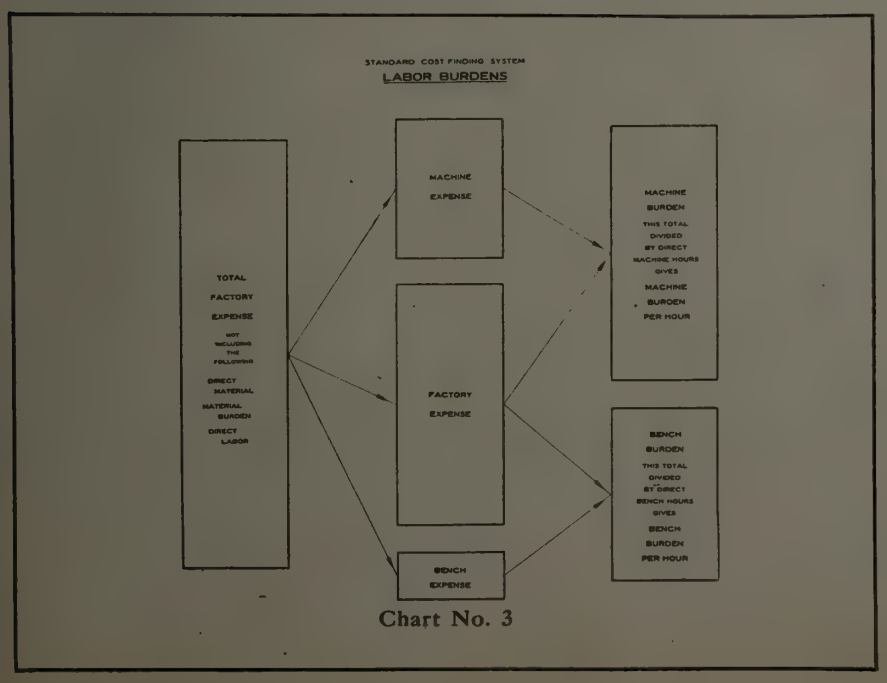


Chart No. 3

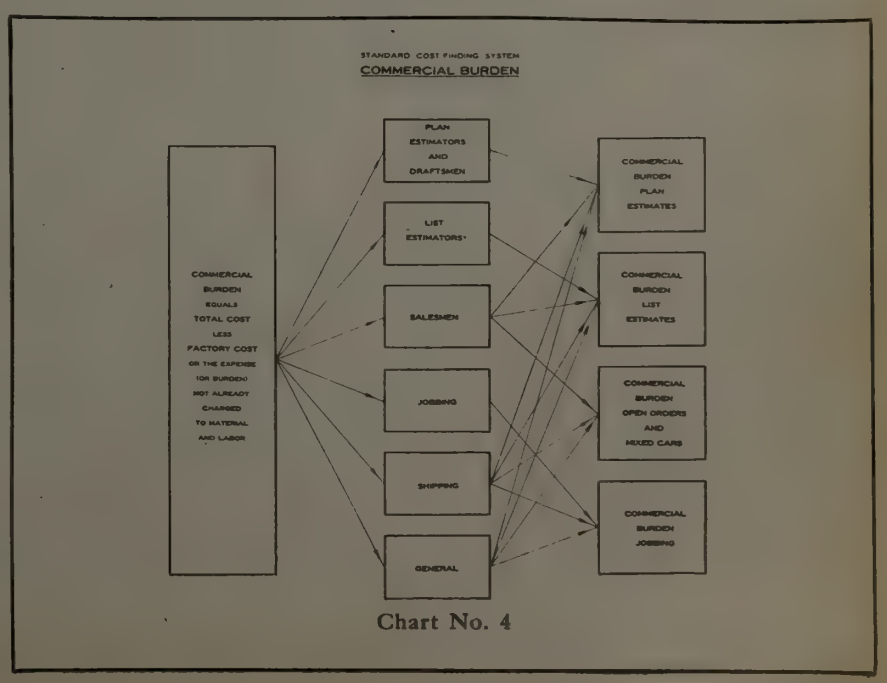

STANDARD COST FINDING SYSTEM
COMMERCIAL BURDEN
COMMERCIAL BURDEN EQUALS TOTAL COST LESS FACTORY COST OR THE EXPENSE (OR BURDEN) NOT ALREADY CHARGED TO MATERIAL AND LABOR
PLAN ESTIMATORS AND DRAFTSMEN
LIST ESTIMATORS
SALESMEN
JOBBING
SHIPPING
GENERAL
COMMERCIAL BURDEN PLAN ESTIMATES
COMMERCIAL BURDEN LIST ESTIMATES
COMMERCIAL BURDEN OPEN ORDERS AND MIXED CARS
COMMERCIAL BURDEN JOBBING

Chart No. 4

"per hour" to each direct bench man's wages to equal the sum of the following:

1. All the expense that the bench operation directly occasions.
2. Bench man's portion of such other factory expense not occasioned directly by the machinery operation.

Commercial Burden.

All of the expense incurred in disposing of the factory product is "commercial burden." Certain items of expense have already been charged to material, others to labor, and the balance is "commercial burden." The best method of applying the commercial burden to the individual order is the percentage method. The percentage necessary to add to the factory cost to equal the total cost is determined, and this same percentage is used in costing individual orders. For planing mills and most sash and door factories one commercial burden is sufficient. However, in some organizations the expense of disposing of the factory product varies so much that it is necessary to determine more than one commercial burden. For instance, carloads are sold to jobbers and branch houses not entailing any salesmen's or estimators' expense. Mixed cars are often sold by salesmen, not entailing any estimators' expense. Shipping expense is charged to all classes of work as commercial expense based on factory cost. General expense is all expense not previously charged or specified in Chart No. 4, and is charged to all classes of work based upon factory cost. The commercial burden for plan estimates equals salaries of plan estimators and draftsmen, its share of the following: Salesmen salaries, shipping and general expense; for list estimates, salaries of list estimators, its share of the following: Salesmen, shipping and general; for open orders and mixed cars, its share of the following: Salesmen, shipping and general; for jobbing, salaries of those who devote their time to jobbing, its share of the following: Shipping and general.

Lumber Burden.

Refined on basis of "value" and "treatment."

Our standard distribution of expense contemplates only one lumber burden, which is an average cost of handling all lumber used. This is correct for all practical purposes for planing mills doing a general millwork buisness. The factory manufacturing both stock and odd work should determine the cost of handling the lumber for both classes of product.

Interest, taxes, and insurance on average stock of lumber vary per thousand feet in accordance with "value" and turnover. Consequently, these three items would be different on a thousand feet of Western pine than on a thousand feet of quartered oak. Therefore, these items are based upon the delivered purchase price of lumber. As they rarely amount to over 3 per cent. of the delivered purchase price, it would be unnecessary to determine more than one lumber burden, unless you manufacture stock extensively, in addition to millwork.

Kiln and planer expense may not be necessary in the treatment of certain kinds of lumber. Consequently, the stock factory charges these items only against those kinds of lumber using same.

In this way various lumber burdens are determined in accordance with the value and treatment. One average lumber burden is practical and fair to the millman. The only reason the stock factory needs more is it is cheaper to handle the lumber he uses for stock manufacture, and if he does not determine various lumber burdens he will burden his odd work with too little and his stock work with too much expense.

Machine Burden.

Refined on basis of value of machine and power used.

Our standard distribution of expense contemplates not more than two machine burdens. Interest and depreciation, also power expense, vary for different machines. In an odd-work factory not specializing on any particular product it is unnecessary to have more than two machine burdens. Most of the products made use both small and large machines. Factories manufacturing both stock and odd work should use more than one machine burden. The investment varies about in the same proportion as the power used, so for all practical purposes the power plant and machinery expense can be distributed to machines on the horse-power basis. More than two or three machine burdens would be unnecessary, because all products would use some of each class, and any inequality would be evened up.

The best and most accurate division of power plant and machinery expense is to determine the total horse power of, say, the stock door department—that is, the power used by all machines making stock doors—and determine one burden for all these machines. This will give you the average cost of running each machine used in manufacturing stock doors, and as they are all used in the same proportion the total costing will be accurate. This is more fully explained under "department burdens." Unless you specialize or manufacture stock extensively, do not make the mistake of using more than two machine burdens.

Department Burdens.

As explained under "Machine Burden," the power plant and machinery expense is determined for the entire door department. The other factors making up machine burden, such as indirect labor, indirect material, and floor space, are less per machine hour in the door department than in the cabinet department. Consequently the total machine burden is determined for the door department, and this amount divided by the machine hours gives the amount of burden on each machine used in making doors.

It often happens that some of the machines in the door department would be utilized to make other products than doors. You must remember that the machine burden in the door department is an average burden of all machines in that department, and, just because some of these machines were available for other uses, is not sufficient reason to use the door burden in costing these orders. In other words, after the burden is determined for making doors this burden should be used only in costing door orders and the burden determined for cabinet work used only in costing cabinet orders. Orders made under unusual conditions should be burdened only with the usual expense determined for that class, as in no other way is it possible to build an average cost. An unusual high or low cost on an individual order is lost sight of, unless it is distributed evenly against all orders of that class—which will be done in determining the burden from time to time to meet these conditions. The selling expense on an order consisting of one carload of doors might be ten times as great as on another order of like amount, but both orders would be costed, using the same commercial burden, and the only effect of an unusual condition like this would be its effect upon the commercial burden to be used in the future. It would surely be lost sight of in any other way.

This method of department burdens used by classes makes it possible to determine the result of manufacturing each class by the month. It is not necessary to debit and credit material to departments. The material used on each class is figured from the cutting bills. This saves an endless amount of work, and makes it possible for you to know accurately your profit or loss on each class of work.

If you do not manufacture extensively stock doors or sash, do not make the mistake of using department burdens.

Method of Applying Burden.

Rates used will, of course, vary in different organizations.

Example No. 1.

1,000 lineal feet Moulding.

Direct material Y. P.	$15.00
Lumber burden at $4.50 per M feet	1.50
Direct machine labor	3.00
Machine burden at 35c per hour	3.30
Factory cost	$22.80
Commercial burden at 20 per cent. of factory cost	4.56
Total cost	$27.36

Example No. 2.

1 Book Case Pedestal.

Direct material oak	$ 1.00
Lumber burden at $6 per M feet	.10
Direct machine labor	1.00
Machine burden at 35c per hour	1.10
Direct bench labor	3.00
Bench burden at 20c per hour	2.00
Factory cost	$8.20
Commercial burden at 20 per cent. of factory cost	1.64
Total cost	$9.84

Turn back and compare the four incorrect methods, formerly used, with our methods shown above. To the cost of the lumber on cars we add for labor handling up to factory door; also all yard and kiln expense. This establishes the price for lumber charged to the various jobs. No one can question that in so doing we are placing that part of the burden exactly where it should be. Example No. 1 takes care of its share of the burden, and would do so even though mahogany were used in the place of yellow pine. Example No. 2 is consistent, as very little lumber is used, and, consequently charge for lumber burden is small.

Now look at the machine burden. To the actual wages paid operator is added the established rate per hour to cover its portion of machinery and factory expense, and in so doing the machinery and factory expense is distributed on jobs requiring machine work in the exact proportion used. Cabinet work or trim will carry its proper part of the burden, no more, no less. To the actual bench wages paid is added the established rate per hour to cover its portion of factory expense. Thus all factory expense, exclusive of power plant and machinery expense, is distributed equally to the machine and bench operation on basis of direct hours, and consequently the burden on bench work will take care only of the correct portion of the expense used. To the factory cost is added commercial burden on the percentage basis, based on factory cost.

Fire Prevention in Dominion Parks

Portable Fire Engines with Remarkable Capacity Adopted by Government—Prevention Methods in Use

One of the most active government departments in the struggle against the destruction of timber by forest fires is the Dominion Parks Branch of the Department of the Interior, Ottawa, which is under the direction of Commissioner J. B. Harkin, and has given a great deal of study to the prevention and fighting of forest fires in the Dominion parks. The branch has now adopted a portable fire engine which gives remarkably good results. Most of the Dominion parks are located in the heart of the Rocky Mountains, partly in British Columbia and partly in Alberta, and the problem of transporting the fire engine in such a broken country was a very difficult one to solve. In an address recently delivered before the Commission of Conservation, Mr. Harkin, referring to the portable forest fire engine, said:

During the last year our special activities in fire protective work have related chiefly to the development of a portable gasoline fire engine for putting out fires when they occur, and to a campaign of education calculated to prevent the starting of fires.

In regard to the engine, I think it needs no argument to convince anyone that the surest way of putting fire out is to apply water. In forest fire fighting it is well known, especially in a mountainous country, that very little can be accomplished with buckets. It is a physical impossibility for men to carry water under fire conditions for any length of time, and it is equally true that usually when a man has climbed up a rough hillside with a bucket of water there is very little water left in the pail when he reaches the fire. It is the experience of nearly all who have been concerned in forest protection that most of the big fires are what are called secondary fires—that is, fires that have been placed under control once and left in charge of a watchman.

Very often a big wind storm comes up, carries the fire forward despite the efforts of the watchman, and a conflagration is the result. It was figured that if water could be got on such a confined area quickly and in quantity we could remove one of the most serious forest menaces. It was this that led us to figure on a portable gasoline fire engine.

It is obvious that light weight and high power are essential. A great deal of time and thought was given the subject. We were fortunate in securing the co-operation in this work Mr. J. C. Johnston, of the Railway Commission Fire Branch, whose mechanical aptitude and varied experience in fire fighting and fire equipment proved invaluable last spring. One engine was completed last spring. Its weight, stripped, is 118 pounds, and, equipped with solid oak base, etc., for work, 143 pounds. The engine is rated 6 horse power. It delivers 20 gallons of water a minute through 1,500 feet of hose. Assuming that it would take one man with a bucket ten minutes to deliver 10 gallons of water at a fire you will see that this engine will do the work of 200 men, and, of course, do it at insignificant cost. The outfit is provided with parallel handle bars, by which two men carry it anywhere.

There are narrow gauge trucks by which engine and hose can be taken by horse power over the timber trails. The engine in its field tests has exceeded our expectations. Let me read you some extracts from reports in this connection. J. E. Sibbald, chief fire and game warden, who was in charge of the engine part of the time, reported as follows:

The engine enabled us to burn the brush in large piles within a clearing of 40 feet in very dry weather without scorching the standing trees; also enabled us to keep fire from spreading along the ground and to entirely extinguish fires before leaving in the evening. Not on fire started up after being put out. We carried the water in one instance over a steep hill 200 feet high and along a clearing for 600 feet, the gauge showing a pressure of from 85 to 90 pounds. This enabled us, by holding the nozzle close to the edge of the fire, to make a ditch from four to six inches deep all round the fire from the force of the water. This will relieve us of digging a trench round a fire, as it is through the hidden roots that fires always spread.

C. Phillips, fire warden, who continued in charge of the engine, wrote:

The whole apparatus was given a very fair four-day test at the Alien Detention Camp at Castle Mountain last month, while the aliens were burning large piles of brush and small timber, and the pump undoubtedly kept the fire within the required area. Water was taken from the river and pumped through 800 feet of hose to points where required, varying from 50 to 150 feet above the water level. A pressure of 90 pounds was obtained at the outlet of the pump and a stream of water was thrown about 40 feet at the nozzle.

At a test in Ottawa the engine was taken to the foot of the locks and, while the engine was not working as well as it should, through an unfortunate mistake in the mixing of the gasoline and oil, it worked steadily and put water up 173 feet to the top of Parliament Hill. An engine of that kind that can be taken any place in the mountains, by man power if necessary, should be of great value in extinguishing fires which are guarded, and possibly may be of great use in direct fire fighting. The intention is to use a battery of engines. One engine would pump through 1,500 feet of hose to a readily portable canvas basin, and a second unit would pump from that on. We might require a good many units, because we are never sure of having water close to a fire. The installation is not expensive; were it so it would be useless to consider it. The engine cost $210, the hose $165, or a total cost of $375. By ordering in quantity we could, no dout, secure a considerable reduction in these prices.

Motor trucks are used for transporting the fire fighting engines and other equipment over the roads in the Dominion parks and have been giving great satisfaction. On the rear "Fire Auto" is printed prominently and the character of the country in which they successfully operate is shown in an accompanying illustration.

In continuing his address, Commissioner Harkin related the good work accomplished in removing inflammable material from the immediate vicinity of a railroad crossing, one park director saying: "We were fortunate in having a camp of interned aliens engaged on road construction there, and, as the road ran parallel and close to the railway, we had them do a considerable amount of clearing along the railway tracks outside the rights of way." The result was so satisfactory that the efforts of the aliens were utilized in other places.

A very detailed and widespread campaign of education was undertaken, and the active co-operation of private firms was secured, that rendered by the match companies being typical of all others. Mr. Harkin said: "It is admitted tht we are creatures of habit. Habit is at once our strength and our weakness, and we should therefore develop careful habits in regard to fires." He continued:

Educating the Public.

"With this object in view we started our educational work with match boxes . We figured that, in the final analysis, practically all fires originate from matches and, therefore, that a match box would be a good medium of education. We took the matter up with the match companies of Canada, and they all agreed to put the fire warning notice on their match boxes. They had to change their labels, and they did it entirely at their own expense, because they thought the cause a good one. On every match box put out in Canada, except perhaps a few safety match boxes, there is a fire warning notice. That means that nobody can take up a match box without seeing this notice, and we hope by the process of affirmation and reiteration to influence every man to some extent."

Because hunters are liable to cause fire the matter of preventing forest fires was taken up with the manufacturers of ammunition, with the result that now all boxes of shells contain a warning against carelessness with fires. One ammunition factory is pushing the plan with much energy and is supplying dealers of sporting goods with stickers, to be placed on all packages, appealing to the people to be careful of fires. The campers are another prolific source of forest fires, so that matter was taken up with the manufacturers of tents, and the result is that nearly all of the companies are inserting a warning inside the tent where the camper will see it the first thing in the morning and the last thing at night. A notice is also stitched to the outside of the tent. In an attempt to reach the woodmen, the axe manufacurers were appealed to, and at least one company is affixing a label to the handle of all the axes made that reads: "No work for the axeman if the forests are destroyed by fire. Save them by extinguishing camp fires, cigar and cigarette butts, and live ashes from pipes." As many people handle a telephone directory daily, fire prevention literature was printed in all the directories at the request of the commision. Placards were posted in the cabs of all engines operating through the parks appealing to the trainmen to be careful and avoid setting fires, as the destruction of forests means a lessening of tourist traffic and consequently loss of employment for railroad men. Fire notices were posted in the railroad coaches, and notices were printed on dining car menus, in the time tables and similar places. Notices were placed in all hotels in the parks, and an attractive card hung in each guest room, showing the danger of forest fires. This card was also freely distributed in stores, restaurants, etc. As most of the visitors to the park do some horseback riding or driving, metal fire notices were prepared and attached to the reins of all livery saddle ponies, in such a position that the rider could not grasp the reins without noticing it, and the other was attached to the dashboard and seats of all livery rigs. In addition to all this, many placards were posted by the government on all roads and trails in the parks.

One of the remarkable things about this campaign of education is that almost the entire expense was borne by the private companies. In speaking of this phase of the matter, Commissioner Harkin said: "So far as carrying on a campaign of education is concerned, our experience has been that the business men of Canada have sufficient interest in fire prevention and forest protection to co-operate at their own expense in carrying on a campaign of education."

Bombadier G. C. Fee, reported wounded and in hospital at Rouen, France, is the son of Mr. Thomas E. Fee, of Thomas E. Fee & Co., wholesale lumber dealers, Montreal.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch. each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

BASSWOOD AND PINE WANTED.—No. 2 Common and Mill Cull Basswood, 1 in. cull pine, Winter cut preferred. Apply M. Brennen & Sons, Hamilton, Ont. 16-21

Wanted to Buy

Maple Squares 18 inches to 48 inches long; 1 in., 1¼ in., 1½ in., 1¾ in., 2 in. and 2¼ in. squares.—Apply to A. K. Hansen & Company, Quebec. Que. 20-t.f.

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Lumber Wanted

We are in the market for a quantity of Birch, Soft Elm, Hard Maple and Basswood, dry stock, for immediate shipment. Will be pleased to receive full particulars as to quantity, grade, and lowest prices. Apply, The London Lumber Co., Ltd., London, Ont. 18-21

For Sale-Lumber

Lumber Wanted

A list of what stock you wish to move placed in this column for a few issues will dispose of the lumber. Let us quote you on an ad. 20-23

For Sale

75,000 to 100,000 feet hickory. Will cut at once. Sell in log or dimension stock. What grades and sizes can you use? Located near Kalamazoo, Mich. Also some red and white oak. Address B. H. Honeywell, 721 N. U., Ann Arbor, Mich. 21-21

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que.

For Sale

1 car 1 x 4 in. and wider, 37 in. long.
1 car 1 x 4 in. and wider, 31 in. long.
1 car 1 x 4 in. and wider, 22 and 25 in. long.

Dry Quartered White Oak, Clear 1 face 2 ends and 2 edges, 2 years old, nicely figured, Ohio stock. Write us for delivered prices.

PROBST LUMBER COMPANY,
18-21 Cincinnati, Ohio.

For Sale

We have the following stock for immediate delivery:—

50,000 ft. 3 x 6 Hardwood Hearts, mostly Maple.
25,000 ft. 4 x 4 Hardwood Hearts, mostly Maple.
200,000 ft. 1 in. Hardwood crating, principally Maple and Birch.
100,000 ft. 1 in. Birch, No. 2 Common and Better.

The Pedwell Hardwood Lumber Company,
18-t.f. Toronto, Ont.

For Sale-Machinery

Machinery Wanted

If you have any machinery for sale right here in this column is the place to advertise it. Every man who reads here is looking for a machine—if you have that machine you can do business. Let us quote you on an ad. 20-23

FOR SALE

1—Wicks Gang.
1—Ideal Engine, 13 in. x 12 in.
1—Plain Engine, 16 in. x 24 in.
1—Plain Engine, 5 in. x 7 in.
1—Boiler, 72 in. x 16 in.
1—Boiler, 54 in. x 12 in.
2—Upright boilers.
1—Cookston water heater.
Several steam pumps.

CHAS. PEDWELL,
16-t.f. McVicar, Ont.

FOR SALE

We have the following second hand machines to offer, ask us about others not listed, if you are interested.

1 Egan 30 in. 2 drum sander.
1 McGregor Gourlay 30 in. 2 drum boss sander
1 Jackson Cochrane 36 in. 3 drum sander
1 Egan 42 in. 3 drum sander
1 Cowan 42 in. 3 drum sander
1 Cowan 48 in. 3 drum sander
1 C. M. C. 8 in. 4 side sticker
2 Ballantyne 12 in. 4 side stickers
1 Egan 36 in. single surfacer
1 Harper 26 in. single surfacer
1 Cowan No. 220 24 x 10 single surfacer
1 McGregor Gourlay QY 15 in. planer and matcher
1 McGregor Gourlay QY 9 in. planer and matcher
1 Jackson Cochrane 54 in. band resaw, 5 in. blade
1 Jackson Cochrane No. 165 rip saw

P. B. Yates Machine Co., Limited
Hamilton, Ont.
19-t.f.

Wanted-Machinery

Secondhand Refuse Burner, 24 ft. diameter preferred. Give full particulars and price. The Knight Bros. Co., Ltd., Burks Falls, Ont. 21-t.f.

Burner Wanted

Wanted, Secondhand Standard Steel Burner, 20 to 25 ft. in diameter. Must be in good condition. Give full description with price, and state where same could be delivered in case of purchase.

FRASER LIMITED,
21-24 Fredericton, N. B.

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

MARRIED MAN, THIRTY YEARS OLD, ten years' experience in office work as Accountant, speaking both languages, desires to change, best of references. For particulars write to P. O. Box No. 69, Three Rivers, Que. 16-24

FIRST CLASS SAWMAKING FILER—Wants piece work contract. Shingle or Long lumber mill filing; will take Kendall gang or lath machines by thousand. Open for any proposition November 1st. Arrange now for next season. Apply Box 439, Canada Lumberman, Toronto, Ont. 21-21

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

FIRST CLASS MILLWRIGHT WANTED at once to install machinery in saw mill. The Turner Lumber & Pulpwood Company, Lake Edward, Que. 20-22

Business Chances

Billion feet, mostly Fir and Cedar, near Vancouver, 35 cents towage to free mill site. Will sell all or part and manufacture. Owner, E. Nichols, 1755 13th Ave. E., Vancouver, B.C. 21-21

For Sale—Controlling interest in a Saw and Planing Mill, capacity 25,000 feet. Could be increased considerably. Mill on rail and tide water. Unlimited timber supply. For particulars apply to R. H. Young, Squamish, B.C. 21-24

Timber Tract and Mill

Valuable Timber Tract, British Columbia; nearly 10,900 acres; 60,000,000 feet of timber; on railroad. Local market for mine props. First class mill, 30,000 feet daily capacity. Very attractive proposition. George W. Grant, P. O. 1676, Calgary, Alta. 18-21

For Sale

Saw-mill Plant at Twin Lakes, near New Liskeard, Ontario, fully equipped including tools, cooking and boarding house outfit.

Mill capacity 10,000 feet per day.

Price reasonable for quick sale.

Plenty of timber adjacent.

Apply TERRY & GORDON,
704 Confederation Life Bldg.,
Toronto, Ont.,
or
21-21 W. D. Watt, New Liskeard.

For Sale

Planing Mill and Lumber Yard in Town of Sudbury, Ont. Electric power, 40 h.p. motor, planer and matcher, surfacer, rip-saw and dado saws, sticker, circular resaw, crosscut saw, turning lathe, mortiser, tenoner, borer, sander, sash and door clamp, shaving baler, automatic knife grinder, fan and blowing system, knives, etc. Mill now running, dressed lumber buildings, barn. No better location in town. Splendid rail facilities, and no doubt the best thriving town in Ontario.

Address, Box 457, Canada Lumberman, Toronto, Ont. 18-t.f.

For Sale

Twenty acres Elm and Basswood, also 40 acres of Virgin Cedar near station. S. A. Price, 71 Lakeview Avenue, Toronto, Ont. 20-23

Miscellaneous

Blankets For Sale

Two Hundred Pairs Clean Blankets in good condition. The Peterborough Lumber Company, Limited, Peterborough, Ont. 20-21

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont.

For Sale

One hundred square miles of Pine and Spruce limits well situated on the St. Maurice River, on which at least 400,000,000 feet of lumber will be found. Price $350,000, payable $150,000 cash and the balance in four annual payments, with interest at 6 per cent. For full particulars apply to La Cie des Bois du Nord, 71a St. James Street, Montreal. 21-21

Tenders for Pulpwood and Pine Limit

Tenders will be received by the undersigned up to and including the 1st day of December next for the right to cut pulpwood and pine timber on a certain area situated on the Pic River and other territory adjacent thereto, in the District of Thunder Bay.

Tenderers shall state the amount per cord on pulpwood, and per thousand feet, board measure, on pine, that they are prepared to pay as a bonus in addition to dues of 40 cents per cord for spruce, and 20 cents per cord for other pulpwoods, and $2.00 per thousand feet, board measure for pine, or such other rates as may from time to time be fixed by the Lieutenant-Governor-in-Council, for the right to operate a pulp mill and a paper mill on or near the area referred to.

Such tenderers shall be required to erect a mill or mills on or near the territory and to manufacture the wood into pulp and paper in the Province of Ontario—the paper mill to be erected when directed by the Minister of Lands, Forests and Mines.

Parties making tender will be required to deposit with their tender a marked cheque, payable to the Honourable the Treasurer of the Province of Ontario, for twenty-five thousand dollars ($25,000), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said $25,000 will be applied on account of bonus dues as they accrue, but the regulation dues, as mentioned above, will require to be paid in the usual manner as returns of cutting of wood and timber are received.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.

Toronto, August 28th, 1916.

N.B.—No unauthorized publication of this notice will be paid for. 18-22

Teams Wanted

We want to hire six or eight teams for winter haul, with or without teamsters. Work to commence about January 10th, 1917. Write Box 392, Huntsville, Ont. 22-23

Tenders for Pulpwood and Pine Limit

Tenders will be received by the undersigned up to and including the 1st day of February, 1917, for the right to cut pulpwood and pine timber on a certain area situated on the Black Sturgeon River and other territory adjacent thereto, in the District of Thunder Bay.

Tenderers shall state the amount per cord on pulpwood, and per thousand feet board measure, on pine, that they are prepared to pay as a bonus in addition to dues of 40 cents per cord for spruce, and 20 cents per cord for other pulpwoods, and $2.00 per thousand feet, board measure, for pine, or such other rates as may from time to time be fixed by the Lieutenant-Governor-in-Council, for the right to operate a pulp mill and a paper mill on or near the area referred to.

Such tenderers shall be required to erect a mill or mills on or near the territory and to manufacture the wood into pulp and paper in the Province of Ontario.

Parties making tender will be required to deposit with their tender a marked cheque, payable to the Honourable the Treasurer of the Province of Ontario, for ten thousand dollars ($10,000), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said $10,000 will be applied on account of bonus dues as they accrue, but the regulation dues, as mentioned above, will require to be paid in the usual manner as returns of cutting of wood and timber are received.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.

Toronto, 1916.

N.B.—No unauthorized publication of this notice will be paid for. 21-22

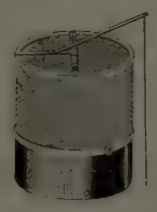
Paper Mills to Use New Woods.

Washington, Oct. 30.—As the result of studies which have been made at the Forest Products Laboratory on methods of handling wood chips suitable for paper pulp, it is announced that Wisconsin paper companies are now negotiating with the railroads for shipment to their factories of experimental train loads of chips of Western woods adapted to paper making. Previous investigations by the Forest Service have demonstrated that good grades of paper can be made from a number of Western woods. The experts now estimate that some of these woods, when cut into chips and dried and baled, can be delivered to the mills in Wisconsin at a very small advance over the cost of chips made from local timber. If a favorable freight rate can be obtained, they say, the great quantity of pulpwood on the national forests should prove to be a considerable factor in supplying favorably located paper mills with the necessary raw material. In Wisconsin alone, it is stated, there is an annual market for over 300,000 cords of pulpwood.

The war has cut down the total shipping of all nations engaged in trans-Pacific trade from 380,000 gross tons to 280,000. Before the war American shipping comprised 21 per cent. of the total, British shipping 39 per cent., and Japanese 33 per cent. Up to the time the recent purchases were made American shipping had fallen off to 2 per cent., British tonnage had fallen off to 30 per cent., Japanese tonnage had increased to 55 p.c. of the total; Dutch shipping had jumped from practically nothing at all to 13 per cent. English tonnage fell from 150,000 gross tons to 84,000 tons, Japanese tonnage increased from 125,000 to 155,000 tons, and the Dutch increased from a negligible quantity to 35,000 tons.

HARDINGE
Watchman's Clocks
Write for details
SIGNAL SYSTEMS CO.
205 Stevenson Bldg., TORONTO

Spark Arresters



Wire Cloth for Refuse Burners

Our spark arrester is substantially built and will last for years. Don't wait until a fire has visited your property, equip your mill at once.

Prices on application

Canada Wire & Iron Goods Co. Limited
HAMILTON, ONT.

The Lumberman's Milk
IN POWDER FORM
KLIM

READ BACKWARD

Klim is pure—cheaper than fresh liquid milk. One-third the cost of condensed milk. No freights on useless water—keeps in any temperature—no waste. Packed for camp use especially in 10 pound tins $2.00 each, the pound makes one gallon. Case lots, special price.

Write for samples, etc.

Canadian Milk Products Ltd., Toronto
Plants:—Belmont, Ont., Brownsville, Ont. Head Office:—Mail Building
Montreal Office—508 New Birks Building

Union Lumber Co.
Limited

Complete Stock
White Pine
Red Pine
Spruce

5 Cars Dry 32 in. Mill Run White Pine Lath

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

Review of Current Trade Conditions

Ontario

During the past fortnight there has been a decided improvement in the lumber market situation throughout Ontario. About a month ago it was difficult to find any wholesaler or retailer who would say that trade was good. In fact everybody was talking about the volume of trade being very low and the demand practically dead in many lines. Today the situation seems to have changed in practically all lines. Undoubtedly the outlook for next winter's logging operations which will probably be smaller than ever before, and more costly, has had much to do with the improvement in trade. Re tailers have realized pretty generally that anything they buy next spring will cost them far more than what they have been paying previously, and that if they get into the market now and obtain such stocks as are available they are likely to come off much better than if they wait. In addition to the small output to be expected next winter, another factor is helping in the improvement that has lately developed. This is the recognized scarcity of many lines of stock. Last winter's production was none too heavy and the quantity of stock consumed during the past summer, both in Ontario and abroad has cleaned up many lines. One has only to recall the extensive export demand and activity locally in the furniture factories, box factories, etc., to account for the disappearance of the moderate stocks that have come from the mills during the past year. The indications are that we may look forward to at least as good trade during the coming year as during the past, and this being the case there is only one conclusion that seems reasonable, namely, that next year stocks will be both short and high in price. The improvement which has taken place in the market is therefore a logical one.

It is not possible to specify particular lines which are showing any special activity. So far as the building trade is concerned it continues on a very quiet basis, being practically non-existent in the large cities and only moderate in the small towns and country districts. As usual, during the past year, the chief consumption continues to be for the important wood consuming factories, especially those that are turning out shell boxes. There is no news to publish at present in regard to new shell box contracts, though many manufacturers are expecting something before long on account of the placing of contracts for various kinds of war supplies by Great Britain, in Canada, to the extent of some $60,000,000, which was recently reported.

Eastern Canada.

Reports of improved trade conditions are received from most points in Eastern Canada. During the past fortnight the trade at St. John has improved greatly, particularly in connection with purchasing ahead for British, French, and United States markets. The price of deals for next year's cut is about the same as for last year's, from $18 to $20 per thousand feet, according to the quality and specification. Scantlings and fourths are bringing about $2.50 per thousand feet less than merchantable. Enquiries from the United States are increasing. Prices are about $16.50 per thousand feet for scantlings and narrow planks. Lath are firm at $2.75 per thousand, and the demand is good. Stocks of shingles at St. John are practically nil, so far as the better grades are concerned. Prices are stiffening for the local trade.

At Montreal the lumber trade has also shown improvement during the past two weeks. There is a good demand for shell box lumber, and the general trade situation is also better. Trade during October has been better than during any previous month this year. Enquiries from the United States are increasing, and the volume of trade is greater. Exports to the United Kingdom are going forward steadily in fair quantities. Shipments of birch have been increasing, and are now of considerable extent. Ocean freight rates continue at from $275 to $300.

The spruce market at Boston continues firm and offerings are light. Random quotations are quite firm. The car shortage in eastern Canada is preventing Canadian spruce from entering the Boston market extensively. Current quotations are firm on the following basis:—2 x 3, $22.50 to $23; 2 x 4, $23.50 to $24; 2 x 5, 2 x6 and 2 x 7, $22 to $23; 2 x 8, $26 to $27; 2 x 10, $27.50 to $28; 2 x 12, $28.50 to $29. There is a fairly good demand for shingles at Boston and offerings are moderate. The best white cedar extras are held at $3.60 and clears at $3.30. Red cedars are firm and are bringing $3.85 for satisfactory makes of extras. Lath continue firm and offerings are becoming smaller. Some producers are now refusing anything under $4.50 for 1⅝ in. and $4 for plump 1½ in. There is not much trouble in disposing of anything in the way of good hardwood stocks at Boston, so long as prompt delivery can be guaranteed. Inch maple 1sts and 2nds has been selling at $45. Plain oak is in good demand and quartered oak is quiet. Birch is selling well. Current quotations on 1sts and 2nds 1 in. are:—Basswood $44 to $46, maple $42 to $45, plain oak $63 to $65, quartered oak $89 to $91, red birch $57 to $59, sap birch $47 to $49, white ash $56 to $60.

United States

The general trade activity of the United States continues, and practically the only thing preventing the trade from even greater expansion is the inability of the railway companies to supply sufficient transportation facilities. All reports agree that retail trade is extending, that buying for next spring is broadening to some extent, that prices continue high, labor continues scarce and the railroads are buying more freely in the steel market. Collections are reported to be good, and interior merchants are paying off old debts. Apparently therefore, United States manufacturers are in an excellent position to weather a storm of almost any kind. Manufacturers on the west coast report a decreased eastern rail trade, but that this has been offset in an increase in the cargo trade following upon more plentiful tonnage. Production of the west coast mills continues below normal. California sugar and white pine manufacturers report satisfactory demand. Southern pine manufacturers are suffering more severely from the car shortage than any other lumber manufacturers. Extensive curtailment of production has brought the output of southern pine down practically to a level with the demand, and manufacturers are able to obtain a better price than they have for a long time past. Prices in some cases have advanced materially and are on the average about $1.50 per thousand higher than they were a month ago. Business is offering freely at these prices, but only a small portion of it can be booked on account of the car shortage.

The demand for northern pine at Chicago continues strong. The yard and corporation trades are active and there is also a good demand for box lumber. The northern pine market at Buffalo is firm in all lines. Stocks are short in many grades.

Continued improvement is reported in the hardwood trade and it is also suffering greatly because of the car shortage. Furniture factories are busy and consuming large quantities of material. In fact all the wood consuming plants that use hardwoods extensively are being run at their capacities.

Great Britain

The advancing tendency in c.i.f. prices in Great Britain has been checked to some extent of late. The experience of c.i.f. buyers last spring was not a very pleasant one and they are holding back now as a result of what they learned at that time, and are watching the course of spot values very closely. Recently there have been a few runs on particular dimensions and prices have gone up rapidly, but the general level of prices has not been affected and reaction has set in as soon as the special orders have been completed. Very high prices have been paid for 3 x 11 in. deals and for all 4 in. stock. Freight rates from the Baltic have become more steady and prices of wood goods have shown a tendency to reach a fairly definite basis. The spruce market is still rather unsettled and shows a greater difference between spot and c.i.f. values than in the case of Baltic wood. Ar rivals of spruce at some of the west coast ports have been rather too heavy in view of the reduced consumption. This condition, however, is certain to be corrected with the end of the shipping season and the development of winter requirements. Some merchants are holding their stock more firmly. Business is rather slow, but the general tone is better and looks as though it will continue to improve. Quotations ex quay seem to be about £28 for 9 in., £26 for 6 in. and £24 to £25 for the smaller sizes. At Foy, Morgan and Company's recent auction sale 1 x 5 St. John spruce, dry, 1st, 2nd and 3rd brought £21 per standard.

Statistics show that stocks of spruce at Mersey points still make a pretty heavy showing in spite of curtailed imports. The consumption has fallen off recently and has brought about rather unsettled conditions for c.i.f. transactions. Importers in general are acting cautiously on account of the uncertainty of the future situation. Heavy f.o.b. contracts have recently been placed, most of the stock being for France, and it is hoped that this will practically clear the winter shipping ports of stock.

Glasgow importers report that the market for all kinds of pine is very dull, and that far too much stock is on hand for the very limited

View of Mills in Sarnia.

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Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

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SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

requirements. Quotations for unsorted spruce, c.i.f. Belfast, were recently reported at £20 15s for 3 x 4 to 6 in. The demand for pine in Great Britain has not been very keen of late, but the volume of receipts from Eastern Canada will probably show up fairly well as compared with last year. Receipts of birch are more extensive of late, but are kept down to a considerable extent by the difficulty in obtaining Board of Trade permits to import. Practically all of the forward purchasing in Great Britain is now being done in connection with stocks required by the Government, both for Great Britain and France. Apparently the Government desires to handle nearly all of the supply and to be certain about such stocks as it purchases for future use.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Trade Much Improved

St. John, N.B., Oct. 24.—(Special to the Canada Lumberman.)—The last two weeks have shown a very material improvement in the purchasing ahead market for British, French, and American markets. Of course, the British and French trade is purely for war material, very little, if any, being bought by private account, the governments preferring to handle about all the supply and also to be sure of any stock they are buying ahead. How much they will want and the way they are able to transport it will have a vital effect on the market. At any moment they may stop purchasing, and this will cause a severe setback, as private individuals cannot purchase and pay the extreme freights that are being asked by steamships. Very little building is being done in England—in fact, any persons who attempt to build any work costing more than £500 must first obtain a permit from the government.

Prices for deals for next year's cut are about the same as last year—from $18 to $20 per M, according to the quality and specifications. Of course, the smaller the specification the lower the price, with scantlings and fourths about $2.50 per M less than merchantable.

The American market is firm, with many enquiries coming into the province. Prices are netting about $16.50 per M for scantlings and narrow planks.

Laths are stiff at $2.75 per M, with a good demand.

The shingle market at St. John is practically bare of all better grades. Of course, there are some Ex. No. 1 and second clears. The prices are stiffening for local trade.

The St. John River Log Driving Company have just completed rafting operations, having rafted 54,000,000 feet during the past season. This is some 3,000,000 feet less than rafted in 1915. It is made up as follows About 48,000,000 feet of spruce, 4,000,000 feet of pine, and 2,000,000 feet of cedar. Practically no logs are left in the River St. John, from the source to the mouth, which is unusual. A few are at Grand Falls, but this is usual, as they go in to the falls in the spring and remain there until the following spring.

At the present moment it is almost impossible to forecast the log cut for 1916. With the scarcity of help and the high price of food both for man and beast, it will surely cost more to log this winter, but all localities will not be affected to the same extent. Places where there is a large population of farmers and lumbermen, with good crops of oats, etc., will not be as hard hit as those in other sections.

Better Trade at Montreal

Montreal, Oct. 24.—(Special to the Canada Lumberman.)—Conditions in the lumber trade have considerably improved of late. This is due mainly to the demand for shell box lumber, but the situation is also better as regards the general trade. One wholesaler stated that October promised to be the best month this year, and another declared that business was quite brisk. There are still complaints of difficulty in obtaining certain lines from the manufacturers, who are hard hit by the decrease in the labor supply.

Pulpwood prices are hardening, and supplies are also limited.

Enquiries from the United States have increased, with a larger volume of business passing.

The Imperial Munitions Board have called for tenders for further quantities of boxes. The board have also placed an order here for cartridge boxes.

Exports to the United Kingdom are still going forward in fair quantities. The amount of space in liners is restricted, owing to the heavy consignments of produce, but this lack of room is in a measure made up by two more tramps which have been loading spruce here. The call for pine has not been very keen, although the volume of this lumber this season will probably be found satisfactory, considering all the conditions. A considerable amount of birch is being shipped, and more would go but for the difficulty of securing British Board of Trade permits. Freight rates are about the same, 275s to 300s being quoted.

The sulphite market continues buoyant. Stocks on hand are small and the demand is as good as ever. Several projects for adding to production are being carried out, and the new year will see a much heavier tonnage available. Several English paper makers made a strong protest against the limited amount of pulp admitted to the country as compared with the imports of paper, with the result that the Government have raised the quantity of pulp to be imported. Canada continues to send substantial amounts to the other side. Ground wood is very firm, and in strong request. Although the manufacture of newsprint by the principal mills on the Continent has increased about 500 tons per day, the purchases are so numerous that stocks have materially decreased, and on the 1st of October these stocks were lower than at any previous date in the history of the industry. The figures show a falling off, month by month, since the beginning of the year, consumption being in excess of the output.

Glasgow Report on Lumber Trade

Calder, Henderson & Livingston, Glasgow, in their quarterly timber market report, under date of October 1st, say:—While a steady consumption of wood goods for war purposes was maintained, the general enquiry was very quiet and trading conditions throughout the quarter were of about the worst possible description. A serious fall in prices of the leading items of the passing consumption, viz.:—Spruce deals and North of Europe white pine, was occasioned by a substantial drop in freight rates and values of almost all other woods were also affected. The change to lower figures brought no expansion in the volume of business, but only served to scare buyers, who refused to operate except for absolute pressing wants or at throw-away prices.

Arrivals of spruce and pine deals were much in excess of requirements, especially the former, and a restriction of imports would help to steady values. Other arrivals on the whole were moderate, and in the case of prohibited woods decreased quantities came forward. Stocks of spruce and pine deals are too heavy. Log timber in the aggregate is moderate but ample for present requirements, and American hardwoods are lightly stocked.

Shipbuilding orders did not come away to the extent expected. Packing-case makers were busily engaged, but report fresh orders as scarce. Other wood consuming industries were fully employed excepting cabinet-making, which was very quiet, and housebuilding, which, apart from erections for munition workers, remained in a state of stagnation.

Yellow Pine—Waney.—Arrivals were light. No improvement in the enquiry for first class deckwood was in evidence, as the expected early return of the shipbuilders to mercantile work did not develop. All other sizes and qualities were also neglected. The consumption for the quarter was extremely poor. Values, in the entire absence of demand, were not tested and were nominally on a high level, but are now weaker on the basis of the lower freight rates current. The stock shows a reduction compared with that of last year at this period, and is more than ample under present conditions.

Oak.—The import was about an average one and came to a very bare market. It consisted mostly of first class wood suitable for railway work, etc. Unfortunately the high figures required scared buyers, and as far as possible they filled their requirements from the cheaper United States logs and also native timber. The consumption suffered and was about the lowest on record for any quarter. Stocks are heavier than those of last year. Values are high.

Elm.—A limited enquiry was experienced for first class logs of good sizes and resulted in a very moderate consumption. High prices ruled and the stock, though to the heavy side, is firmly held for all qualities and sizes.

Birch—Logs.—The import was moderate and arrived on a market bare of stock, but the extreme prices required practically put a stop to purchasing and caused the using of cheaper substitutes, such as native elm, beech, etc. Values weakened but are still considered too high by buyers. Stocks are ample. Planks.—A moderate quantity, partly on contract, arrived and was on the whole well taken up. Prices were high and kept steady and retain their firmness.

Deals, battens and boards—Pine.—Arrivals of all descriptions and sizes were largely in excess of the enquiries, so that stocks all round

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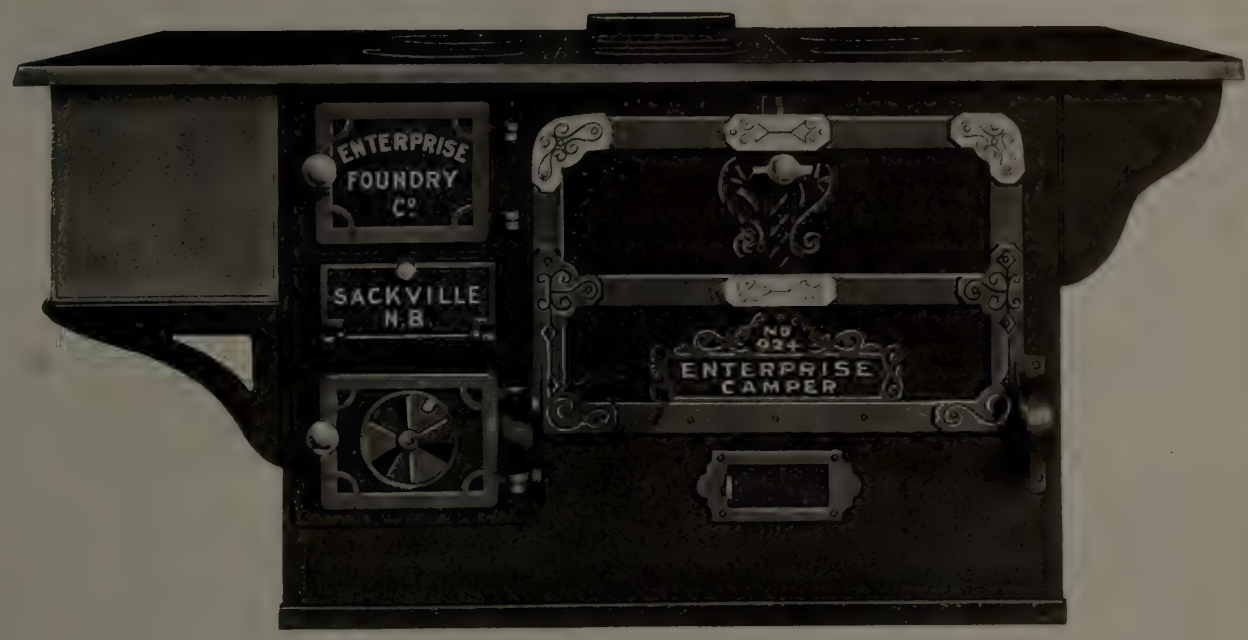

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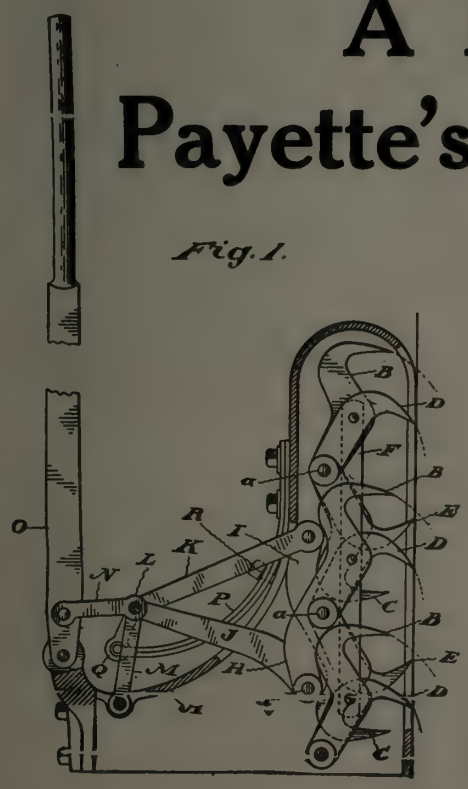

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We also manufacture the following High-Grade Saw-Mill Machinery:—New Modern Saw-Mill Carriages, with either three or two head blocks; P. Payette's New Patent Saw-Mill Dog, for use in either winter or summer. P. Payette's Grip-Set Works; Steam Feed Valves, Steam Lifter and Loaders, Valves, Five different classes and styles of Edgers, for either light or heavy duty. Combined Gang-Circulars and Edgers, or Independent Gang Circulars.
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are too heavy. Values, affected by the absence of demand and the fall in freight rates all over weakened, but are now somewhat steadier.

First quality.—For broad deals 12 inch and up by 3 inch only occasional enquiries were received, and transactions were difficult to carry through owing to the high figures wanted and also the competition with the cheaper Siberian wood. Regulars and undersizes were not wanted.

Seconds.—For all sizes there was no demand, the import and stock remaining practically untouched.

Thirds and Fourths.—Experienced a very moderate enquiry, chiefly for the regular sizes 11 inch by 3 inch.

Red pine.—Was seldom enquired for and could only be moved at a low figure. Stocks are ample, especially in view of the limitations of building construction, except for munition purposes.

Spruce arrivals were too heavy and the demand very disappointing. Buyers in the face of the falling market purchased lightly and only for immediate requirements and consequently stocks show a large increase. The competition of cheap Swedish deals and box shooks was keenly felt. Under pressure to sell values showed a substatntial reduction, but are now considered to have about touched bottom, and the tendency is towards steadier prices. Stocks are ample and a lessened import would help to regulate values. The demand at present is not strong.

Spruce Stocks Heavy on Glasgow Market

Cant & Kemp's, Glasgow, in their timber market report, under date of October 2nd, write as follows:—There is little change to report in the position which developed in the latter part of the previous quarter. Buyers are showing no desire to make extensive purchases and seem quite content with the "hand to mouth" system of buying which has been a feature for some months, while the fall in freights was no doubt the primary cause of this policy, other factors have influenced its continuance. The considerable imports of spruce, for instance, coupled with the fear of a much lower rate of consumption, have given buyers the impression that they will be able to get their needs supplied whenever necessary without much difficulty. The recent rises in the freight from Sweden, which had reached a low level, compared with earlier in the season, will probably have a firming influence on spruce. Yellow pine deals have met with a poor demand and there is ample stock unless there is some unforseen development.

The full effect of the prohibition of various hardwoods and fancy woods is now apparent and no further lots are likely to get forward. In spite of this fact, the demand is very trifling, and there are still some parcels in first hands for sale.

Shipbuilders are still mainly employed on government work. There has been a little more enquiry from this source, but until they can get ahead with merchant work there can be no great volume of business.

Quebec waney and square pine.—The stock is lower than usual but appears ample for the demand.

Quebec red pine.—The stock of timber is "nil." The stock of deals is sufficient for the small demand.

Quebec oak.—The stock is considerably increased and meeting with a fairly ready sale at good prices.

Quebec elm.—The stock is lower, and prices keep firm, though the demand is not very active.

Ash.—The stock is not heavy but quite ample for the demand, owing to the competition of home ash. Quotations are—5s 6d to 7s for first class parcels of logs and from 4s 6d to 6s per cubic foot for planks and boards, according to quality and specification.

Birch.—The stock is increased but the demand is very disappointing. Quotations are—4s 6d to 5s 6d. Planks 3s 6d to 4s per cubic foot.

Quebec yellow pine deals, etc.—The stock is much heavier, and the demand is restricted. Quotations are—Firsts—Broads, 6s 7d to 7s. Regulars, 6s to 6s 3d. Undersized, 4s 9d to 5s. Seconds—Broads and Regulars, 5s to 5s 6d. Undersized, 4s to 4s 3d. Thirds—Broads and Regulars, 4s to 4s 4d. Undersized, 3s 7d to 3s 9d. Fourths—Broads and Regulars, 3s 9d to 4s. Undersized, 3s 5d to 3s 6d. Good Sidings, 5s 6d to 6s 6d,—all per cubic foot, according to specification.

Quebec spruce deals.—The stock has greatly increased and prices have fallen. Quotations are—9 inches and up, 3s 6d to 3s 9d.; 8 inches and under, 3s to 3s 3d per cubic foot.

Lower port pine and spruce deals.—The stock is considerable. Quotations are:—9 inches and up, 3s 4d to 3s 7d, 8 inches and under, 2s 11d to 3s 1d per cubic foot.

New Brunswick North Shore Operations Increasing

Lumbermen on the North Shore of New Brunswick are preparing for a larger cut of logs on Miramichi waters this winter than last winter, according to a report by J. M. Scott, of Fraser Limited, Fredericton, N.B., who recently visited a number of the manufacturers. Last winter the cut on Miramichi waters was 68,200,000 superficial feet. This winter's cut is sure to be much larger, and at the present the estimate is that it will be over 90,000,000 feet. Fraser Limited, will cut 12,000,000 feet on the Clearwater for the mill at Nelson, N.B., and about the same quantity for the Victoria mill at Fredericton. Lumbermen on the St. John River are not yet certain about the extent of their operations during the coming winter as they have to face a serious problem in connection with the shortage of labor. It is considered likely that a large number of French Canadians will be taken to New Brunswick for woods operations this winter.

Liverpool and Manchester Stocks

The following report upon Liverpool and Manchester stocks for the month ending September 30th, 1916, is furnished by H. W. Lightburne and Company, Liverpool, and their St. John, N.B., representative, John E. Moore and Company, Limited:

Spruce and Birch

Month Ending September 30th, 1916

Liverpool

	Import			Consumption			Stock		
	1914.	1915.	1916.	1914.	1915.	1916.	1914.	1915.	1916.
N.B. & N.S. Spruce & Pine, Stds. ..	5,380	5,950	6,240	2,850	3,540	2,770	9,180	16,410	14,610
Birch Logs, Loads.	460	40	180	320	80	320	740	1,260	
Birch Planks, Stds.	145	206	485	61	170	315	418	800	703

Manchester

Spruce, Stds.	4,900	9,430	3,240	5,810	6,430	4,260	13,190	19,550	19,950
Birch Logs, Loads	240	280	0	200	500	60	920	1,180	240
Birch Planks, Stds.	176	509	0	79	164	55	618	946	473

Stocks in Manchester and Liverpool Combined

Spruce

	1912.	1913.	1914.	1915.	1916.	
Manchester	15,870	25,270	13,190	19,550	19,950	
Liverpool	8,320	7,840	9,180	16,410	14,610	
	24,190	33,110	22,370	35,960	34,560	Stds.

Birch Logs

Manchester	500	320	920	1,180	240	
Liverpool	1,140	520	320	740	1,260	
	1,640	840	1,240	1,920	1,500	Loads.

Birch Planks

Manchester	794	551	618	946	473	
Liverpool	867	715	418	800	703	
	1,661	1,266	1,036	1,746	1,176	Stds.

Barbados Market Report

S. P. Musson, Son & Company, Bridgetown, Barbados, report under recent date as follows:—Lumberstuffs—White pine—No arrivals have taken place during the fortnight, and as there is a good enquiry we would recommend later shipments which should sell well. Spruce—The Schr. "Ainslie" from Gaspe has brought a small lot of 30,000 feet which have been sold at £31 duty paid. Supplies are wanted. Shingles—The Schr. "Ainslie" has brought 847,000, of which 640,000 are cedar laying, and these have been sold at $2.50 duty paid for Extra No. 1's, and $2.10 for No. 1's. The remainder of 207,000 are Long Gaspe, and these brought $6.00 duty paid. Shingles of both descriptions are wanted for later shipment. Wood hoops—No receipts. Shooks—The S.S. "Cratheus" from Mobile has brought a small lot of 521 bdls. shooks.

Important Improvements at Port of St. John

The Canadian Pacific Railway Company is laying plans for another record season at St. John, New Brunswick, during the approaching winter. It will be remembered that all records for the port were broken last year by an export valuation of 24,000,000 sterling, as against £8,600,000 in the previous year. The Canadian Pacific Railway's programme of improvement, which has already been entered upon, calls for additional trackage space sufficient for 350 cars in their west-side freight yard. This will bring the total yard accommodation up to 1,850 cars. All light rails now in the yard will be replaced by heavier metals; a new coaling plant will be erected, a 20,000,000-gallon fresh water tank installed, and the capacity of the sidings between St. John and Montreal increased. Other concerns are likewise providing for increased demands on their freight and passenger handling capacity.

J. D. Buckley, Newcastle, N.B., has exported 25 vessel loads of lumber and timber during the present year. The last vessel shipped out carried 3,800,000 feet. Mr. Buckley has sent 200 men into the woods for the coming winter's operations. This is twice as many men as he employed in the woods last year.

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SO WRITES Mr. Wm. H. Turner, secretary and treasurer of **The Easton Furniture Company,** of Easton, Md., after giving the "Morehead" system a thorough trial.
Until you are draining the condensation from your kilns and returning it—every drop—to the boilers at the **original temperature—**
—you are wasting heat units that **cost** you DOLLARS to produce.

STOP THAT WASTE!

Rejuvenate your entire steam plant by making the inexpensive "Morehead" system a part of it.
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Co-operation of Employer and Men

Logging Results Improved by Good Treatment of Men and Mutual Esteem Between them and the Employers

By D. S. Painter, McCloud River Lumber Co.*

There can be no doubt at all in the minds of any who have the control or handling of labor that to obtain efficient results there must be co-operation, at least, between yourselves, the company you represent and the men in your employ. There is great need for the employer and employe to work together, and the present time is particularly appropriate for co-operative effort.

Years ago, when practically everything was done by human hands, labor was plentiful—there was little or no competition—the employer had not personal interest in the welfare of the employe—paid them almost nothing, and the output per man was in proportion to his pay. The education of the masses has changed all this. They are to-day a higher type of man than they were then, and, being such, demand more consideration.

In this day of keen competition and modern improvements in all kinds of machinery the operator must get all he can from the labor he employs. The question is, "How to get the best results, and how his labor must be handled to get these results." The answer is, "Welfare work." Within the meaning of these two words wonders can be accomplished. The constantly increasing disposition on the part of the employer to regard the interest of his employes with the degree of concern that attaches to his own affairs is hopeful. It is not so long ago that the employer believed he had no interest in the person of his employe beyond the door of his mills and factories. He knows now that he owes something more than the opportunity of giving a man a mere job. He knows that if the greatest economy in production is to be secured, the people who make up his organization must live in an environment and under circumstances conducive to highest efficiency.

Camp Improvement Noticeable.

A beginning has been made in practically all of the logging camps and industrial towns already. Compare the vermin-infested bunkhouses and the fly-breeding camps of a few years ago with the sanitary surroundings in which the loggers and mill employes live to-day. This change has been made voluntarily in some instances by the employers, but with others it was necessary to pass laws governing sanitation in camps. Give a man a good place to sleep, good, wholesome food to eat, pleasant surroundings for his hours of rest and recreation and his whole being is more in accord with the management that makes such things possible. A manager who is located a distance from his operation does not come in contact, and therefore does not know his men. His demand is generally "maximum economy and output," which means low wages and as much work as possible. Most all labor troubles have been caused by a mutual misunderstanding. The industrial woods are full of schemes these days to bring together in the spirit of better understanding the employer and employe. Some of these efforts have succeeded admirably, while many have failed. The motive, however, has been in the main honest, and, as a consequence, encouraging headway has been made. What we want are the methods by which a better understanding, which results in more co-operation, can be obtained. One of the best indications of finding the right path through the thicket of industrial misunderstanding is the disposition on the part of both to listen to each other.

The best way I know of to get the employe to listen is by forming a plant organization, which should meet at least once a month—every two weeks if possible. Let the employer be represented by the manager and department heads, a programme of topics arranged that are of interest to the employe—work being done, methods of doing it, comparisons with methods used elsewhere, etc. Each meeting a single topic is taken up, a paper on this is read by an employe and afterward thoroughly discussed by those present. You would be surprised at some of the able papers presented at such meetings.

We tried this at McCloud, and it certainly did a great deal to improve the feeling between the men and the management. At these meetings, after the programme has been finished, anyone present who has any suggestions or criticisms to make regarding anything around the plant, whether for the benefit of the company, his neighbor or himself, is requested to make these suggestions, and he knows that anything he may say, if he is sincere in his statements, will not be held against him. A frank, outspoken man is a good deal more valuable to you than a "behind your back" grumbler.

Publishing a House Organ.

There was a time when a close relationship used to exist between the logger and his employes—when the operations were of small magnitude. Then the employe went directly to his employer with his grievance or his suggestion, and they talked it over, face to face. Now, however, conditions have naturally changed. Some substitute for the old relationship must therefore be instituted in order to supply a safety valve for individual grievances. The method spoken of above I believe to be an excellent one. One of the best guarantees against misunderstanding is publicity. This can be obtained by publishing a house organ in connection with the organization spoken of above. The publishing of a periodical, say, monthly can be made to show not only the correct intention of the employer and employes, but it can be used as a sort of forum through which an exchange of ideas and methods may be discussed. Of course, the direct value of a house organ will depend largely upon the prevailing conditions in the organization using it and the man or men you may put in charge of editing it.

Another idea along these lines has been the installation of suggestion boxes, placed in the commissaries of logging camps and mills and factories of industrial towns. Employes are advised that any suggestion they may have to make or any ideas that might be worked out can be written up and dropped in the box and they will be given due consideration. A committee consisting of camp foreman and two employes, who should be well liked and leaders, is appointed to make periodical collections from these boxes. This establishes a regular means of communication between the working organization and the management. A financial recognition of suggestions or ideas adopted goes a long way toward keeping the interest in this work up.

The establishment of the Y.M.C.A. cars in the camps of the Northwest, from what I can find out, has been a good thing, not only for the employer, but the employe, who is beginning to appreciate that something is being done for him. The scoffers are getting less and less every day. They will soon be eliminated. New ideas and methods will be adopted from time to time, all leading toward the goal of perfection in social and industrial development which can come about only through co-operative effort.

Bonus System An Incentive.

The adoption of the bonus system in logging is receiving more recognition every year. This is another step in co-operation.

The reward of success is large to both sides. To the employe it comes directly in increased earnings. To the employer it comes almost equally directly; for if under the stimulus of wages proportionate to effort the men increase their efficiency the output of the camp is increased without any cost for additional engines or skidders, enlargement of the camp, extension of or additional logging spurs or of any increase of any fixed expense. The cost of production is lowered and the profit per thousand in logs is correspondingly increased. It is a stimulant to individual effort by the incentive of individual reward—without breaking down the men's safeguard of a recognized standard wage rate.

Fundamentally there are but two ways of paying men for their services: One is day wages, where a man is paid according to the time he spends, regardless of the quantity of work done in that time; the other, piece rate, where he is paid according to the quantity of his output, regardless of the time spent. The advanced wage systems in logging operations are combinations of these two principles. Payment of bonus should be for a month's run and not on one day's output, for if paid according to the latter method the entire crew could work hard and efficiently for one day, bring their earnings for that one day far above the average daily earning, then be lax in their efforts the balance of the week. The result would be less output in logs per man for the week, but payment of wages would be more than an average daily wage, so such bonus systems should be paid in the general average on logs for a month's work, or logs brought in on one donkey or skidder setting. Falling and bucking by piece work is also another step along these lines—a system whereby the worker is paid proportionate to his efforts.

Simple Accounting System.

The employer knows just exactly what each operation of his logging is costing him. This brings us now to the method of keeping these costs and the results to be expected of cost accounting. Which is the more important—to know what you have paid out or to receive what you have paid for? Both are of equal importance to the manager and logging superintendent. To know these things you must have a reliable, adequate, and permanent form or system on which these costs are figured. To form any comparison between your operation and ours, your forms, cost sheets, and fundamental records must be made and figured on the same basis—in other words, standardized. We will all admit that in each operation, whether fir, pine, or redwood, the basic principles of getting logs to the mills are the same, but conditions in each operation are vastly different. A primary obstacle in the way of a uniform cost keeping system for all timber operations is in the great diversity of conditions under which the timber is purchased, handled, and transported to the mills. The operation itself, whether by ground or overhead skidders, donkey engines, big wheels, or the latest electrical machines; whether the timber was purchased twenty years ago or bought yesterday, your cutover lands of a problematical value left on hand after your operation, all present phases extremely difficult to adjust to the niceties required by the modern apostles of cost keeping. Nevertheless a standardization of cost keeping of logging operations should be decided upon and adopted.

The Southern Pine Association, consisting of a combination of 74,

* Address delivered before Pacific Logging Congress.

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have standardized their cost accounting, and issue a statement to their members each month, showing what the cost of operation has been for that particular month and for the season to-date. Each mill or logging operation on the published cost sheet is designated by a number, without the name being given. Each operating member can then see at a glance how his cost compares with others, and in this way watch closely for any particular part of his operation that may be high in proportion to the others. This all works toward the betterment of those concerned, and is co-operation between yourselves, which is just as important to the industry as that between you and your employes. Taking it all in all, an industry's prosperity depends on the big word co-operation and the little word individual, mixed with a lot of well-directed energy, making a composite effort which spells success.

The Care of Saws

The proper care of cut-off saws is an item in every up-to-date mill where trimmers and gang slashers are used. Much has been written about broken cut-off saws, and highly intelligent information given. A sufficient amount of set should be given cut-off saws. They should be filed or ground square in front, with pitch line to centre, with the back beveled. This makes the best tooth for a cut-off saw, swing or stationary. Each tooth is a cutter and a raker. Experts tell us that large cut-off saws should be left with a little slack on the rim, sufficient not a wave in motion. Again, cut-off saws should be at least one gauge heavier than the standards. Keep the saws sharp. The average reader will be surprised to make power tests of same machine and same kind of stock cut with a dull and sharp saw. Short cracks can be centre punched on each side, which will arrest them. Cracks over three inches long should be drilled.

There are two extreme conditions under which lumber may be resawed to get best results. One when it is green and fresh, and the other when it is thoroughly dry. To resaw it anywhere between, with it partly dry, means excessive warping and checking. It naturally follows therefore that whatever kiln drying is to be done should be done in advance of resawing. This drying out offers an opportunity also for straightening warped and crooked boards. One can resaw boards with curves and crooks in them and get along very well, but if they are warped and cupped, the best thing to do is to make some effort to flatten them out before resawing.

A band saw is as treacherous a thing, when you approach a point nearing its capacity, as anything one can imagine. It may be working fine at 60 feet feed, and push it up to 70 feet and it will begin to make trouble. The result is usually an inferior quality of work, much more than offsetting the gain in quantity. The saw cannot be rushed beyond what it is put up for, to do good work. Neither can the saw be underfed and good results obtained. Either will soon get the best fitted saws to working badly.

To fit up saws to stand the highest test of efficiency, you must carry all the weight consistent with good practice, as well as tension to the highest degree that the plate is capable of withstanding without danger of cracking. In the case of a saw wearing narrower, you can decrease the weight, but do not decrease the efficiency of the saw. On the other hand, with a still wider saw and conditions the same, carrying the maximum tension the saw will stand, if you undertake to increase the weight because wider saws are recommended to carry heavier weights, you are subjecting your saws to fracture from heavy strain.

As to the brazing of band saws. Be sure you cut the blade to a line squared across from tooth edge, as the back being crowned or convex would not do for squaring the ends. After the saw is cut, see that both ends, when laid down on the leveling block, lie flat. This is very essential in making a good braze, as if one corner should not fit down closely you couldn't possibly grind the lap evenly all the way across, which is necessary in making good brazes. After the ends are flattened down properly, joint them until the full thickness is square, or until edges are sharp. Be careful to get all the cold-chisel marks out if you use one to cut the saw, and be sure to keep the ends square.

Always leave the ends of laps the thickness of 26 or 28 gauge. By so doing, when your laps are clamped together, the pressure is all concentrated on the part where it is needed; and the irons don't mark or compress the plate on each side of the lap, leaving an unsightly scar, which won't file out in finishing without making the plate too thin at the point, which would weaken the braze.

After the two ends of the saw have been brazed together the spot will be found to be soft. If the saw is left in this condition it will likely bend and kink at the braze, entailing considerable trouble to put right again. The saw should be taken out of the clamps as soon as the brazing irons lose their color and become black, and the saw should then be allowed to cool rapidly in the air. If this is done at the right moment the saw at the braze will be much harder than if left in the clam until cold.

As frequently happens, the operator is not particularly interested in the machine, its adjustment, care or output. He has merely to put the stock through. In this case, the saw may or may not do good work. Most likely not; and if the filer does not take an interest in it, and the saws do not work right, it immediately reflects back on him.

Every filer should make it his business to see that guides are in proper adjustment. But don't stop at the saw guides; go over the entire machine. Look at the guide support. See if it slides properly on the guide column. Indeed, it pays to look ahead as well as behind.

It has always been an established fact in the minds of practical operators that accurate knife-setting was impossible and now that joining them while in motion has added much to approach the degree of accuracy, they overlook the importance of getting each as near as possible within the cutting circle before they do their jointing.

Too much jointing does not tend to improve the quality of machine work. On the contrary it leaves a heavy heel on the knives and lessens their cutting qualities.

Again, careless setting causes many ills that jointing or grinding cannot overcome. You cannot expect that because you have more knives cutting, it isn't essential to set each one accurately and think that the balance will do the work. It's a bad habit to get into, and it will never get one anything to overlook this feature of practice. Hardwood Record.

France Wants Canadian Wood Pulp

Mr. Philippe Roy, General Commissioner for Canada in Paris, has forwarded the subjoined translation of a report prepared by the Societe des Papeteries Berge at Lancey, whose mills were visited by the members of the Canadian Trade Commission, during their recent tour of inspection in France. It has been requested by the Commerce of Grenoble that the contents of this report should be brought to the attention of pulp manufacturers in Canada:—

The French industry of paper manufacture depends upon foreign countries for its supply of chemical and mechanical pulp.

Its requirements are supplied by the countries producing wood-pulp, Sweden, Norway, Austria-Hungary and Germany.

The imports amounted during the year 1913 to:—

Mechanical pulp	tons	260,000
Chemical pulp	tons	205,000

Valued, according to 1913, as follows:—

Mechanical pulp	Frs.	35,000,000
Chemical pulp	Frs.	60,000,000

Germany and Austria only appear for 26,000 tons of mechanical pulp, but the imports of chemical pulp from these two countries amount to 66,000 tons, of a value of about Frs. 20,000,000.

The increase in imports of German chemical pulp was particularly rapid, indeed from 18,000 tons in 1894, it reaches 66,000 tons in 1913.

The German and Austrian forests cannot now supply in full the pulp mills of these two countries which make up a good part of their needs with lumber from Finland.

Finland, which already has a few chemical pulp mills, can extensively develop this industry.

Canada owns inexhaustible forest resources. She can, like Finland, considerably develop the manufacture of mechanical and chemical pulp.

These two countries can assure all the requirements of the allied countries importing wood-pulp, if they find themselves protected against the competition of the central empires.

We recall below the means which we have indicated to the Canadian Trade Commission as likely, in our opinion, to favor the development of the production of wood pulp in Finland and Canada, as well as in the allied countries.

1.—Enactment of export duties in Finland and Canada on lumber intended for the central empires.

2.—Enactment, in allied countries importing pulp, of special custom duties against pulp coming from the central empires.

We deem it advisable to add that during the first year which will follow the end of hostilities, owing to the high rates of freight, in order to offer an effective protection to the Finnish and Canadian industry against German mills, it seems imperative to establish ad valorem duties. The principle of specific duties could nevertheless be preserved and these specific duties re-established when the position of the world market will have become normal again.

During the last two weeks in October the shipments of lumber to foreign ports from Portland, Oregon and other lower Columbia River points amounted to more than ten million feet, which is said to be the most extensive off-shore lumber trade recorded at Portland in many months. Shipments included 3,500,000 feet to the United Kingdom, 2,500,000 feet to Balboa and 4,000,000 feet to Hawaii and Australia.

The Importance of Wholesome Food

Lumbermen especially need the very best of nourishment all the time. Don't neglect this for a minute. Flour plays a very big part in the diet of every camp, and to get the best possible results always choose wisely from the brand you **know** is reliable and uniformly nourishing and good. Do you know that almost all the large lumber camps in this country stock

Cream of the West Flour

The Hard Wheat Flour that is guaranteed for Bread

Not from price influences or hearsay. These experienced men have tried out our product, and keep to the same brand because it has passed their test and serves their purpose best.

Our horse feed is distinctly good. Bullrush Crushed Oats (best grade Western oats) and Geneva Feed (crushed oats and cracked corn) are both worthy of attention for your stable.

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The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

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B. C. Industry Enjoying Improved Demand

W. A. Anstie, general manager of the Forest Mills of British Columbia Limited, Revelstoke, B.C., recently visited Vancouver on business. He reports that for some months past the demand for lumber has been exceeding the supply and that the mountain mills are working to capacity in order to fill prairie orders. When the mountain mills shut down for the winter he expects that the coast mills will find a continuous demand for lumber from the prairies and that, as a result, the price of lumber is likely to be well maintained. Mr. Anstie expects the lumber industry in British Columbia to experience a revival in the spring of 1917, and a year hence that it will be in a more flourishing condition than for some years past.

Knock Down Portable House for War Areas

According to a report in the Timber Trades Journal, of London, Eng., Mr. Alphonse Gravel, of New Orleans, who has spent his business life in the lumber trade, has designed a wooden house in knock-down form for the devastated war areas, to be erected immediately on the cessation of hostilities and used until such time as new houses of bricks and mortar can be constructed. Mr. Gravel's house is composed of sections that are all interchangeable, so that there is no necessity for marks to distinguish them, and the sections of one house will fit in all the others. The frame is so designed that only two standard unit sizes of each part, and the two standard insertions will produce any size frame required. The floor and ceiling sections are of three standard dimensions, and will fit a room of any given size. The wall sections are so constructed that when put in place they form with the posts that separate them from each other a dovetailed joint which is securely clamped with bolts and is impervious to the weather, and makes the building stronger than one built in the usual manner. The frame is put together with suitable casting and bolts, which are already fitted before shipment and can be quickly assembled together by any intelligent man with the help of one or two laborers. The building contains no parts which are too heavy to be readily handled by two men. Mr. Gravel was at one time a manager of a large woodworking establishment near Quebec, P.Q.

Music and Movies for Camp Employees

Keeping the employees of a logging camp contented is a big proposition nowadays, but it has been solved by at least one large western company in a simple enough manner. "It will not be necessary for the woodsmen employed by our company to go to the city to see the latest wrinkle in movie theatre attractions, because we are to build a movie house for the men," said the president and manager of this company. "We have decided upon the new diversion in the life of our employees because we feel that they are entitled to amusement and are entitled to the very best. We purpose supplying nothing but the very best class of films and constant renewals of programme. But that is not the only innovation we are introducing among our workers. In each lumber camp, some far from the railroads, you will find the very best of phonographs the company could buy. The company also keeps the phonograph supplied with records. Our boys in the heart of the forest can hear the very best bands, the best orchestras, the best singers, the cleverest chatter of the ablest comedians every evening after they are through with work. We have erected a hotel for our employees. Every man has a room to himself, a bed to himself, and every room is lighted with electricity. The food is first class. We supply this hotel accommodation for about ninety cents a day. We have not a man on our payroll, laborers I mean, who is receiving less than $2.50 per day, and most of them are getting $3 and $3.50. I decided some years ago that if employees are to be made content they must have good surroundings. That is why a large number of our men that we brought from the east when we first opened up are still with us. There has been some talk of threatened labor trouble among the timber workers, in which I do not take much stock, and I will venture right now that there will be no labor trouble in the ranks of this company. A large part of our men stay with us the year around and we kept our hotel running all last winter."

Decreased Timber and Lumber Exports from United States

United States exports of timber during the twelve months ending June were valued as follows: 1916, $4,066,607; 1915, $3,177,976; 1914, $9,172,411. Of thees amounts the shipments to Canada were as follows: 1916, $356,065; 1915, $382,945; 1914, $1,047,441. Exports of lumber, including boards, planks, deals, joists, and scantling, were valued as follows: 1916, $27,912,300; 1915, $25,225,101; 1914, $57,781,467. Canada's portions of these were as follows: 1916, $4,028,636; 1915, $4,653,184; 1914, $10,434,000. The total exports of wood and manufactures of wood from the United States during the twelve months ending June were valued as follows: 1916, $60,707,229; 1915, $49,787,303; 1914, $103,179,640.

High Prices of Lumber in New Zealand

The price of lumber has materially advanced in New Zealand of late, notwithstanding the fact that the consumption has decreased more than 40 per cent. since the beginning of the war, according to a report by the United States Consul at Auckland. This increase is attributed to the advance in freight rates and the rapid consumption of the native supply. Freight rates on Douglas fir to New Zealand are now $36.49 per 1,000 feet, against $6.68 in 1908, and it is difficult to get deck space at this advanced rate. Douglas fir is well received for certain construction work, and there should be a good field for this lumber as soon as reasonable freight rates can be obtained.

The following table gives the prices per 1,000 feet of different kinds and classes of lumber in the markets of Auckland and Wellington, compared with those paid at the beginning of the war.

Kinds	Wellington		Auckland	
	1914	Present Price	1914	Present Price
Rimu: Ordinary building	$33.44	$34.64	$30.40	$31.62
Totara:				
Heart, sawn, building	70.56	76.64	60.82	65.69
Clean	77.86	85.16	65.00	70.56
Second-class	53.53	58.39	30.40	31.62
Kauri:				
Heart, sawn	93.67	97.33	68.13	68.13
Dressed	99.76	103.40	72.99	72.99
Douglas fir:				
Building quality, sawn	55.96	68.13	48.66	60.82
Selected	63.26	72.99	58.39	70.56

The imports of Douglas fir for 1914 amounted to 8,625,595 board feet, but it is generally understood that the imports for 1915 fell far below the above amount. Most of the better furniture and industrial lumber is imported, such as oak, ash, hickory, etc., and comes largely from the United States, United Kingdom, and Japan.

St. Francis Storage Dam

In the annual report of the Quebec Streams Commission, just issued, reference is made to the log slide provided for in the plans of the Lake St. Francis storage dam, now under construction. It is stated that in the basin of Lake St. Francis a great number of logs are cut each year, and are driven on the river to mills at East Angus and Bromptonville. To allow the passing of these logs there was left in the dam an opening 7 feet wide by 15 feet high. To bring these logs from the water level in the reservoir to that in the river below there has been provided a log slide 7 feet wide, 3 feet high, and 56 feet long. This slide will be adjustable for different water levels in the reservoir. This method of sluicing the logs has been criticized by certain parties interested in the log drive. They asked if it were possible to increase the amount of water passing through the log sluice opening so as to create in the reservoir immediately above the dam a current which will draw the logs to the opening. Another scheme has been under consideration, and the question will be settled satisfactorily for all concerned.

Death of G. A. Grier, Montreal

Mr. G. A. Grier, founder and head of the firm of G. A. Grier and Sons, Limited, Montreal, P.Q., died on October 24th at his home in Montreal. The late Mr. Grier was born in Cumberland, Ont., in 1849. He started in the lumber business in 1870 and was successful in it from the very first. At various times he was interested in the operations of a number of important manufacturing plants, but during the last fourteen years he has confined his attention to the wholesale business in Montreal, in which he was assited by his sons.

When Should Birch and Basswood be Cut?

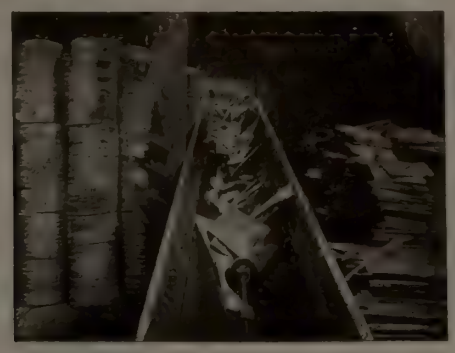
Editor Canada Lumberman:— Huntsville, Ont., October 17th.

Some of the lumbermen who have hardwood limits along rivers are resorting to a practice which, if continued to any extent, will seriously affect our markets for hardwoods, especially birch and basswood.

The practice referred to is to cut down the trees in June, when in full leaf, and allow them to remain whole till autumn, when they are cut into logs. This has the effect of reducing the weight of the wood, so it can be floated, but it also has the effect of destroying all the good properties of the lumber, rendering it unfit for any of the purposes that the natural qualities of the several kinds render them specially adapted for.

The result must be that lumber, sold as birch and basswood, is only such in name, having lost all the qualities of these desirable woods, and a great injury will be wrought to the trade. The practice should be discouraged by all who are interested in lumber, or in the benefits that accrue to our commerce through the manufacture and sale of it.

Anything that can be accomplished to stop this practice before it has caused the loss that it will inevitably cause will be rendering a national service. —A. P. Ebert.



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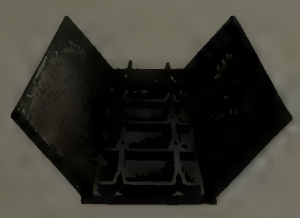

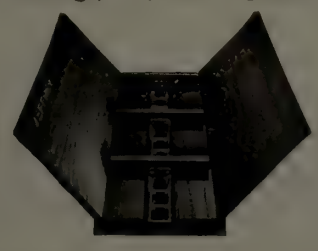

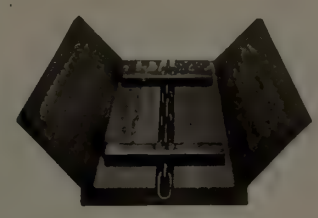

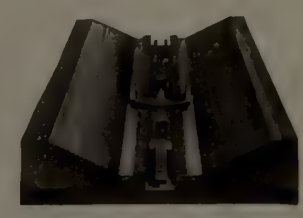

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Proper Care of Lumber

The care of lumber after it is cut is as important as proper sawing and grading. Lumber from sap and crooked logs not only springs in sawing, but warps, checks and stains very quickly. The smaller mills cannot afford to dip their stock, so they must stack it right from the saw.

It is astonishing the indifference or carelessness exercised in stacking lumber. The illustrations show the evil effects of poor, also the result of proper stacking. Fig. 1 shows the reckless method of a few; Fig. 2 some improvement, while Fig. 3 shows the correct way. In stacking for dry kiln it is not so important to keep sticks properly set, as there is not the excessive weight to spring the lumber. Fig. 1 shows the flat stacking. Only when lumber is to remain for a short time on sticks should this be resorted to, as there is no drainage. The careless method of placing the sticks ruins a lot of lumber from excessive weight, especially on a high stack.

When permanent stacking is done, it will pay to make good foundations. Concrete is best and will prove to be the cheapest. In Figs. 1 and 2 the ends are exposed; some lumber end-checks so badly as to damage it. The sticks should extend a little over the ends, as shown in Fig. 3; the ends are also better protected from weather. Give about 24-in. slope in 16 ft. All piles should be one width, say 12 feet, then 12-ft. strips can be used all over the yard. These strips can be saved from the edger (the smaller mills seldom make lath or pickets) and should be dry—the wider ones used at each end.

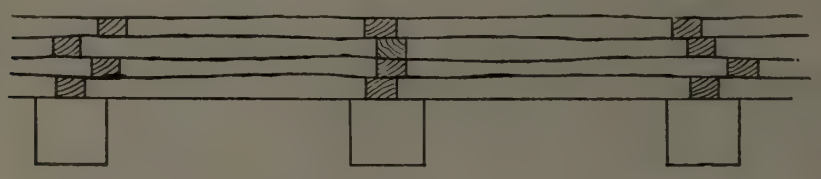

Fig. 1.

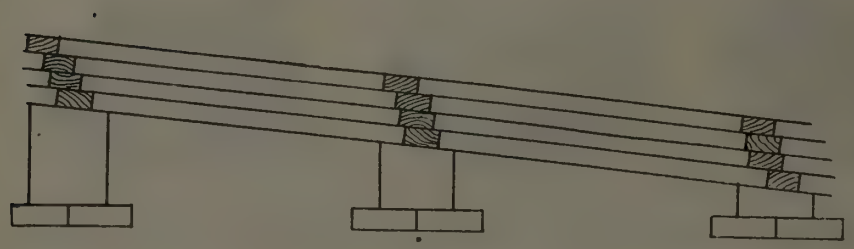

Fig. 2.

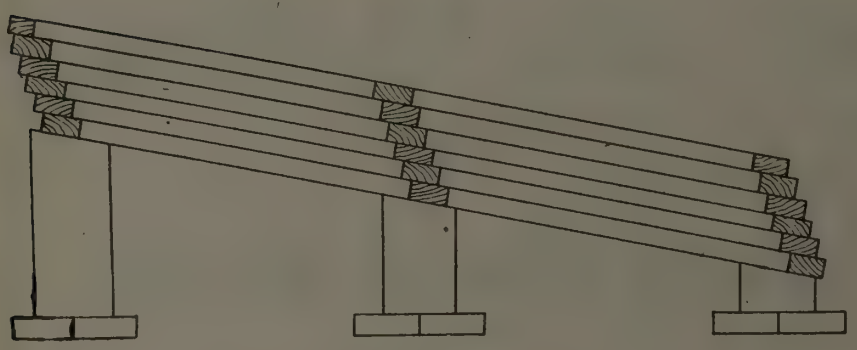

Fig. 3.

Some care must be exercised to get a good foundation. For a heavy or high pile, use 2 x 10 heart, 24 inches long, checked (that is, crossed) then a 12 x 12, cut the proper slope, will answer. Note that neither end of the lumber is exposed. If it does not pass over a trimmer, then the lower end will be irregular and the ends cannot all be covered. Sticks should be not more than 4 feet apart with 1-inch air space between boards.

All sap lumber, up to 4 x 6, should be stacked, and all piles when finished should be covered. Lumber properly stacked and air-dried brings a better price and there is a saving in depreciation of enough to more than pay for the stacking. Less room will be consumed and in case of fire it can be controlled better. There are other methods in use, principally the "X" stacking, but the one here described is in most general use.

A look at some yards pretending to stack properly will often show a few zigzag sticks, warping or springing the lumber. As stated, lumber often springs badly, particularly from crooked logs. Stacking cannot overcome edge springing, but flat springing, when properly stacked, will not deteriorate.—The Woodworker, Indianapolis.

Another Forestry Battalion

An Ottawa despatch states that the 230th (French-Canadian) Battalion has been changed into a forestry battalion, and that it has been decided that the unit will go overseas about December 1st. Lieut.-Col. Allard is chief recruiting officer of the battalion. The officers of the battalion have been notified that the unit will be sent to the south of France to cut timber. A complete reorganization of the battalion is being made. Lieut.-Col. de Salaberry will be in full command.

Miscellaneous Items of Interest to Lumbermen

C. H. Lovell, M.P., Coaticook, P.Q., died recently, after a long illness. The late Mr. Lovell had extensive lumber interests in various parts of Quebec Province.

Geo. Gordon & Company, Limited, Cache Bay, Ont., report that they will go into the woods much more extensively this winter than last winter, and that they expect to take out about 30,000,000 feet.

The exhibit of British Columbia lumber hitherto on view at the rooms of the Montreal Builders' Exchange, has been removed to the Forest Products Laboratories of Canada, 700 University Street, Montreal.

Another member of the staff of the Riordon Pulp and Paper Company, in the person of Mr. Samuel L. William, has joined the 242nd Forestry Battalion. Mr. William, who was head shipper at the Calumet, P.Q., mills of the company, has been appointed a lieutenant.

The Excelsior Lumber Company is the name of a new wholesale lumber firm which has opened offices at Room 44, 33 Richmond Street West, Toronto, under the management of J. C. Leigh. Mr. Leigh is well known to the trade in Ontario, having had long experience as a wholesale salesman.

Practically all the Douglas fir mills in the States of Oregon and Washington have become members of an organization recently formed under the name of "The Douglas Fir Exploitation and Export Company." The company will handle the export business of all the mills represented in its membership.

The barge "White and Friant" arrived at Owen Sound, Ont., on October 20th with a cargo of 500,000 feet of red pine deals from Michigan. The stock was transferred to cars at Owen Sound and shipped to Montreal, for export to Great Britain. The Union Lumber Company, Toronto, who have handled a large quantity of this line of export trade, purchased this stock in Michigan and made the sale to parties in Great Britain.

The Union Lumber Company, Dominion Bank Building, Toronto, have received a cheque for $10,367 from the Royal Insurance Company, Ltd., of New York, to cover their loss upon a stock of red pine deals that were destroyed by fire at Ogdensburg, N.Y., recently. The stock destroyed had been sold for delivery to the allied powers for use as trench timbers and in connection with coast defence works, etc. The cheque was the largest individual amount ever paid over by one company to meet a loss at Ogdensburg.

A. G. McIntyre, former manager of the Mattagami Pulp and Paper Company, Smooth Rock Falls, Ont., has accepted a position as manager of the Committee on paper of the American Newspaper Publishers' Association. His chief duty will be to represent the interests of the consumers of newsprint paper, and endeavor to relieve them as much as possible from the difficulties resulting from the shortage in production. He will practically act as a go-between between the paper manufacturers and consumers, with the idea of encouraging better trade conditions between them.

How Ocean Freight Rates Have Advanced

Interesting statistics in regard to Atlantic freight rates have been prepared by Representative Alexander, of Missouri, in connection with the shipping bill of which he had charge in the United States Congress. Taking Liverpool as a typical port of destination of American export lumber, it is shown that the rate on hardwood lumber ranged from 16½ to 18½ cents during the first half of the year 1914. In August it advanced to 23½ cents and by the end of the year had reached 38 cents. During 1915 it rose steadily and reached 95 cents on December 31. In January, 1916, it stood at $1.10.

Taking London as a port of destination for softwoods the rate is shown to have been 27c before the outbreak of the war, rising to 32c in August, 1914; 43½c in December, 1914; to 65c in March, 1915; to 76c in July, 1915; to 90c in October, 1915; to $1.00 in December, 1915, and to $1.20 in January, 1916. Since January still further increases have occurred.

On the Pacific there have also been large increases in ocean freight rates. According to Mr. Alexander's statistics the lumber rate from Seattle to Hong Kong and Manilla was $10 during 1914, but increased to $12 early in 1915, to $15 in the fall of 1915, and to $17 in January, 1916, making still further advances since that date. During the same period the rate to Sydney nearly trebled. To London from Seattle, the rate was $19.47 in the first three quarters of 1914, $24.33 in the last quarter, $30.43 at the end of 1915 and $54.75 early in 1916.

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Dear Sirs,—In reference to your Eiderdown Robes, I had one which has been in use for fourteen years in the Yukon and Alaska Territories. I have used it with nothing except a few small spruce boughs to keep it off the snow—in temperatures as low as 50 and 60 degrees in the open, and have felt no inconvenience whatever. I consider it better than a fur robe, as it is lighter, stronger, cleaner, and cheaper. A wolf robe 90 x 90 inches would cost $150 to $200, weigh twice as much, and not last half as long. A Lynx Robe is as warm, probably lighter, but has to be very carefully taken care of. A Lynx Robe of the same size could not be purchased for less than $400.

I don't think any robe can be compared with your eiderdown, and would say, "that by anyone who has ever used them in extreme temperatures they are considered as 'LEGAL TENDER.'"

Yours truly,

R. S. Inkster.

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EDGINGS

Ontario

Canadian Wood Products Limited have been incorporated with capital stock of $40,000 and head office at Toronto, to carry on business as lumber and pulp manufacturers and dealers.

Dominion Hardwoods Limited, Deseronto, Ont., will probably proceed at once to rebuild their plant which was recently destroyed by fire. The town of Deseronto has carried a by-law granting the company certain important concessions.

The Hendum Lumber Company, Limited, has been incorporated with head office at Timmins, Ont., and capital stock of $40,000, with power to deal in lumber and operate saw and planing mills. Day and Gordon, Haileybury, Ont., are the solicitors for the company.

The Lincoln Paper Mills Company, Merritton, Ont., have let a contract for the construction of a sulphite plant, comprising a series of buildings, of steel, brick and concrete. The acid towers and digester buildings will be each 100 feet high, the other structures being one storey. The engineers are G. D. Jennsen & Company, New York, and the contractors, the Purdy and Henderson Company, Limited, Montreal.

The Colonial Lumber Company's mill at Pembroke closed down for the season on October 17th. The water situation recently made it very difficult for the company to obtain logs at the mill, notwithstanding the fact that it has many million feet in the water on the way to the mill. The logs in the water and those which they will take out of the woods during the coming winter will assure them of a plentiful supply for next season's operations.

Eastern Canada

The W. H. Kelly Lumber Company, Buckingham, P.Q., recently suffered a loss by fire.

Berthiaume & Sequin, sash and door manufacturers, Montreal, P.Q., have been registered.

J. C. Risteen & Company, Limited, recently lost their woodworking factory at Fredericton, N.B., by fire.

Wm. Thomson & Sons, lumber dealers, Thurso, P.Q., recently lost their planing mill by fire. The loss was covered by insurance.

The plant belonging to the St. Stephen Lumber Company, St. Stephen, N.B., was recently destroyed by fire. The loss is estimated at about $100,000.

The Nashwaak Pulp and Paper Company, St. John, N.B., have obtained a charter to carry on the operation of the plant of the Edward Partington Pulp & Paper Company.

Fire recently destroyed the sawmill belonging to Emile Gagnon, St. Narcisse, P.Q., incurring a loss of about $10,000. The owner will rebuild at once and steam power machinery will be required.

Fire from an unknown cause in Mr. W. A. Warman's lumber mill yard at "Atlantic Siding" near Ninon Station, N.S., destroyed about 1,400,000 feet of sawed lumber recently. The loss is partly covered by insurance.

Jas. A. Outterson, of the Carthage Sulphite and Paper Company, Ogdensburg, N.Y., has purchased 80,000 acres of timberland between Murray Bay and Tadausac, in the province of Quebec, which is estimated to contain over 800,000 cords of pulpwood. The price paid is between $250,000 and $300,000. Operations will be started at once on a large scale. It is expected that it will take sixteen years to clear the tract.

A bankruptcy sale of pulpwood, timber and rossing plant of the Battle Island Paper Company will be held at public auction at an unstated date in the near future. The property to be sold includes a rossing plant, about 25,600 acres of freehold timber property, and about 130 square miles of timber limits held under license, located on both sides of Mars River, Chicoutimi County, P.Q. Interested parties may write to Gannon, Spencer and Mitchell, Syracuse, N.Y., attorneys for the trustees.

Western Canada

The Victoria Shingle Mill, Victoria, B.C., was recently destroyed by fire. Only a small amount of insurance was carried.

The Rock Creek Lumber Company's mill at Waldo, B.C., has resumed operations after being idle nearly all summer.

Work has been commenced in connection with the erection of the McNair Shingle Mill at Port Moody, B.C. A mill will also be erected for cutting logs into shingle bolts.

The new shingle mill erected by Mills and Hamilton at Port Moody, B.C., is now in operation, with two machines. Additional equipment will probably be installed in the near future.

The sawmill of the Jackman Lumber Company at Jackman Station on the Fraser Valley branch of the B. C. E. R., was recently destroyed by fire,

the loss being estimated at about $30,000. The mill was owned by Mr. Sid. B. Smith, of Vancouver.

The Dominion Cedar and Shingle Company are constructing a shingle mill near the Lulu Island Bridge, New Westminster, B.C. It is expected that the mill will be ready for operation early in December.

The Cypress Lumber Company, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $10,000, to carry on business as timber merchants, sawmill and shingle mill owners, etc.

The mill at Ruskin, B.C., formerly owned by the E. H. Heaps Lumber Company, Limited, has been sold to Mr. Robert Dollar, of the Canadian Robert Dollar Company. The mill has a daily capacity of 100,000 feet of lumber and 500,000 shingles.

The Western Sandstone Company, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $25,000, to carry on business as timber and lumber merchants, sawmill and pulp mill proprietors, and to deal in lumber and wood of all kinds.

Midway Ranch, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $100,000, to carry on the business, among other things, of lumber and timber merchants, sawmill proprietors and manufacturers and dealers in timber and lumber of all kinds.

Cook's mill at Matsqui, B.C., which was closed down for a month and a half has resumed operations under the management of the British American Mills Company of Vancouver. A new road has been cconstructed to Cruikshank timber limits. The daily capacity of the mill is 35,000.

The Eagle Timber Company, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $25,000, to carry on business as foresters, loggers, timber and lumber merchants, sawmill and planing mill proprietors, and to deal in and manufacture saw logs, timber, lumber and wood of all kinds.

The Pacific Mills Limited, a corporation owned and controlled by the Crown Willamette Paper Company of Portland, Oregon, is building large pulp and paper mills at Ocean Falls, B.C. The plant will have a capacity of one hundred tons per day and is expected to be ready for operation about April 1st, 1917. The chief stock holders in the corporation are H. L. Pittock, F. W. Leadbetter and F. F. Pittock.

An extension of the Hartnell Lumber Company's plant at Port Hammond, B.C., which will practically double its output, is under way. One new dry kiln has already been erected, and another will be started shortly. A new boiler is being installed, and arrangements are being made for extensive yards. The plant is at present working night and day. The company specialize in clear cedar siding, and cut the balance of the logs into shingles.

The Canadian Robert Dollar Company, Limited, has been incorporated with head office at Vancouver, B.C., and capital stock of $40,000, to carry on business as lumber and timber merchants, and as manufacturers and dealers in lumber, sawlogs, timber, piles, poles, etc., and as sawmill, shingle mill and pulp mill owners. The company will erect a sawmill on Burrard Inlet, which will have a capacity of from 120,000 to 150,000 feet per day. Most of the output will be exported by the Dollar Line of Steamships, whose headquarters are being moved from San Francisco to Vancouver.

The Vedder River Shingle Company, of Chilliwack, B.C., have purchased from Frank King, of Vancouver, an extensive cedar limit in West Vancouver, which formerly belonged to the Frazer and McNair interests. It is estimated that the limit contains over 100,000,000 feet, mostly cedar of large size and good quality. The Vedder River Shingle Company will move their plant from Chilliwack to West Vancouver. This plant has a capacity of 175,000 shingles and this will be almost doubled. In order to overcome difficulties in connection with securing the timber the company will construct a flume a mile and a quarter long into the centre of the limit. The company will also erect new dry kilns in connection with the plant when it is established at West Vancouver.

Pacific Ocean Freight Rates Advanced

An interesting illustration of the way in which the war has affected Pacific Ocean freight rates is afforded by the case of the schooner Wm. Bowden, which recently took on a cargo for Sydney, Australia, under a charter providing for a rate of 90s a thousand feet, board measure. In April, 1917, the Wm. Bowden will return to the Puget Sound for another cargo for Sydney under a charter providing for a rate of 100s. Late in 1917 she will return to the coast and take on a cargo for Sydney at the rate of 120s, or at a proportionate rate for Adelaide, Australia, or South Africa. For the last two or three months the charter rate from the Sound to Sydney has been 125s per thousand feet, but the Bowden's charters, however, were made before the advance in rates which took place last summer.

A meeting of the Forestry Association of the University of New Brunswick was held recently and the following officers were elected:—Hon. president, R. H. Campbell, Ottawa; president, Prof. R. B. Miller; first vice-president, Geo. Miller; second vice-president, Lee Milburn; secretary-treasurer, P. R. Crandall.

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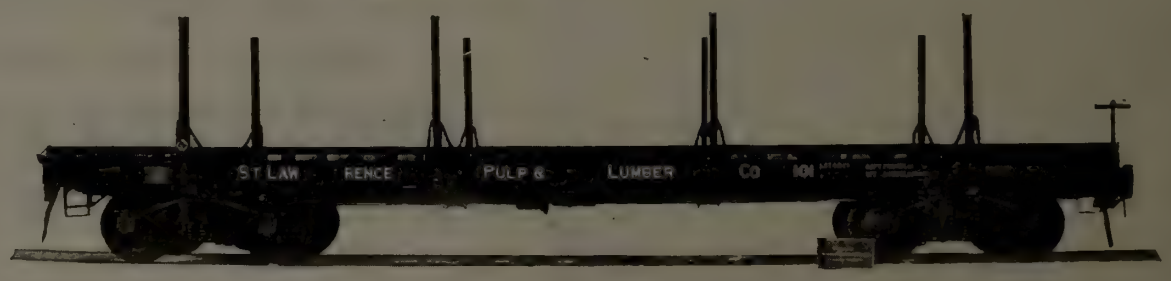

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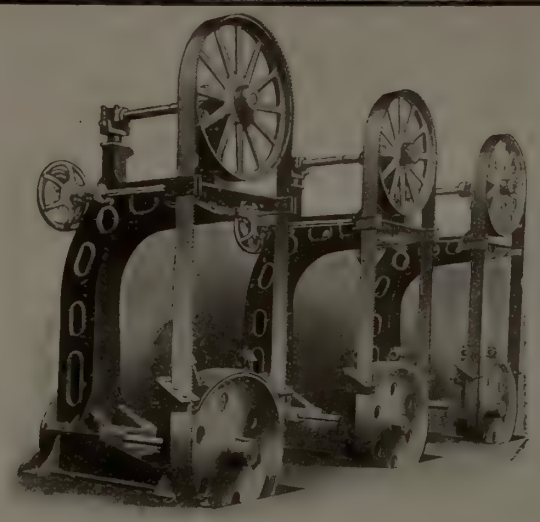

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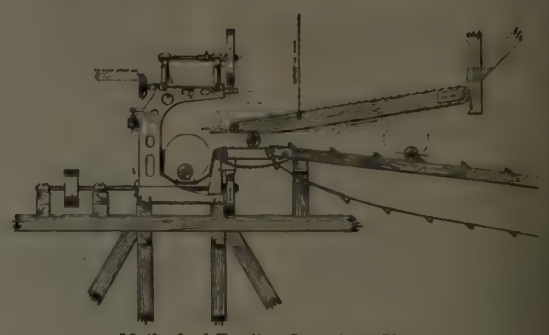

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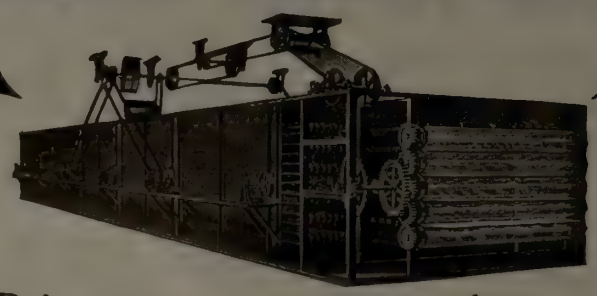

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Utilization of Wood-Waste (Second Revised Edition), by Ernst Hubbard. Published in 1915 by Scott, Greenwood & Sons. 192 pages, illustrated. Price $1.50.

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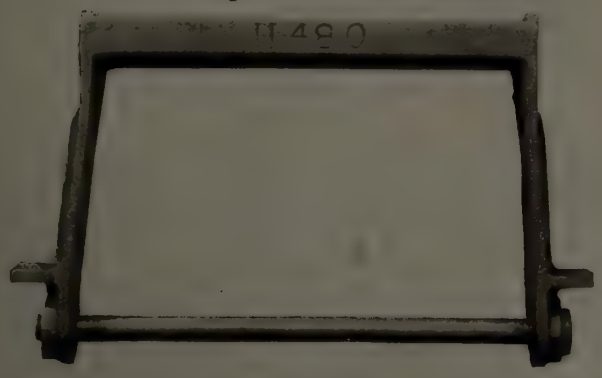

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Write for General Catalog No. 110

CANADIAN LINK-BELT CO., LIMITED

265 WELLINGTON ST. WEST - TORONTO

A. R. Williams Machinery Company, Limited, Vancouver, B. C.
Link-Belt & Dodge Products Co., Seattle, Wash.

Garlock Packings

Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

Style No. 777

Style No. 150

The Garlock Packing Co.

Hamilton, Ontario

Branches: Calgary, Montreal

Branches: Toronto, Winnipeg

Ideal Saws FOR Frozen Timber

Hoe Chisel Tooth Saws

are ideal for Hardwood, Frozen Timber, Soft Wood and for every purpose to which a good saw may be put. They are used by thousands of progressive lumbermen in every part of the world. Evenly tempered. Send for our illustrated book showing how to care for saws and giving prices and descriptions of Hoe Saws.

R. HOE & CO.

504-520 Grand Street
NEW YORK CITY

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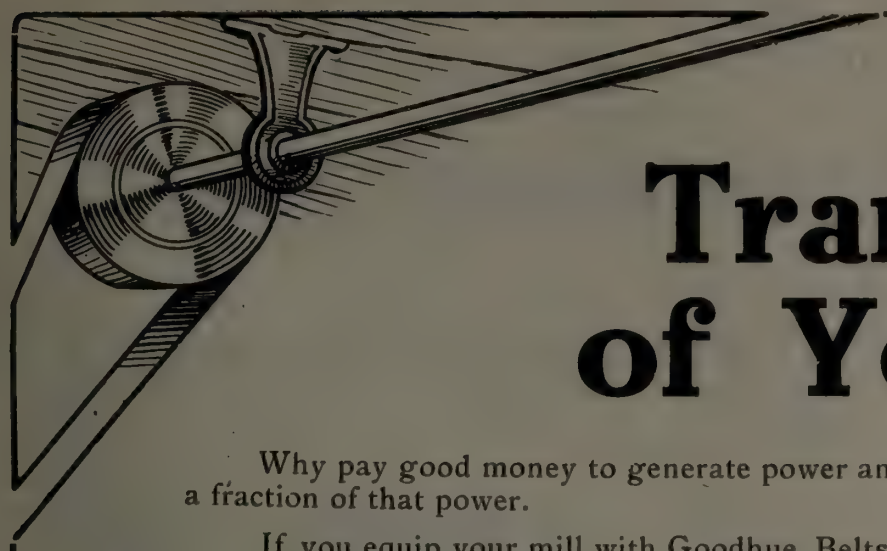
"Wilson Bros." Hardwood Flooring

is the Flooring that is manufactured expressly to supply the demand for the best. It is made by modern machinery from carefully selected stock, and every precaution is taken throughout our entire system to make it fulfil the requirements in every particular. Write us for prices.

Wilson Bros., Limited - Collingwood, Ont.



Transmit 100% of Your Power

Why pay good money to generate power and then employ a poor belt that will only transmit a fraction of that power.

If you equip your mill with Goodhue Belts you can transmit 100% of the power generated.

Goodhue Belts stretch 15% to 25% less than other belts aind have just the right amount of "cling" on the pulley.

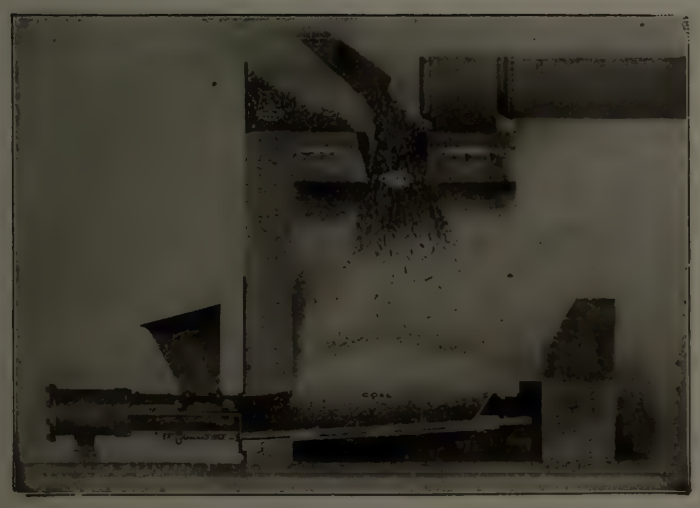
Write us for particulars and prices

YOU CAN DO IT WITH A— GOODHUE BELT

Winnipeg Agents: Bissett & Webb, Limited, 151 Notre Dame Ave. East, Winnipeg, Man.
Vancouver Agents: Fleck Bros., Limited, 1142 Homer St., Vancouver, B.C.

J. L. GOODHUE & COMPANY, LIMITED.
DANVILLE, QUEBEC CANADA.

Make Steam and Dollars From Your Refuse



Arran gement of Jones Underfeed Stokers in Dutch Oven for burning paper mill refuse in conjunction with coal.

Burn your saw mill and paper mill refuse in our special Jones Underfeed Stoker Dutch Oven and increase your profits.

Our stokers are installed in many of the most modern pulp and paper mills throughout Canada and the United States using a system combining the burning of mill refuse in conjunction with a small proportion of coal and are giving excellent results. If you have refuse to dispose of or if you depend on coal alone to fire your boilers the addition of a Jones Underfeed Stoker will make an enormous cut in your costs for steam.

Partial List of Users

	Boiler H.P.
Cleveland-Sarnia Sawmills Company, Limited, Sarnia, Ont.	1,200
St. Lawrence Pulp & Lumber Corporation, Chandler, P.Q.	3,000
E. B. Eddy Company, Hull, P.Q.	2,700
Kinleith Paper Company, St. Catharines, Ont.	450
Abitibi Pulp & Paper Company, Limited, Iroquois Falls, Ont.	1,672
Edwin Crabtree & Sons, Limited, Crabtree Mills, P.Q.	300
Minnesota & Ontario Power Company, Fort Frances, Ont.	1,533

Jones Underfeed Stoker Co., Limited

National Trust Building - TORONTO

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	27 00	28 00
1 x 6 common and dressing ...		28 00
1 x 8 common and dressing ...	27 00	29 00
1 x 10 common and dressing ..	31 00	32 00
1 x 12 common and dressing ..	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		28 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		29 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		23 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ...		17 00
1 x 6-in. x 9 to 16 ft.		21 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		23 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft. ...		16 00
2 x 4 to 12, 10 and 16 ft. ..		20 00
2 x 4 to 12-in., 12 and 14 ft. ...		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet: 8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain..		31 50
Fir flooring, 1 x 4, edge grain..		35 00
Fir flooring, 1 x 4, flat grain ..		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 35
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00	
Ash, white, No. 1 common	45 00	
Ash, brown, 1sts and 2nds, 4/4	50 00	
Ash, brown, common and better	40 00	
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00	
Birch, 1st and 2nds, 4/4	44 00	
Birch, No. 1 com. and bet., 4/4	35 00	
Birch, 1st and 2nds, 6/4 and 8/4	46 00	
Birch, 1st and 2nds, 10/4 and 12/4..	60 00	
Birch, 1st and 2nds, 16/4	62 00	
Basswood, 1sts and 2nds, 4/4	42 00	
Basswood, No. 1 com. and bet., 4/4..	35 00	
Basswood, No. 2 and 3, common	18 50	
Basswood, 6/4 and 8/4, 1sts and 2nds.	45 00	
Basswood, 6/4 and 8/4, com. and bet.	38 00	
Basswood, 4/4, No. 2 com. and bet...	30 00	
Soft elm, 1sts and 2nds, 4/4	40 00	
Soft Elm, No. 1 com. and bet., 4/4	33 00	
Soft elm, No. 2 and 3 common	17 50	
Soft elm, 6/4 and 8/4, 1 and 2	42 00	
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00	
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00	
Soft maple, 1sts and 2nds, 4/4	33 00	
Soft maple, com. and bet., 4/4	25 00	
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00	
Hard maple, 1st and 2nds, 4/4	40 00	
Hard Maple, common and better, 4/4	33 00	
Hard maple, 12/4 & 16/4, 1sts and 2nds	50 00	
Red oak, plain 1st and 2nds, 4/4 ...	60 00	
Red oak, plain, No. 1 com., 4/4	42 00	
Red oak, plain No. 2 com. 4/4.....	32 00	
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00	
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00	
White oak, plain 1sts and 2nds, 4/4	60 00	
White oak, plain, No. 1 com., 4/4...	42 00	
White oak, plain, No. 2 com., 4/4....	32 00	
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	60 00	
Red and White oak, plain, No. 1 com. 5/4 and 6/4	45 00	
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00	
Red and White oak, plain, 1sts and 2nds, 8/4	70 00	
Red and White oak, plain, No. 1 com. 8/4	50 00	
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00	
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00	
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00	
White oak, ¼ cut No. 1 common	57 00	
Hickory, 1sts and 2nds, 4/4	70 00	
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00	

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up $52 00		54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ...	29 00	30 00
Pine, No. 1 dressing shorts ...	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ...		24 00
Pine, 1-in. x 5-in. s.c. strips ...		25 00
Pine, 1-in. x 6-in. s.c. strips ...		27 00
Pine, 1-in. x 7-in., s.c. strips ...	24 00	25 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	27 00	28 00
Pine, 1-in. x 10-in. M.R.	28 00	29 00
Pine, s.c. sidings, 1½ and 2-in.	30 00	32 00
Pine, s.c. strips 1-in.	24 00	25 00
1¼, 1½ and 2-in.	26 00	28 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00	22 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x 10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	18 00	19 00
1" x 3", 12'-16'	21 00	22 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	22 00	24 00
Pine, mill culls stock, 1 x 12 ..		22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16' ...	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1¼, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet.....	80	85
According to average and quality, 30 to 35 feet	50	60

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00

Birch Planks

1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00

Cuts and Better

4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00

No. 1 Cuts

1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00

No. 2 Cuts

1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in.	27 00
1-in. x 5-in.	27 00
1-in. x 6-in.	28 00
1-in. x 8-in.	28 00
1-in. x 10-in.	30 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00

No. 1 Barn

1 inch	33 00	45 00
1¼, 1½ and 2-in.	36 00	45 00
2½ and 3-in.		45 00
4 inch		50 00

No. 2 Barn

1 inch	28 00	36 00
1¼, 1½ and 2-in.	30 00	36 00
2½ and 3-in.		38 00

No. 3 Barn

1 inch	26 00	30 00
No. 1, 1, 1¼, 1½, 2-in.	26 00	30 00

Box

No. 1, 1, 1¼, 1½, 2-in.	22 00	25 00
No. 2, 1¼, 1½, 2-in.	24 00	25 00

Mill Culls

Mill run culls, 1-in.		19 00
1, 1¼, 1½ and 2-in.		20 00
No. 2	17 00	18 00

Lath

No. 1, 32-in. pine	1 85
No. 2, 48-in. pine	4 50
No. 1, 48-in. pine	5 00
No. 3, 48-in. pine	4 00
Hemlock Lath 48 in.	4 00

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1. E. 6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8..	15 00	18 00	21 50	22 50
2 x 10	19 00	19 50	22 50	23 50
2 x 12	19 00	20 00	24 50	24 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	22 50
2 x 4, 10, 18, 20	24 50
2 x 6, 8 to 16	22 50
2 x 8, 8 to 16	22 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	30 50
2 x 10 and 2 x 12; 8-16 ft.	27 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	29 50
2 x 10 and 2 x 12; 24, 36, 28, 30, 32 ft.	31 50

No. 1 Common Boards

4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50

Flooring

4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00

Shiplap—Finished

6 inch	23 00
8, 10 and 12 inch	24 00

Siding

6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00

Lath

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	28 10
3 x 8 in.; 8 to 16 ft.	25 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	28 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	30 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	21 50
2 x 4 in.; 12 and 14 ft.	22 50
2 x 4 in.; 10 and 16 ft.	23 50
2 x 4 in.; 18 and 24 ft.	24 50
2 x 4 in.; 22 and 24 ft.	25 50
2 x 4 in.; 26 to 32 ft.	27 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.....	24 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.....	26 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.....	27 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.....	29 00
2 x 14 in.; 10 to 16 ft.	29 00
2 x 14 in.; 18 and 20 ft.	31 00
2 x 14 in.; 22 and 24 ft.	32 00
2 x 14 in.; 26 to 32 ft.	34 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	25 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	26 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	27 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	28 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	30 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	28 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	28 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	29 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	29 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 50
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ...	23 50
No. 2 Shiplap, 6 in.	22 50
No. 2 Shiplap, 8, 10 and 12 in.	23 50

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 85

LATH

Fir lath, ¾ x 1½ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ¾ x 1½ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4 ....$100 00	
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00

(Continued on page 62)

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No. 1 Moulding 8/4	62 00
No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	44 - 46	28 - 30	14 - 16
5/4 to 8/4	46 - 48	30 - 32	16 - 18

SAP BIRCH

4/4	39 - 41	26 - 28	16 - 18
5/4 and up	39 - 41	26 - 28	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in.		98 00
Selects, 1 to 2 in.		88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	72 00	74 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	48 00	50 00
No. 1, 1 x 10	38 00	40 00
No. 1, 1 x 8	37 00	38 00
No. 2, 1 x 12	38 00	40 00
No. 2, 1 x 10		37 00
No. 2, 1 x 8		35 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	30 00	31 50
No. 3, 1 x 8	30 00	31 00
Canadian spruce boards	25 00	27 00
Spruce, 10 in. dimension	28 00	30 00
Spruce, 12 in. dimension	29 00	31 00
Spruce, 9 in.		29 00
Spruce, 8 in. and under dimen.		28 00
10 and 12 in. random lengths, 10 ft. and up		29 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	22 00	24 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	22 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50	23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled		22 00
1⅝ in. spruce laths		4 25
1½-in. spruce laths	3 80	4 00

New Brunswick Cedar Shingles

Extras	3 50	3 60
Clears		3 30
Second clears	2 30	2 40
Clear whites	2 00	2 20
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.		4 00
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear		3 65

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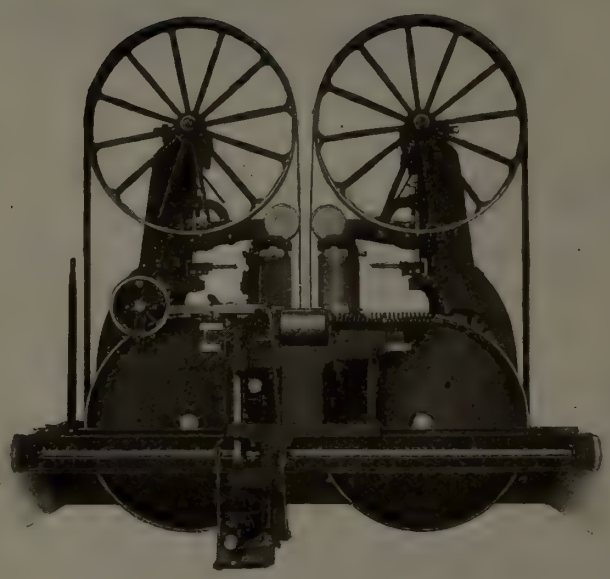

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100 Rooms, Private Bath, $2.50 Single, $4.00 Up Double.
100 Rooms, Private Bath, $3.00 to $5.00 Single, $4.50 Up Double.

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Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa,
December 20th, 1912.

Deputy Minister.

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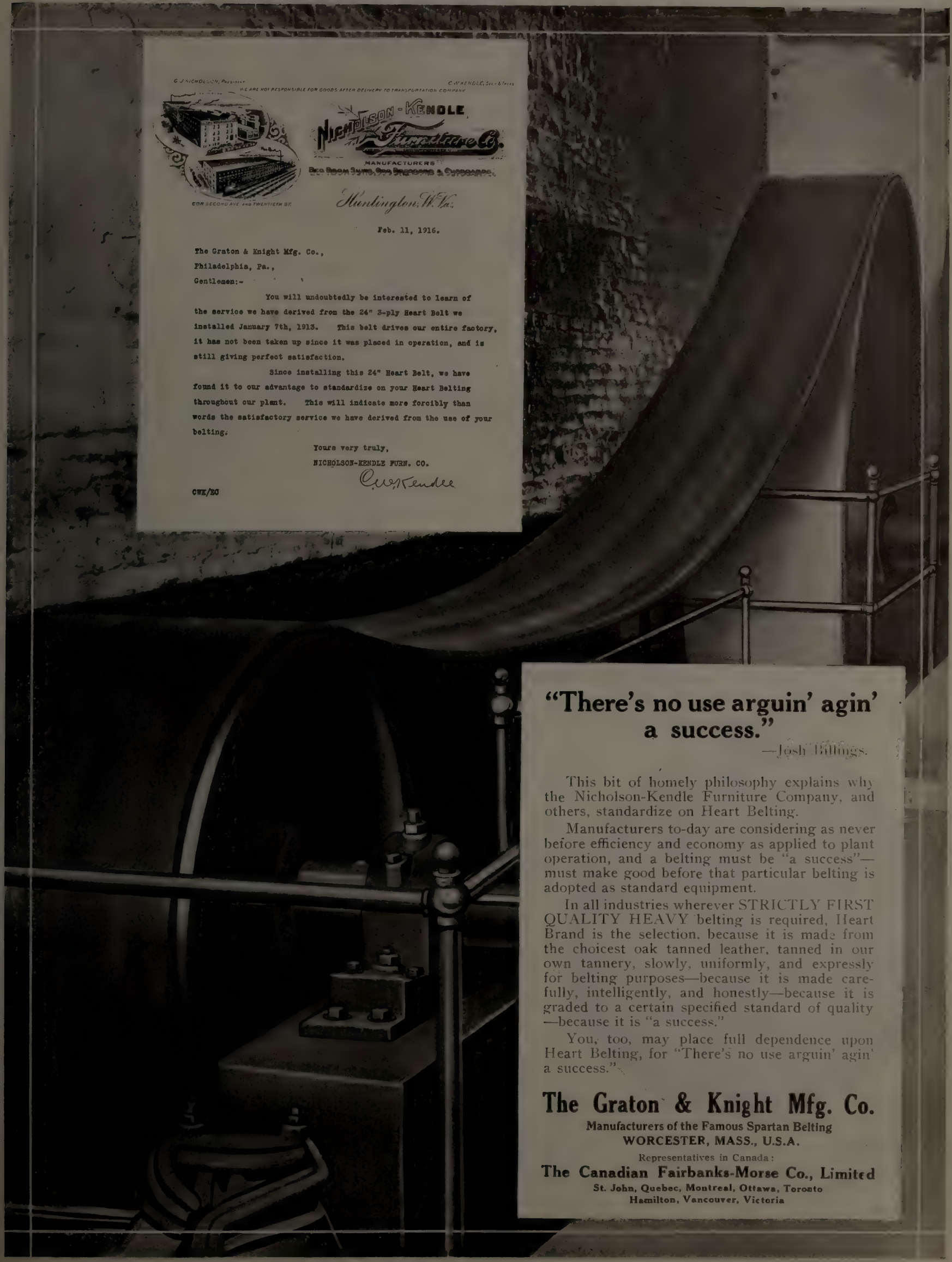

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You will undoubtedly be interested to learn of the service we have derived from the 24" 3-ply Heart Belt we installed January 7th, 1913. This belt drives our entire factory, it has not been taken up since it was placed in operation, and is still giving perfect satisfaction.

Since installing this 24" Heart Belt, we have found it to our advantage to standardize on your Heart Belting throughout our plant. This will indicate more forcibly than words the satisfactory service we have derived from the use of your belting.

Yours very truly,
NICHOLSON-KENDLE FURN. CO.
C. W. Kendle

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Manufacturers to-day are considering as never before efficiency and economy as applied to plant operation, and a belting must be "a success"—must make good before that particular belting is adopted as standard equipment.

In all industries wherever STRICTLY FIRST QUALITY HEAVY belting is required, Heart Brand is the selection, because it is made from the choicest oak tanned leather, tanned in our own tannery, slowly, uniformly, and expressly for belting purposes—because it is made carefully, intelligently, and honestly—because it is graded to a certain specified standard of quality—because it is "a success."

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Partington Pulp & Paper Co., Ed.
Spencer, C. A.
Summers, James R.
Terry & Gordon
Watson & Todd, Limited

PACKING

Dunlop Tire & Rubber Co.
Garlock Packing Company
Gutta Percha & Rubber Company
Turner Brothers Canada, Limited

PAPER

Bowater & Sons, W. V.

PAPER MILL MACHINERY

Bowater & Sons, W. V.

PATENTS

Harold C. Shipman & Company

PIPE UNIONS

Dart Union Company

PLANING MILL EXHAUSTERS

Sheldons Limited
Sturtevant Company, B. F.

PLANING MILL MACHINERY

Canadian Blower & Forge Company
Sheldons Limited
Yates Machine Co., P. B.

POSTS AND POLES

Harris Tie & Timber Company
Long Lumber Company
Muir, Kirkpatrick & Sharpe
Terry & Gordon.

PRESSES

Perrin & Company, W. R.

PULLEYS & SHAFTING

Hamilton Company, William
Waterous Engine Works Company

PULP MILL MACHINERY

Canadian Link-Belt Company, Ltd.
Hamilton Company, William
Jeffrey Manufacturing Company

PUMPS

Darling Bros.
Hamilton Company, William
Smart-Turner Machine Company
Waterous Engine Works Company

RAILS

Gartshore, John J.

ROOFING

Turner Bros. Canada, Limited

ROPE

Plymouth Cordage Company
Waterous Engine Works Company

RUBBER GOODS

Gutta Percha & Rubber Company
Turner Brothers Canada. Limited

SASH

Haeberle Lumber Company

SAWS

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Disston & Sons, Henry
Hoe & Company, R.
Shurly-Dietrich Company
Simonds Canada Saw Company
Smith Company, R. H.

SAW SHARPENERS

Waterous Engine Works Company

SAW MILL MACHINERY

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Clark Bros.
Dunbar Engine & Foundry Co.
Hamilton Company, William
Huther Bros., Saw Mfg. Company
Jeffrey Manufacturing Company.
Long Manufacturing Company, E.
McLennan Foundry & Mach. Works
Parry Sound Lumber Company
Payette & Company, P.
Waterous Engine Works Company
Yates Machine Co., P. B.

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Campbell-MacLaurin Lumber Co.
Canadian Western Lumber Company
Christy-Moir Company
Fesserton Timber Company
Fraser Limited
General Mercantile Company
Gillespie, James
Harris Tie & Timber Company
Heeney, Percy E.
Long Lumber Company
Mainland Lumber & Shingle Co.
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Terry & Gordon.
Timms, Phillips & Company
Vancouver Lumber Company

(Continued on page 68)

The Babbitt Metal that's at the Front in Efficiency and Economy

HARRIS HEAVY PRESSURE

"The Babbitt Metal Without a Fault," is guaranteed to give EXCELLENT SERVICE. It will not crack or squeeze out. It will run cool at any speed. It is copper coated and copper hardened. It is best for all general machinery bearings. Order a box from our nearest factory.

It is Made in Canada. What We Make We Guarantee.

We Manufacture All Grades of Babbitt Metals.

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THE CANADA METAL COMPANY, Limited

Head Office and Factory TORONTO Fraser Avenue

Branch Factories :—HAMILTON, MONTREAL, WINNIPEG, VANCOUVER

Good Fi
To Use

—To a layman, all files look alike. the skilled mechanic and practica superintendent will tell you they pr work with the "Famous Five" Files.

The steel in them is made from our formulas, which have been proven best after years of investigation and practical experience.

They are nicely balanced.

Their cutting qualities are good.

And then there is such a wide variety of grades, that the superintendent and buyer can select from the line the file he wants for any particular grade of work, and know that it will fulfill his requirements exactly.

You probably are already using them. But it is just as well to specify the "Famous Five" when ordering.

The "Famous Five" are:—

Kearney & Foot
Great Western
American
Arcade
Globe

(MADE IN CANADA)

emergency. There ... made the

Stops Bleeding Immediately

Also for thrush, cuts, callouses, spavin, etc., it will be found invaluable.

FREE TRIAL

We will send you a sample absolutely free by filling in the attached coupon. This trial will prove the wonderful beneficient qualities of Douglas Egyptian Liniment.

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Douglas & Co.,
Napanee, Ont.

Please send me sample of Douglas Egyptian Liniment as advertised.

Name _____

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New RAILS Relaying

12 to 80 pounds per yard.

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58 Front St. West, Toronto

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TIMBER ESTIMATORS
Sewall, James W.
McInnis, A. D.

TIMBER CRUISERS
Campbell Lumber Company. L. E.

TIMBER LANDS
Lacey Co., Jas. D.

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Dodge Manufacturing Company
Jeffrey Manufacturing Company
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West & Peachey

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Hoffman Brothers Company
Webster & Bro., James

VENEER MACHINERY
Perrin, William R.
Philadelphia Textile Machinery Co.

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Signal Systems Co.

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Smith Company, S. Morgan

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Canadian Blower & Forge Company
Jeffrey Manufacturing Company.
Long Manufacturing Company, E.
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Yates Machine Co., P. B.

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Becker & Co.
New Ontario Colonization Co.
River Ouelle Pulp & Lumber Co.

Edgar Lumber Company
Freeman-Smith Lumber Company
Fordyce Lumber Company
Gates Lumber Company
Hobart & Company
Long Lumber Company
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Muir, Kirkpatrick & Sharpe
Southern Lumber Company
Stout Lumber Company
Valley Lumber Company
Wilson Lumber Company
Wisconsin & Arkansas Lumber Co.
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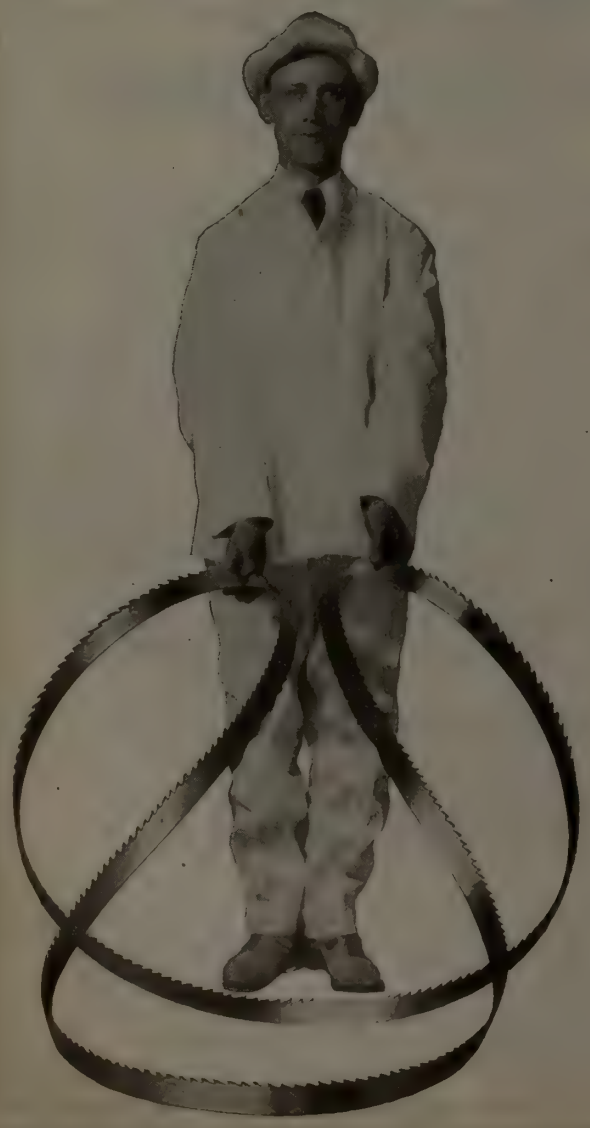
STEAM PLANT ACCESSORIES
Waterous Engine Works Company

STEAM APPLIANCES
Darling Bros.

STEAM TRAPS
Canadian Morehead Mfg. Company

STEEL BARRELS
Smart-Turner Machine Co.



ATKINS
BAND and RE-SAWS

We have achieved an enviable reputation for supplying SAWS which stand up to their work longer, with less re-fitting than any other SAWS in the world. If there is any doubt in your mind, we stand ready to prove it to you.

A Perfect Saw for Every Purpose

Send for our 248 page book on Saws. The most valuable and interesting Saw book ever published. Tells you just what you want to know about SAWS, MACHINE KNIVES and SAW FITTING TOOLS.

ASK FOR BOOKLET "C L"

E. C. ATKINS & COMPANY INC.

Makers of Sterling Saws

Factory—HAMILTON, ONT.

Vancouver Branch—109 Powell St.

J. J. TURNER & SONS

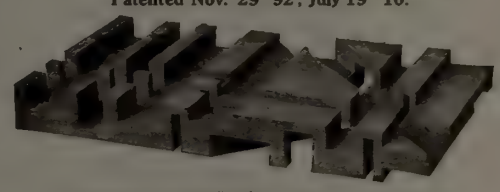
PETERBOROUGH, ONT.

Government Contractors and the largest Manufacturers and Dealers in Canada of

Lumbermen's Tents, Bed Ticks, Grey Blankets, Nose Bags, Waterproof Goods, Steel Ranges and General Camp Outfits.

Write for Catalogue. **Prompt shipments.**

Patented Nov. 29 '92; July 19 '10.



Grooves Cut with Huther Bros. Dado Heads

Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

Write for New Illustrated Catalog.

HUTHER BROS. SAW MFG. COMPANY, Inc.

1103 University Ave.
ROCHESTER, N. Y.

LOGGING LOCOMOTIVES

Locomotives on trunk line railroads have the advantage of the best facilities for inspection and repairs.

Logging locomotives face different conditions. They must work day after day in the hardest service, and often in localities where repairs cannot be made without great inconvenience. That is why we build our logging locomotives from interchangeable stock parts. With this system every part must fit every other locomotive of the same size and design, and long delays waiting for duplicate parts are avoided. Interchangeable parts kept on hand at our Works for prompt shipment

MONTREAL LOCOMOTIVE WORKS, LIMITED,

DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

The Peter Hay Knife Co., Limited

GALT, ONTARIO

MANUFACTURING WOODWORKING

Machine Knives, Circular Cutters and Mortise Chisel

32-Inch Edger

Among the details of this sturdy high capacity edger we may mention:—

The two main frames supporting the bearings are built so as to be stiff and rigid, and are well braced with cast iron tie-plates. It is designed for portable or small stationary saw mills. By a slight change this machine can be made right or left hand to suit mill.

The arbor is 2½ inches in diameter, and made of the best machine steel. The drive pulley is 10 inches in diameter and 8½ inches face.

The arbor runs in three bearings, 6 inches long, all of which are lined with the best babbitt, and fitted with covered oil-cups of ample capacity.

There is one fluted feed roll 5 inches in diameter on either side of saws. These are power driven by means of belt and gears. There is a roll on top, in centre of machine, over which lumber can be passed back.

Saws used are 16 inches in diameter and will cut stock 5 inches thick. Machine is fitted with collars for two saws, one stationary and one movable.

The saw shifter casting has a long bearing on the sliding rod, which makes it shift easy. There is a lever jaw casting supplied to connect to saw shifter.

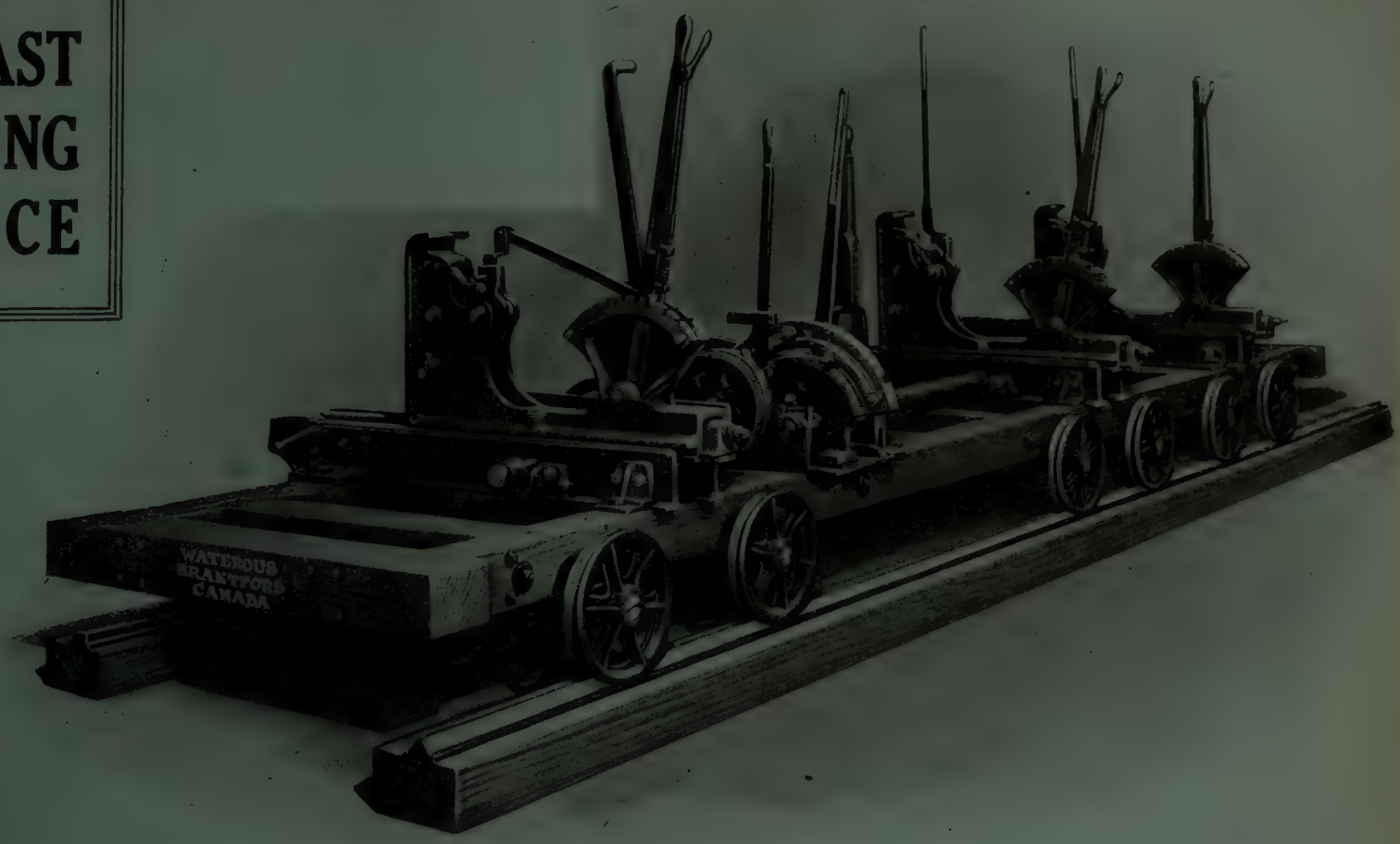
When overhauling your mill ask us about repair parts or new equipment.

THE E. LONG MANUFACTURING CO. SAW MILL MACHINERY ORILLIA, CANADA

The E. Long Manufacturing Company, Limited

Orillia - Ontario

FOR FAST CUTTING SERVICE



Waterous Carriages

Steel Girder and All-Steel—For Every Size Mill

We build Saw Carriages.

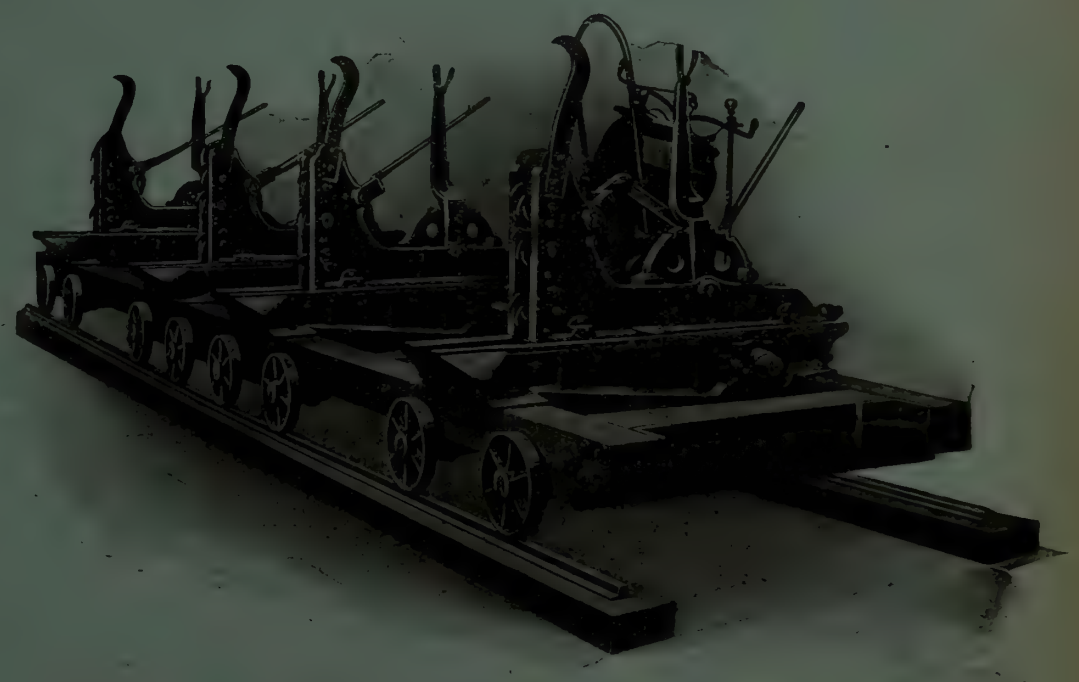
Double Girder Carriages
With log openings of 24 in. to 50 in.

All-Steel Rack Carriages
With opening 36 in. to 72 in.

All Steel-Screw Carriages
With openings 60 in., 72 in., and 84 in.

No matter what size your mill or what kind of logs you are handling we have the right carriage for your use.

Our carriage equipment is of the very best. Waterous Dogs will hold the logs in place to stay; Waterous Setworks are accurate and durable; Waterous strength of construction will hold the carriage up to its work under the rack and wear of severe usage longer than most makes.



Writes us for catalogues and prices

The Waterous Engine Works Co., Limited, Brantford, Canada

H. B. Gilmour
Vancouver, B. C.
Winnipeg, Man.

$5,000,000.00
worth of mixed metal sold annually.

"FROST KING" METAL

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price **30c per lb.**, Fort William and East; West of Fort William **35c per lb.**, delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

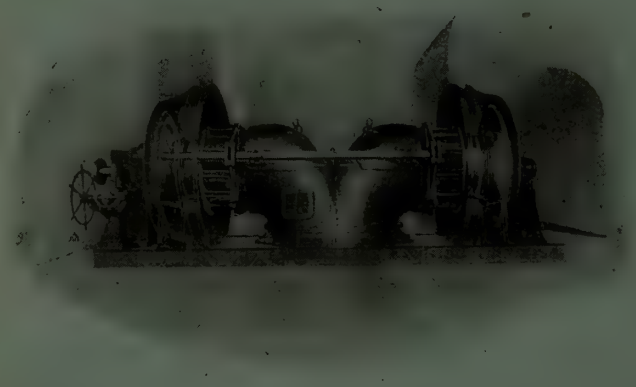
For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

The Low Head Plant
with
SMITH HYDRAULIC TURBINES



has established a reputation for real service that is second to none in the field of water power utilization. It is the result of all-round efficiency, hydraulic as well as mechanical, and has been attained by the careful consideration of every feature entering into the design of turbine equipment.

Our thorough investigation of the conditions peculiar to any proposition assures a practical and economical solution of the problem.

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S. Morgan Smith Co., York, Pa.

H. B. VanEvery—CANADIAN REPRESENTATIVE
405 Power Bldg. - - - Montreal, Can.

Montreal Toronto Winnipeg

The J. C. McLaren Belting Co.
Limited
General Mill Supplies MONTREAL

Pink's Lumbering Tools

The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

Long Distance Phone, No. 87

Send for Catalogue and Price List.

Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants.

The Thomas Pink Company, Limited

Manufacturers of Lumber Tools

PEMBROKE - - - - - ONTARIO

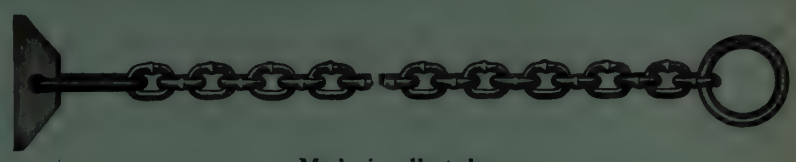
Vol. 36 Toronto, November 15, 1916 No. 22

Canada Lumberman & Wood Worker

THERE IS NO LOSS

from leaks at pipe joints
where Dart Unions
are used.

Your Jobber Sells Them.



Made in all styles

Electric-Welded Boom Chain

We also specialize

Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

BUY GOOD HARNESS

Here's a big problem solved.
Forget your harness troubles. Alligator Brand is used year in and year out by wise lumbermen without the least trouble or delay of any kind.
Made to wear through sleet and snow and under most trying conditions.
The leather, tanning workmanship and hardware are good. Our 50 years experience is a guarantee of quality.
We have a big interesting catalogue giving complete descriptions of several harness models that will fill your needs. Write for it to-day.

Lamontagne Limited

MONTREAL—338 Notre Dame St. W.
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GENUINE "TURBROS"

Balata Belting

Waterproof and Stretchless.

The best belt for sawmills.

Manufactured and guaranteed by

Turner Bros. Canada Limited

Montreal

WHEN IS A PUMP NOT A PUMP?

When its efficient service is not to be relied on.
It will pay you to get acquainted with **REAL PUMPS**
as built by

The Smart-Turner Machine Co., Limited

HAMILTON - CANADA

J. M. T. Automatic Injector

Made in Canada

Made according to the most approved ideas with connections to suit any requirement. Injectors start from 2 to 3 lbs. of steam pressure when water is taken from a barrel or tank, at level of the Injector. With water pressure of 20 lbs. they start at from 10 to 12 lbs. of steam and work up to 175 lbs. Used for low pressure in steam heating plants.

We also make our J.M.T. Improved Injector for Working Pressures up to 220 lbs. Steam.

Send us your Injector enquiries.

The James Morrison Brass Mfg. Co., Limited

93-97 Adelaide Street West, TORONTO

Alphabetical Index of Advertisers, Page 58 Classified Directory to Advertisements, Page 60

The DODGE Standard Wood-Split Pulley

With Interchangeable Bushing System

"50% More Efficient, 50% Less First Cost"

Is the difference between Wood Pulleys as against any other kind.

MILLIONS IN USE EVERYWHERE

Made in all sizes, 4 inches diam. to 4 feet.
All widths of face; in stock everywhere.

We have the most Extensive Pulley Manufacturing Plant in the Dominion of Canada.

Capacity 340 pulleys per day.

SOLE MAKERS

Dodge Manufacturing Co., Limited

Toronto - Canada

Bartram Brothers

Limited

Ottawa, Canada

Wholesale Lumber

SPECIAL

Merchantable Spruce

1915 Sawing

2 x 4 x 10/16 - - - -	122,000 ft.
2 x 5/6 x 10 16 - - -	393,000 ft.
2 x 7 x 10/16 - - - -	76,000 ft.

1916 Sawing

2 x 4 x 10/16 - - - -	150,708 ft.
2 x 5 x 10/16 - - - -	165,169 ft.
2 x 6 x 10/16 - - - -	167,244 ft.
2 x 7 x 10/16 - - - -	109,530 ft.

Hemlock

Send us your enquiries—we have dry stock and can furnish your requirements.

Birch, Ash and Maple

We have a few cars in stock and can make prompt shipment.

H. J. TERRY A. E. GORDON

Terry & Gordon

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At Your Service

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F. W. Gordon, Mgr.

HEAD OFFICE
704 Confederation Life Building
TORONTO, ONT.

Montreal Branch
23 La Patrie Building
Leon Gagne, Jr. Mgr.

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

Spruce

Bone Dry, 1915 Cut

50,000	1x4&5	No. 1 Spruce
25,000	1x8	"
40,000	4x4	"
35,000	3x6	"

Hemlock *1915 Cut*

70,000	2x4—14	No. 1 Hemlock
30,000	2x6—10	"
25,000	2x6—12	"
10,000	2x6—14	"
1,013	2x9 – 14	"
18,000	2x10—14	"
12,000	2x10—16	"

3 Cars 3 x B.C. Shingles in Transit

Left Vancouver October 1st

The Long Lumber Company

HAMILTON, ONT.

FOR SALE: Standing Timber, in Large or Small Blocks and Sawmill Machinery

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Hand Machine for cut-off saws.

POWER PLANT

1 Double Duplex, high pressure Water Pump.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 30 h.p. Generator, 250 volt.

1 30 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

HIGH GRADE

MUIR, KIRKPATRICK & SHARPE

HEAD OFFICE
1325-6-7-8 Traders Bank Bldg., Toronto, Ont.

WESTERN OFFICE
1007 Dominion Bldg., Vancouver, B. C.

SEND US YOUR ENQUIRIES FOR SPRUCE

We have a Complete Stock of 1 in., 2 in. and 3 in. in all grades

ALSO

A Nice Stock of Exceptionally Good Spruce Lath

Put up in both 50 and 100 p.c. bundles

A Very Complete List of

WHITE PINE - RED PINE - JACK PINE and HEMLOCK

British Columbia Red Cedar and New Brunswick White Cedar Shingles
British Columbia Fir Flooring, Ceiling Siding and Timbers
Spruce and Cedar Silo Stock

We also have about 200M feet, 2 in., 2 1/2 in., 3 in. & 4 in. Log Run Birch (Dead Culls out)
Exceptionally Choice Stock

SEND US YOUR FALL ENQUIRIES

LUMBER

Murray & Gregory, Limited

Head Office:
ST. JOHN, N. B.

Established 1868

Quebec Office:
ST. CAMILLE, Bellechase Co., P.Q.

SAW MILLS

St. John, N.B., St. Camille and Lake Frontier, Que., cutting SPRUCE and PINE Lumber for British, United States and Canadian Markets.

Also

LATH, SHINGLES, PULPWOOD and RAILWAY TIES

Manufacturing and Grading Right

Trade *Mark*

Address all enquiries to our Head Office, ST. JOHN, N. B.

Horse shoes for luck

The extra good quality of our Horseshoe Logs is not the result of luck but of good management and careful selection. Nevertheless, they have proven lucky for us and will bring good luck to you.

White and Norway Pine

We make a specialty of Boxes, Box Shooks, Wooden Pails and Tubs, Pine Lath, and Cedar Posts. In all these lines you will secure from us the product of the latest machinery and equipment and experienced workmen.

Write for prices

C. Beck Manufacturing Co., Limited

Penetanguishene, Ont.

"WE AIM TO SERVE YOU WITH THE BEST"

Vancouver Lumber Co.

LIMITED

MILLS: False Creek, Vancouver, B. C.
Roche Point, Burrard Inlet, B. C.

B.C. Fir and Cedar Lumber and Shingles

Try our 1 x 10 and 1 x 12
No. 1
Common Cedar
for
Barn Boards

W L A C RITE-GRADE TRADE MARK

Fir Flooring
Fir Ceiling, etc.
Fir Timbers
Cedar Siding
XXX, XXXXX and
Rite-Grade Shingles

Address enquiries to our Eastern Sales Office—

701 Excelsior Life Building,
TORONTO, ONT.

CHAS. PLANT, Representative

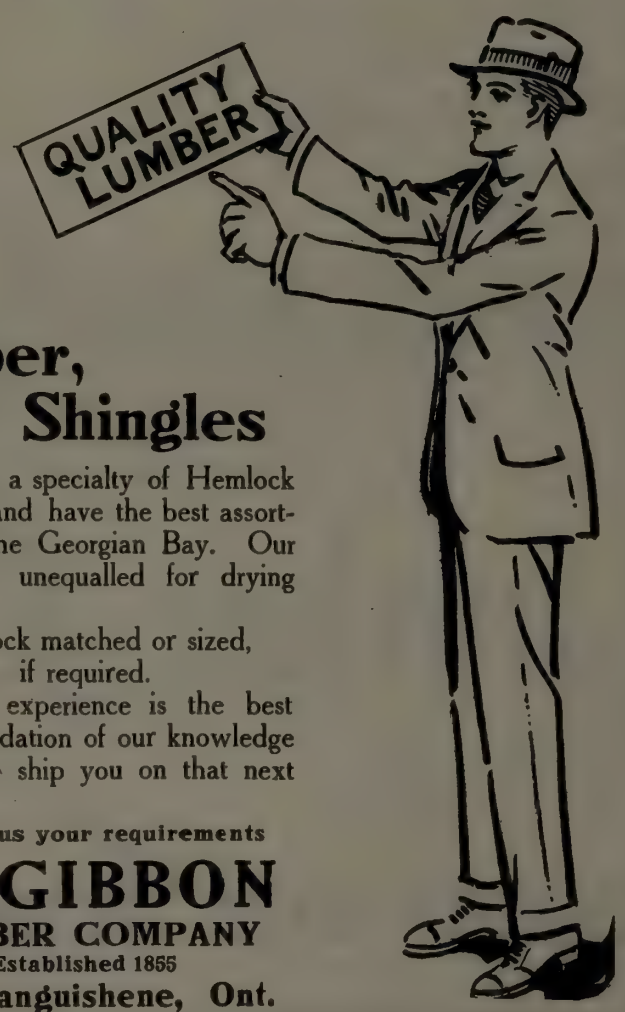
Watson & Todd Limited
OTTAWA

RED PINE WHITE PINE
SPRUCE

SEND US YOUR ENQUIRIES

The
Harris Tie & Timber Co.
Ottawa - Canada
Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

WE SELL YOU



Lumber,
Lath, Shingles

We make a specialty of Hemlock Billstuff, and have the best assortment on the Georgian Bay. Our yards are unequalled for drying lumber.

All stock matched or sized, if required.

Our long experience is the best recommendation of our knowledge of what to ship you on that next order.

Phone us your requirements

McGIBBON
LUMBER COMPANY
Established 1855
Penetanguishene, Ont.

Fraser Bryson Lumber Co., Ltd.

Office, Castle Building 53 Queen St. Ottawa, Can.

Wholesale Lumber Dealers and Selling Agents for

Fraser & Co.

Mills at
DESCHENES - - - QUEBEC

White Pine
Red Pine
Spruce
Lumber and Lath

River Ouelle Pulp & Lumber Co.

Manufacturers of

SPRUCE

Lumber Lath Pulpwood

Head Office and Mills at:
St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of Quebec City

Also Mills at:
Crown Lake, Powerville Riv. Manie
On Nat. Transcontinental Ry.

Mill Yard.

Spruce, Tamarac, Whitewood and Poplar Lumber

SPRUCE AND WHITEWOOD LATH

Planing Mill in connection with Saw Mill

ROSSED SPRUCE PULPWOOD

Full supply of Seasoned Lumber always on hand.

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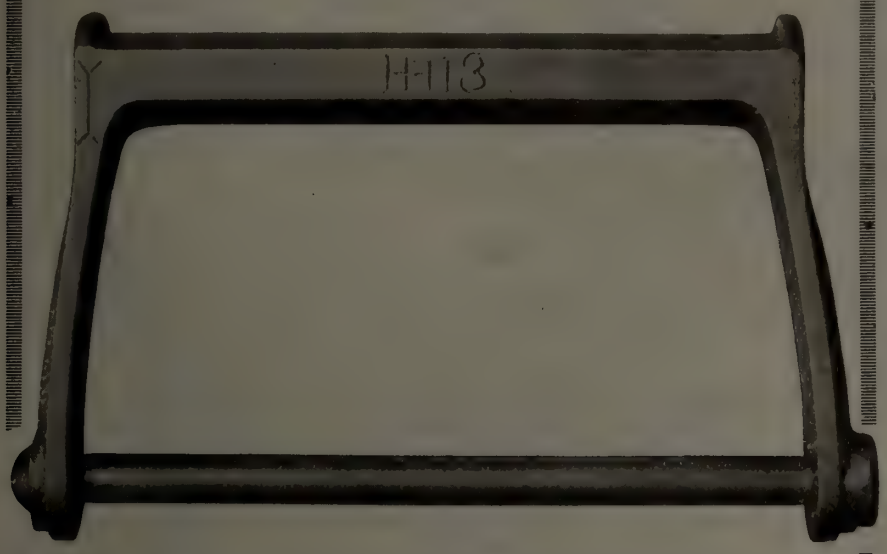
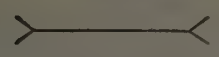


This trade mark  on every link

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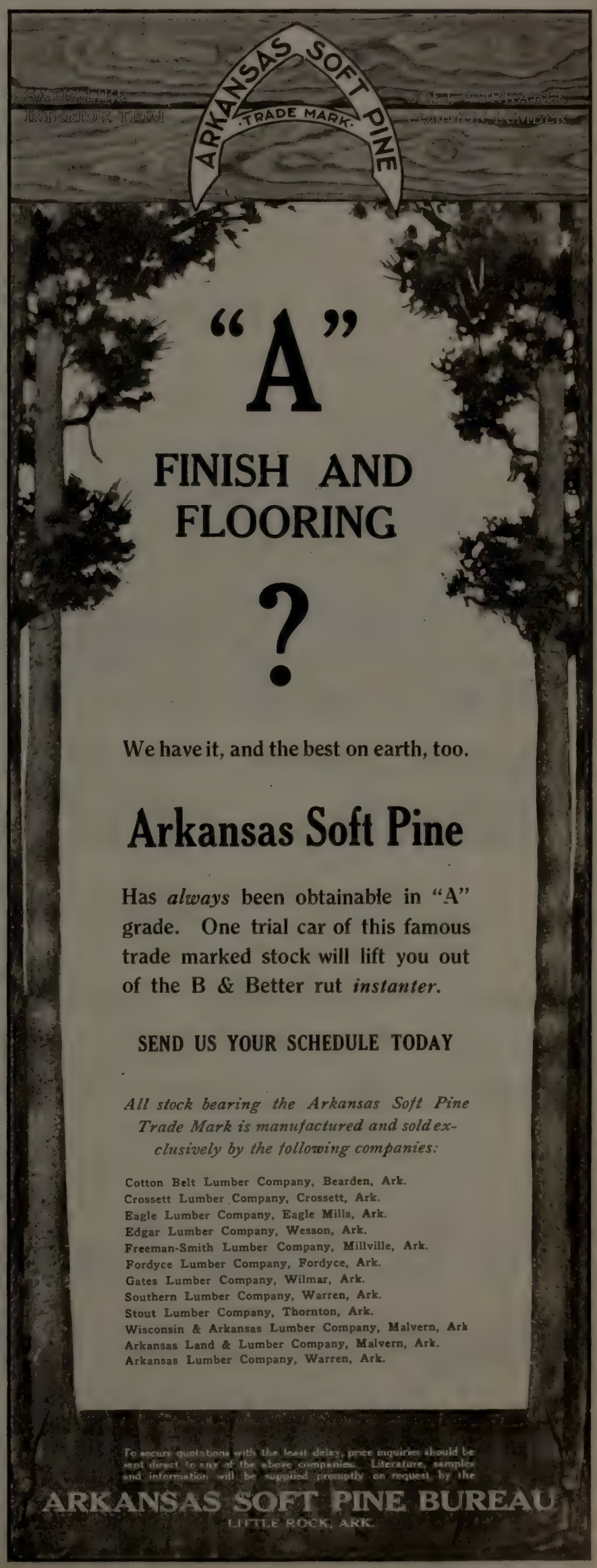

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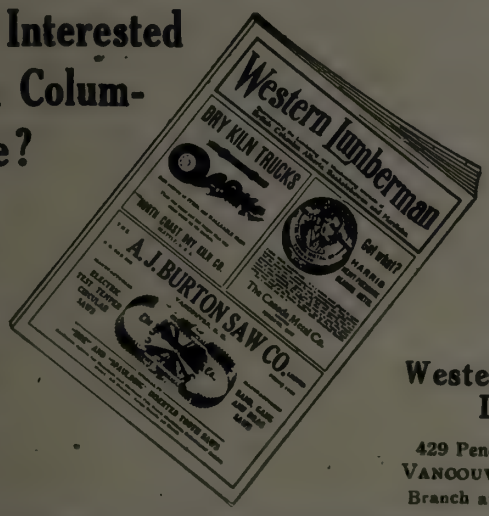
The immensity of the Lumber Industry will within a few years make this Province the most important in the whole Dominion.



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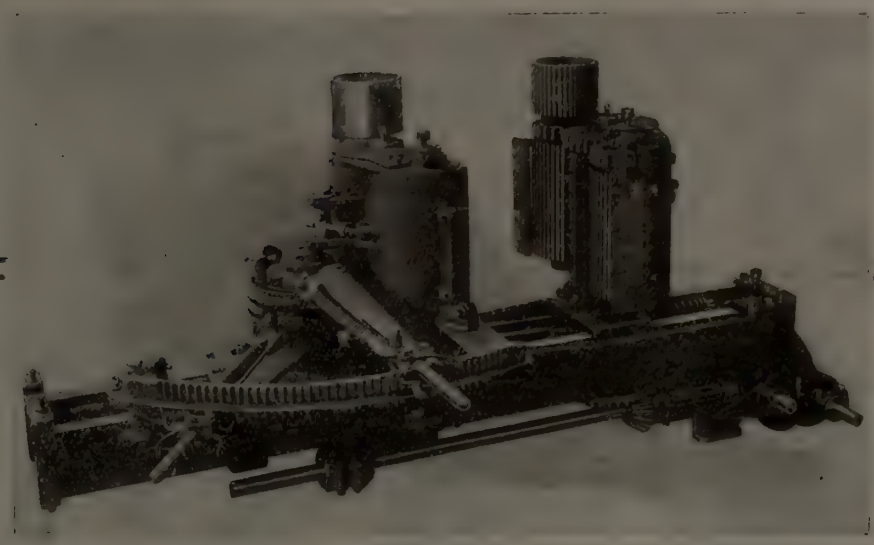

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Heavy Duty Vertical Band Resaws

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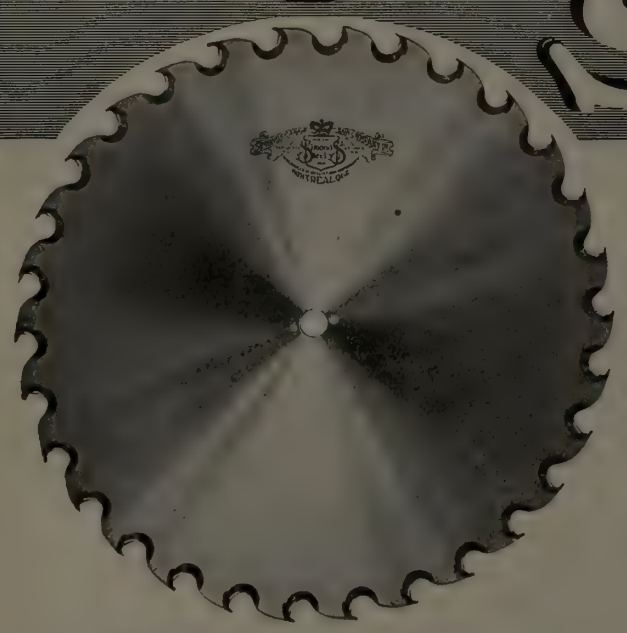

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MONTREAL TORONTO WINNIPEG

Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

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"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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A Critical Moment for the Canadian Lumber Export Trade

More than a year ago the Canada Lumberman published a number of articles specially designed to awaken among lumber manufacturers and exporters in Canada an adequate appreciation of the importance of studying the export markets for Canadian timber and lumber which will develop after the war, and even the markets which can be expected to develop during the course of the war. For the time being the best that we could do in the way of stirring up interest was in connection with the trade which then seemed likely to develop first of all, namely, that in ready-to-erect, portable houses. The firms in Eastern Canada that were in a position to take care of such trade did form an association, which went to work systematically upon the problem, prepared plans and specifications, constructed and shipped to France a number of sample houses, and sent a representative to France, who, we believe, has been able to promote their interests with some measure of success.

So far as the general lumber trade is concerned, however, although we believe that individually they are keeping closely in touch with the situation as it exists to-day, and are keeping their ears to the ground to learn of future developments as far as possible in advance, there has been nothing done that we have learned of, in the way of organizing, handling, and developing the business collectively and efficiently. We believe that an organization should be formed immediately with this object in view. Our conviction in this regard is strengthened by the course which has recently been taken by lumbermen in the United States, as reported in the Canada Lumberman of October 15th, an association having been formed for the definite purpose of sending a number of skilled representatives abroad to get in touch with the situation and to develop the demand for United States timber and lumber. The fact that the United States trade and industry are taking this step makes it all the more imperative for Canadians to do the same thing. It is, indeed, a pity that we were not first in the field. Now, however, unless an effective organization is established, the bulk of the trade will go to the United States, and not only that, but the influence of this aggressiveness on the part of our competitors to the south will be of a lasting nature and give them the upper hand in foreign markets long after the abnormal demand growing out of the war has passed into history.

The Department of Trade and Commerce at Ottawa has already done something towards paving the way for the development of Canadian trade in this connection by sending Mr. H. R. MacMillan on a trip around the world to study the foreign markets for lumber and make reports upon them. Regarding the situation, the Department of Trade and Commerce, in its latest weekly bulletin, says:

"Canadian lumbermen in all the provinces of the Dominion should get together and concert measures for the efficient disposal of their products in the wide-opening markets of the world. There will be an immense demand for lumber in Europe during the reconstruction period following the war. Why should not Canadian lumbermen get their share of this trade? In Australia, New Zealand, South Africa, India, China, the West Indies, and South America there are opportunities for the sale of Canadian lumber awaiting organized efforts on the part of the great lumber interests.

"As a result of a conference between the various lumber manufacturing organizations of the United States and representatives of the United States Government, a corps of experts will start for Europe early in November to study the conditions of the lumber market likely to prevail during the reconstruction period following the war. The expedition is being largely financed by the lumbermen themselves.

"Before taking up the question of how to organize the American lumber industry to best secure the great volume of foreign lumber business that must come to the United States even before the European war ends, detailed reports were given of the conditions abroad by the varied interested organizations, as well as from governmental agencies."

After summarizing the conditions in various European countries to-day, so far as the demand for lumber is concerned, and the situation that will develop when the reconstruction period begins, the bulletin says that the enterprise of the United States association will not end with sending experts to report on market conditions in Europe. The lumbermen propose to organize export associations, with foreign sales agencies, to secure and distribute orders for American lumber.

The lumbering interests represented at the conference agreed that American lumbermen of all sections should unite to secure this market, regardless of whether they are exporters or not.

There is still time to work out an organization of this nature in Canada and to get into the field before our Southern competitors have effectively forestalled us. Canadian exporting firms which feel satisfied that they can individually secure plenty of this trade after the war should not look upon the matter from the individual point of view. They stand to profit as much as anyone by the development of an organization formed to increase our share in the business abroad, and they stand to lose enormously if the aggressiveness of the United States is allowed to instill into the minds of Europeans the idea that the best source of supply for them is in the United States.

It will not take long to work out and create an effective export association in connection with the Canadian lumber manufacturing industry if it is gone about in an enthusiastic manner. The expense of sending representatives abroad will be infinitesimal compared with the value of the results or compared with the cost of neglecting the opportunity.

Co-Operation the Foundation of Success

At the annual meeting of the Western Forestry and Conservation Association, which was held recently at Portland, Oregon, a number of excellent addresses were delivered, among them being two that were of special interest to Canadians. Mr. M. A. Grainger, chief of the British Columbia Forest Service, told of what British Columbia is doing to help its lumber manufacturers. Over one-third of the Forest Service staff have gone to the war, and therefore the work suffers to a

great extent; nevertheless much good work is being done. Conditions confronting the industry in British Columbia are similar to those confronting the manufacturers of the Pacific Coast States. The government realizes that forest conservation can only be carried out with the co-operation of the lumbermen and the development of the market for lumber products, as well as through the proper adjustment of production to demand. As market extension presents the only way in which immediate results can be secured, this is the problem the government attacked first of all. The chief efforts of the Forest Service, therefore, were directed towards the markets overseas and those of the Canadian prairies and Eastern Canada. A movement has been planned and is being carried out for increasing the consumption of lumber in the prairie districts, with the co-operation of the government agricultural authorities and the agricultural experts of the farmers' universities. The farmers' experts are anxious to improve farming methods and conditions, and such a movement goes hand in hand with a campaign for increasing the use of lumber which is really necessary in order to promote better and more profitable farming.

The method in which this campaign is being carried out is a practical one. Ten booklets have been published, containing information upon farming subjects, giving complete lists of building materials for the erection of any buildings advocated, and also including detailed plans. Large scale working drawings are also being furnished at the cost of production, namely, from 10c to 15c. In addition to this, the bulletins are being advertised in local and farm papers; travelling exhibits are being sent out in charge of trained men and displayed at all farmers' conventions, fairs, etc. Free motion picture entertainments are also being provided.

The value of all this work depends entirely upon the enthusiasm put into it and the thoroughgoing and effective way in which it is carried out. Similar methods are being followed in Eastern Canada, but the lumber products are being advertised to the general public there, as well as directly to government and municipal engineers, architects, contractors, lumber wholesalers, and the trade generally. The Eastern representative makes a point of being on hand whenever building codes are being revised in a city, or when specifications for big contracts are under consideration, and makes a special point of seeing that the legitimate claims of British Columbia materials are fully considered. The next few years will see many big problems tackled by the united efforts of the Forest Service and the lumbering industry.

A brief address was also delivered by Mr. H. R. MacMillan, former trade commissioner for the Canadian Government, who dwelt chiefly upon one important point. Instead of sitting and preaching optimism, he said, they ought to organize and co-operate to get $2 more a thousand, and thus insure prosperity and happiness for all. He spoke chiefly in the interest of international co-operation, saying that British Columbia had only one-third as much timber as the Pacific Coast states, but that one-third was enough to make trouble for the United States manufacturers for the rest of their lives, without co-operation.

Hardwood Grading Rule Changes Still Under Discussion

The most important discussion of the grading of hardwoods that has occurred for many years was that which took place last June at the annual meeting of the National Hardwood Lumbermen's Association in Chicago and resulted in the changes submitted by the grading rules committee being defeated, leaving the rules practically as they stood. It will be recalled that there was a vigorous fight upon the matter at that time, and that those who desired certain changes, while taking the defeat philosophically, were not disheartened, but determined to keep up the agitation. The Northern Hemlock and Hardwood Manufacturers' Association have held an important meeting to discuss this situation, and adopted a proposed set of changes to the National rules. These changes will be submitted for final approval to the Michigan Association, and then will be discussed once more by the Northern Association, after which the plan is to make a strong effort to have them adopted by the National Hardwood Lumbermen's Association at its next annual meeting.

Canadian hardwood manufacturers, wholesalers, and consumers have become closely allied in their interests with the National Hardwood Lumber Association, many of the manufacturers and wholesalers being of that body. They have watched the grading rule situation closely and jealously, their interests being so intimately affected by the grades established. At the meeting last June, when the changes originally proposed were defeated, the efforts of Canadian members of the association had much to do with the result. They will, therefore, be interested in learning about the move taken by the Northern Hemlock and Hardwood Association, and for this reason we present the proposed changes now adopted by that association, which are as follows:

Hard Maple and Beech.—Selects (new rule): Grade to be made from best face of the piece. Selects must be 4 inches and wider, 8 feet and over long. Four, five, and six-inch strips shall have both edges free of standard defects; pieces over 6 inches wide shall have one edge free of standard defects. Pieces 4 inches wide shall have one clear face; pieces 5 inches wide, 8 to 11 feet long, shall have one clear face; pieces 5 inches wide, 12 feet and longer, admit one standard defect or its equivalent. Pieces 6 inches and over wide shall grade not poorer than seconds on one face. The reverse face of pieces 5/4 and thinner will admit sound defects, and shall be at least 85 per cent. of the grade No. 1 common, and the remainder shall grade not below No. 2 common. The reverse face of 6/4 and thicker shall admit of sound defects, but shall not grade below No. 1 common.

No. 1 Common.—(Changes.) Six feet and over long; not over 30 per cent. shorter than 10 feet. Pieces 3 and 4 inches wide, etc. (no further change).

Hard Maple and Beech.—Nos. 1 and 2 common (flooring stock) shall be graded from the best face; 3 inches and wider, 4 feet and longer. Heart rule does not apply. Percentages of clear face cuttings to be the same as for Nos. 1 and 2 common regular grades; back face of cuttings must be sound.

Ash, Birch, and Sycamore.—Select (new rule): Grade to be made from best face of piece. Selects must be 4 inches and wider, 6 feet and over long. Four, five and six-inch strips shall have both edges free of standard defects; pieces over 6 inches wide shall have one edge free of standard defects. Pieces 4 inches wide shall have one clear face; pieces 5 inches wide, 8 to 11 feet long, shall have one clear face. Pieces 5 inches wide, 12 feet and longer, admit one standard defect or its equivalent. Pieces 6 inches and over wide shall grade not poorer than seconds on one face. The reverse face of pieces 5/4 and thinner will admit sound defects, and shall be at least 85 per cent. of the grade No. 1 common, and the remainder shall grade not below No. 2 common. The reverse face of 6/4 and thicker shall admit of sound defects, but shall not grade below No. 1 common.

No. 1 Common.—(Changes.) Six feet and over long.

Birch.—Nos. 1 and 2 common (flooring stock) shall be graded from the best face; 3 inches and wider, 4 feet and longer; heart rule does not apply. Percentages of clear face cuttings to be the same as Nos. 1 and 2 common regular grades; back of cuttings must be sound.

Basswood, Soft Elm, Soft Maple, and Buckeye.—Seconds must be 6 inches and over wide.

Selects (new rule): Grade to be made from best face of piece. Selects must be 4 inches and wider, 6 feet and over long. Four, five, and six-inch strips shall have both edges free of standard defects; pieces over 6 inches wide shall have one edge free of standard defects. Pieces 4 inches wide shall have one clear face; pieces 5 inches wide, 8 to 11 feet long, shall have one clear face. Pieces 5 inches wide, 12 feet and longer, admit of one standard defect or its equivalent. Pieces 6 inches and over wide shall grade not poorer than seconds on one face. The reverse face of 5/4 and thinner will admit of sound defects, and shall be at least 85 per cent. of the grade No. 1 common and the remainder shall grade not below No. 2 common. The reverse face of 6/4 and thicker shall admit of sound defects, but shall not grade below No. 1 common.

No. 1 Common.—(Changes.) Six feet and longer.

The continued earnest agitation of the Northern Hemlock and Hardwood Association for changes to make the rules more in keeping with the interests of their trade indicate that the subject was not settled at the last annual meeting of the National Association, and that another big discussion is on the boards for the next annual. There are several months yet before that meeting will take place, and it is more than possible that the grading rules committee of the National and the bureau of grades of the Northern Association will be able to hold a series of conferences before that time which will result in something being done to simplify the situation and to meet the wishes of all parties.

Woods Operations in Ontario Reduced

Reports from Manufacturers Show How Labor Scarcity and High Cost of Provisions will Curtail Coming Winter's Output

Stocks Low—Output Small—Demand Increasing.

Marmora, Ont.

Editor Canada Lumberman:—

Lumbering operations in this vicinity during the coming winter will be very limited indeed. The scarcity and high price of labor and the marked increase in the cost of supplies make it almost impossible to carry on logging operations at all. As nearly as we can make out at the present time, we feel that the prices of lumber must advance very sharply, at least 25 per cent., and probably 50 per cent. in some lines, over what they have been during the past summer. We do not expect that our cut will exceed a million feet, and will probably be even less than this, for lack of labor. About one-half of our cut will be hemlock, one-quarter of the balance pine, and the rest will be made up of basswood, ash, and cedar. Dry stocks are getting very scarce throughout this section, and, judging by numerous enquiries from Canadian, as well as United States, firms, dealers are anxious to contract for all they can get, even at considerable advances over the prices that have prevailed this fall. Sales are considerably better than last year, and our stocks are already running low in many sizes.—The Pearce Company, Ltd.

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Twenty-five Per Cent. Reduction.

Thessalon, Ont.

Editor Canada Lumberman:—

We figure on putting in about 12,000,000 feet this winter, which will consist of about 75 per cent. white pine and 25 per cent. red pine. We put in last year about 16,000,000 feet, and it all depends on labor conditions if we put in 12,000,000 feet this year or not. Labor is hard to get; wages are high, as well as provisions and material. We figure that it will cost at least five dollars per M. feet more to lumber this year than last, and the lumbermen will have to get a large increase in the price of their lumber next season in order to meet the large increase in cost of production. It looks to us as though during the coming season there will be quite a shortage of lumber, as most of the operators are decreasing their output, and some are not lumbering at all this winter owing to the high cost of production and scarcity of labor.—Hope Lumber Company.

* * *

Higher Prices Certain for Next Season.

Midland, Ont.

Editor Canada Lumberman:—

Last winter we took out stock approximately as follows: 5,000,000 feet bush scale white pine, 775,000 feet bush scale red pine, 250,000 feet bush scale spruce, 35,000 feet bush scale cedar. Owing to conditions existing this season from the standpoint of the high cost and scarcity of labor and the expensive supplies, we have concluded to reduce this output by at least one-third. What we do take out, so far as classes of timber are concerned, should bear about the same ratio as last winter's output. In view of the substantial increased cost of production and the reduced output, we anticipate higher prices for next season.—Chew Brothers.

* * *

Will Take Out Large Amount on Account of Fires.

Ottawa, Ont.

Editor Canada Lumberman:—

Last season we took out about a million feet of spruce, a million and a half feet of red pine, and about four million feet of white pine. This season our output will be about a million and a half feet of spruce, two million feet of red pine, and about twelve million feet of white pine. We do not know what quantities our neighbgrs are going to take out this season, but we think some of the lumbermen who have had extensive burns during the past season will take out more than they intended; but, in any event, logging operations will be just about double the cost of last year, owing to the very high rate of wages and exorbitant price of all foodstuffs.—Shepard & Morse Lumber Company.

* * *

Doing Nothing This Winter.

Peterboro, Ont.

Editor Canada Lumberman:—

Owing to the scarcity and high cost of labor and supplies for operating, and with the prospect of not being able to get help to saw or handle lumber next summer, we have decided not to take out any logs this season. Last winter we took out two and a half million feet of pine and one and a half million feet of hemlock, cedar, etc., logs, with an advance of 40 per cent. in cost for driving and sawing and no increase in the selling price of lumber.—Estate of Alfred McDonald.

* * *

Output Much Reduced.

Toronto, Ont..

Editor Canada Lumberman:—

We figure on bringing out this year about 2,500,000 feet of hemlock, 250,000 feet of spruce, 250,000 feet of birch, 250,000 feet of pine. In other years our stock ran up around 5,000,000 feet, but, owing to the shortage of labor, last year we did not get this amonut, nor do we anticipate getting more than about 3,250,000 feet this year. Last year we took out 3,000,000 feet of hemlock, 285,000 feet of spruce and balsam, 550,000 feet of birch, 250,000 feet of pine, amounting to a little better than 4,000,000 feet.—Standard Chemical, Iron, and Lumber Company, Ltd.

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Logging Operations Reduced One-half.

Pembroke, Ont.

Editor Canada Lumberman:—

Owing to labor and the price of supplies, we are only putting in three camps this season, about half our usual winter's operations. We will take out probably from ten to twelve million feet. Besides this quantity we have twenty million feet of old logs in the water, not yet sawn. About 60 to 70 per cent. of this winter's operations will be white pine, balance red pine and spruce. The market for lumber at present is exceptionally good, all lines being in demand. Prices have advanced on many lines materially since last spring.—The Colonial Lumber Company, Ltd.

* * *

A Poor Outlook for the Log Supply.

Sudbury, Ont.

Editor Canada Lumberman:—

It is very hard to say how many logs we will take out this season. If we cannot procure labor faster than we have been doing up to date, we will not get out enough logs this year to run our mills on a day shift. Last year we took out about three-quarters of a million pieces, which we have just completed sawing. We would like to get as many this year in order to have work for the mills next season, but the outlook is doubtful, owing to the shortage of labor. We manufacture only pine.—Spanish River Lumber Company, Ltd.

* * *

Expects a General Reduction of About One-half.

Otter Lake, Ont.

Editor Canada Lumberman:—

We are taking out about the same quantity of logs this winter as we took out last, but in our vicinity the cut appears to be reduced by about 50 per cent. Trade conditions are much improved of late. Stocks are scarce and prices firm, with some advances. The cost of operation has increased from $5 to $8 per M., and consequently we must look for a considerable advance in order to continue operating—Hocken Lumber Company, Ltd.

* * *

Not Operating This Winter.

Pembroke, Ont.

Editor Canada Lumberman:—

We are not going into the bush this season. We have about five million feet of logs in the water, which, together with some logs we intend purchasing, will keep our mill running next season.—Petawawa Lumber Company, Ltd.

* * *

Hard to Get Men for Camps.

Owen Sound, Ont.

Editor Canada Lumberman:—

We intended operating four camps in the woods this winter, but as yet have only sufficient men for one camp. Cannot say at present what quantity we will be able to take out.—John Harrison & Sons Company, Ltd.

* * *

No Change in Bracebridge Output.

Bracebridge, Ont.

Editor Canada Lumberman:—

We will have about the same amount of stock this year as last, which was about two million feet, chiefly hemlock.—J. D. Shier Lumber Company, Ltd.

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Cleveland Sarnia Saw Mills Company Not Operating.

Sarnia, Ont.

Editor Canada Lumberman:—

We are not taking any logs out this season.—The Cleveland Sarnia Saw Mills Company, Ltd.

* * *

Small Cut for Graves, Bigwood & Co.

Byng Inlet, Ont.

Editor Canada Lumberman:—

We will put in about three million feet of white pine during the coming winter.—Graves, Bigwood & Co.

According to a petition for administration of the estate of the late John Hendry, well known lumberman of Vancouver, B.C., the gross value of his estate was $1,248,829 and the net value $725,783.

The Hardwood Situation in Canada

Good Trade Certain During War—Little to Fear After Peace Comes—1917 Output Sure to be Small

By, A. E. Clark

Early in the year 1916 we had an overwhelming situation to handle, arising out of the fact that in addition to more or less disorganization in the hardwood trade situation in Canada and the United States because of the war, our difficulties were increased by the British War Office refusing to permit the importation of certain hardwoods into Great Britain. The good grain crop of 1915, however, has had a steady tendency to improve the Western trade as well as the Eastern trade, until at the present time the furniture, agricultural implement, and piano trades are in a very much improved state, if not back close to normal conditions. The huge munition orders placed in Canada, with their great requirements of boxes for the consignment of these goods, have eaten into the supplies of hardwood a great deal further than any casual observer would imagine. In all probability, if the situation were thoroughly examined and an estimate made, it would be found that the embargo against Old Country shipments has been practically, if not fully, offset by the consumption of hardwoods for these munition boxes. This, with the improved local condition and the tendency on the part of the manufacturers of lumber to go easy in their production last year, together with a certain measure of shortage of labor, has gone far to place the hardwood situation back upon a healthy basis. At the present time there is possibly less hardwood, both in high and low grades, on the market for immediate shipment than there has been for several years. This applies very particularly to birch, basswood, elm, and maple. We are now facing a condition of good demand, short supply, and very little prospect of relief from our 1917 production. We have a shortage of labor as the main cause whereby it will be impossible to get much more than a 50 per cent. cut. Added to this is the huge increased cost of production, which any cautious manufacturer is inclined to consider seriously before going ahead. Anyone who looks at it from all these points of view must realize that if he is to get any kind of an adequate profit from his operations the increase in price will have to be very considerable.

We have still practically a year to go before the lumber that will be produced in 1917 can be marketable, and the manufacturer naturally asks himself what the condition will be at the end of 1917, when this lumber is to be put upon the market. Will he get his increased costs out of the production, plus a reasonable margin of profit, or will the war be over and a certain measure of demoralized trade be facing him, making it impossible for him to get back the capital he has invested? There are certain reasons for viewing the situation more or less in this light, although any sort of normal conditions at all should surely be able to take care of a possible less than 50 per cent. production. In my opinion, the situation should be approached cautiously, but everything points to a reasonably good market. The slump in trade which naturally will be due us from a good many sources when the war ends should be, in a considerable measure, offset by the demand for export, since there has been no hardwood exported, at least in any quantity, during the year 1916.

The war has no doubt done much for the lumber manufacturer in the way of improving efficiency and showing him where hardwood can be used to advantage in manufacturing articles that he has not thought of previous to war times, and has created a considerable number of markets that will remain after the war. Should the war continue, with its difficulties in the way of securing adequate supplies of mahogany, the field for local hardwood lumber in general, and birch in particular, should be a large one.

I would sum it up that, with war conditions prevailing for another year, the hardwood trade will be exceptionally good, and if the war does come to a speedy end, the hardwood manufacturer should not have very much to fear.

Suggests Eliminating the Primsoll Line

Now that the Dominion Government is taking such an interest in helping the lumber manufacturers to develop foreign markets nothing is being left undone to insure British Columbia exporters as to many advantages to help in securing trade as it is possible for the government to give. As an example of this attitude the present agitation to remove any Plimsoll regulations from British ships carrying lumber to Australia is worthy of notice. At present Australian regulations prohibit British ships entering any Australian port loaded below a certain mark. An American schooner can load lumber at either a Canadian or American port until the water comes half way up the hatch combings and still enter Australian ports, thus allowing the American vessels to carry from 150,000 to 200,000 feet more lumber than British vessels of the same capacity. Thus it is said that the British vessels are placed under a disadvantage. As there is no Plimsoll mark in Canada and ships have to be loaded only to the satisfaction of the underwriters, the question of loading regulations in this country will probably be easily settled, but the question given prominence now is what steps will be taken by the Canadian Government to induce the Australian Government to change its regulations so as to enable the vessels built in British Columbia, and other British-owned boats, to load lumber on the same basis as the American vessels.

As a reason for removing all restrictions regarding a Plimsoll mark for vessels loaded with lumber Capt. Robert Dollar, of San Francisco, Cal., is quoted as having said at a recent hearing on the matter in Washington, D.C.: "Vessels carrying lumber on the Pacific Coast must be free from any load line regulations while carrying lumber, but if they are carrying anything else they must be subject to the same regulations as other ships." Representations have been made to Sir George Foster and other government officials regarding the necessity of placing British-owned vessels on an equal operating basis with those of any other nation, and it is the prediction that before the fourteen ships now being built in British Columbia shipyards are completed—the vessels are to be largely used in carrying lumber from British Columbia to Australia—a perfect understanding will have been reached between the Canadian and Australian Governments with regard to any details affecting the overseas trade.

Contractors Responsible for Loss

The case of the Canadian Spool Cotton Company, Ltd., Montreal, against Peter Lyall & Sons, contractors, Montreal, and Brown & Vallance, architects, Montreal, has been heard by the Court of Review, and judgment has been given confirming the judgment of the Superior Court rendered in April, 1914, condemning the two defendant parties to pay, jointly and severally, $71,120.85, and condemning the contractors, Messrs. Peter Lyall & Sons, Ltd., to pay $4,098.72 additional in damages. This is the well-known case in which the plaintiff company sued on account of the timbers in their cotton mill having developed dry rot a short time after the building had been completed. The contract for the construction of the building at Maisonneuve, P.Q., was let in 1907, at a cost of $218,000. When the dry rot was discovered the floors of the mill were sagging and threatened to collapse. The affected wood was taken out and replaced with new timber, but the defects seemed to increase, and in 1910 all the timbers appeared to be affected. The company protested to the contractors and architect, and finally removed the whole of the timber and substituted steel. Then they brought suit against the contractors and architects for $98,802. The Superior Court found in their favor to the extent of $71,120.85, and this is the judgment upheld by the Court of Review.

One of the chief points upon which the argument in the case centred was whether the appearance of the dry rot in the timber could be considered an inevitable accident. The Court of Review held that this was not the case. Dry rot was not "an act of God" in the sense in which man could not guard against it. Dry rot could be discovered. There was a dry rot germ, and it could be ascertained whether or not this germ existed in the wood. Mr. Justice McDougall, in the course of his judgment pointed out that the conditions of the contract included a provision that Georgia pine, longleaf, straight grain and free from knots, was to be used. The proof established that another quality of timber had been used. The defendants had pleaded that it was impossible at the time to get the grade specified. This plea had not been borne out by the evidence, which was that Georgia pine of the grade specified in the contract was on the market. It was very expensive, and the contractor, Mr. Justice McDougall said, "not wishing to go to this expense, sought a cheaper grade and put that into the mill. The concensus of opinion, as expressed in the evidence, was that this second quality, or lower grade pine, is more liable to dry rot than the higher grade timber. In using it the contractor took the risk, and, as dry rot set in, the court comes to the conclusion that the builders are responsible."

The claim against the contractors alone for $4,098.72 for repointing brick work was held by the court to be a matter of specific performance, "and as it was not executed in accordance with the specification, the contractors are bound to pay the costs of having the work done over again in the manner called for."

Eastern Lumbermen's Association Organized

The organization of lumbermen of the Province of New Brunswick and the State of Maine, which has recently been formed, is to be known as the Eastern Lumbermen's Association. At the last meeting twenty-five members were enrolled, and the following officers were elected: President, R. H. McWilliams, of Stetson, Cutler & Co.; vice-president, A. W. Brown, of the St. John River Lumber Company; secretary, William H. Cutler, of Bangor; treasurer, W. A. Finnigan, of Bangor; executive committee: Samuel H. Boardman, of the Guilford Manufacturing Company; William H. Murphy, of Old Town, Me.; George Merrill, of Patten, Me.; Mr. Cobb, of Calais; John Rainey, of Portage Lake; John Morrison, of Fredericton, N.B.; S. J. Hinch, of Danforth, Me. There were about fifty lumbermen present at the meeting, and all were enthusiastic as to the future of the association. Operators, manufacturers, and wholesalers in the Maritime Provinces and Northern New England are eligible for membership. It is believed that this is the first international organization of the kind.

Nova Scotia's Revival in Shipbuilding

Click of the Caulker's Mallet Again Heard—Great Quantities of Timber Consumed in Vessel Production

By Elihu Woodworth

Necessity is the mother of shipbuilding in Nova Scotia. This means that among the early settlers of this province the need of vessels became so imperative that men with no knowledge of the art of building ships were induced to attempt their construction. At first the early settlers devoted their energies to the destruction of the forest, and millions of feet of prime lumber and thousands of cords of excellent fuel were burned on the ground to clear the land and prepare it for cultivation. In course of time the landowners began to realize that burning their timber was not the best method of getting its value, and, consequently, they tried to discover a more profitable way to dispose of what was left. They soon learned that there was a demand for ton-timber in England, and that spruce deals and boards could be sold at paying prices at some of the provincial ports. They had excellent material for ton-timber and knew how to manufacture it, and they had an abundance of spruce timber ready to be converted into merchantable lumber, but they had no facilities for getting their goods to market. Their urgent need was ships, and ships of any kind they were unable to get. But they were a resourceful people, accustomed to overcoming difficulties, so when they could not get by other means the vessels they so urgently needed, they resolved to build them for themselves. Accordingly they commenced ship-building, and, as they did not know their trade, they learned it as their work went on. Probably the first vessel they turned out would not compare very favorably in finish and appearance with those built in the same localities to-day, but they were staunch and strong, and admirably adapted to the purposes for which they were built. At first the number of shipbuilders was limited, but when their ventures proved successful many others were eager to engage in the business. Sturdy brigs were built and loaded with ton-timber, and sometimes when they reached the English market both the vessel and cargo were sold. Small schooners were built for the coasting trade, and sawmills with a single saw, which were erected on nearly every stream and known derisively as "jackknife mills" supplied cargoes of deals and other lumber. Shipbuilding soon became a large and profitable industry. Larger and better vessels were built, and found plenty of employment, and the time soon came when Nova Scotia ships were to be found on every sea. Builders who did not care to employ their own ships could sell them at remunerative prices, and the shores of the province were spangled with shipyards.

Decline of the Industry.

A change was inevitable, but its approach was so gradual that it found many unprepared. Shipbuilding had undoubtedly been somewhat overdone, and the result of the keen competition that ensued was low prices for ships and greatly reduced freight rates, but the final blow was struck with the advent of the tramp steamer. Then freight fell to figures which would not pay a sailing ship's expenses, and the demand for large sailing vessels ceased entirely. Practically all the shipyards were closed, and fine vessels registering from 1,500 to 2,500 tons were sold for a tithe of their value and converted into barges for carrying coal or gypsum. The only sailing vessels for which any work was left were coasting schooners of moderate tonnage and a fleet of small schooners engaged in the fisheries. A very few builders still had faith in wooden vessels, and turned off an occasional tern schooner to trade with the West Indies and South America, and a few small vessels had to be built every year to replace the schooners lost on fishing cruises, but the general concensus of opinion was that wooden shipbuilding was dead, never to be revived again. Then came the great war, the undreamed of scarcity of bottoms, and the consequent sharp advance in freights. Every available tern schooner was requisitioned and loaded with lumber for the United Kingdom, although many claimed they would be failures as ocean carriers. When these vessels made successful voyages and proved superior to the few "square-riggers" that could be obtained, there were indications that a revival of shipbuilding was coming, but the revival did not fully materialize until the present year. Take, for instance, Parrsboro Shore, which was formerly a famous shipbuilding district and which has never gone entirely out of the business. Last year Parrsboro Shore turned out a fine four-master of over 500 tons register, but this season three fine vessels have already left her shipyards—one a tern schooner of 425 tons, another a four-master of 528 tons, and a second three-master has 418 tons to her credit, while four others are still on the stocks, only one of which will register less than 400 tons. More than that, each of the five shipyards will build at least one vessel next year, some of which will be larger than this year's output.

Activity at Many Points.

On the south shore of Nova Scotia there is great activity in the shipyards, and some builders are forced to decline further orders. Shelburne is building nine vessels, but some of them are fishing schooners of about one hundred tons each. The same is true of Lunenburg, with eight vessels, and of Liverpool, Mahone, and Conquerall Bank, with five each to their credit. In a dozen or more places where only one or two vessels are being built scarcely any are under two hundred tons. Strangely enough, the revival has not yet spread to all the places formerly noted for shipbuilding. The south side of Minas Basin was once dotted with shipyards and swarming with shipwrights, but now, with scarcely an exception, the shipyards are silent and deserted, and the click of the caulker's mallet is no longer heard.

The revival of shipbuilding has not only greatly enlarged and increased the facilities for marketing our lumber, but is putting to profitable use an unbelievable quantity of raw material. Nobody unacquainted with the shipwright's art can form any adequate conception of the quantity of lumber of various kinds that must be used in building a ship. If such a one could see in one pile the timber required to build a vessel of any specified size he would be sure the pile contained enough material not only to build the ship, but to furnish a cargo for it after it was built. Some of the timber used is too crooked to make merchantable lumber and is worth little for any other purpose, but it becomes extremely valuable when used as part of a ship. To give it that value, however, it must be supplemented with a vast quantity of the best lumber the forest can supply, and the profitable disposal of that lumber is only one of the advantages afforded by the revival of shipbuilding.

War a Boon to Wooden Shipbuilding Industry

Mr. A. B. Mackay, of Hamilton, Ont., who was recently in Toronto, gave an interesting interview to the Globe, in which he spoke of the development of the shipbuilding industry in Eastern Canada. "The high price of steel," he said, "has been responsible for the return to the lakes of wooden sailing vessels, which had become almost obsolete when the modern steel craft made its appearance a few years back. Since the outbreak of the war the building of steel vessels for the merchant trade on the Great Lakes does not warrant the outlay of a large amount of money by shipowners. Consequently several marine transportation interests which contemplated adding to their fleets have hesitated about placing orders on that account."

At Meteghan, N.S., a four-masted schooner is being constructed for Mr. Mackay, which he expects to have launched about the middle of this month. On its maiden trip it will carry a cargo of lumber from Yarmouth, N.S., to Montevideo, South America, a distance of over 6,000 miles. The vessel is being constructed of hardwood frames and spruce planking, and will cost about $75,000, which is said to be the highest price ever paid for a vessel of this type in Canada. Mr. Mackay stated that he has already placed orders for six more schooners, at a cost of almost $500,000. The present cost of construction, he says, shows an increase of about 75 per cent, as compared with the cost fifteen years ago.

"The war has been responsible for unusual activity in the wooden shipbuilding industry in different parts of Nova Scotia," added Mr. Mackay. "Before the war many of the shipbuilding industries had practically gone out of business with the gradual disappearance from the lakes of the wooden vessel, the great bulk of which were built in the Maritime Provinces. At present there are between thirty-five and forty wooden sailing vessels under construction within a radius of ten miles, and there would be many more if labor was available. The most of these vessels are for transatlantic service."

Extensive Operations in Northwestern Ontario

Reports from Fort Frances, Ont., state that the Shevlin-Clarke Company now have seventeen camps in process of formation, which, when completed, will give employment to 2,000 men. These camps are scattered from Rainy Lake east to Atikokan. The report also states that the company will take out the largest cut of logs it has taken out for some years. Labor is scarce and wages are running from $30 to $40 per month and board. The company expect, however, that when threshing has been completed in the West the supply of labor will be more plentiful. Altogether between the Shevlin-Clarke Company and others there are expected to be some 2,700 men engaged in the woods east of Fort Frances this winter.

As the price of pulpwood has advanced, it is expected that at least 100,000 cords will be taken out in the above district this winter. There will probably also be about 1,000,000 ties, poles, and posts taken out in the same locality.

New Manager for Knight Brothers Company, Limited

J. H. Cole.

Mr. J. H. Cole, whose portrait we publish herewith, has resigned his position as secretary-treasurer of the Magnetawan Tanning and Electric Company, of Toronto and Burk's Falls, in order to take the position of manager for the Knight Brothers Company, Ltd., of Burk's Falls, Ont.

Mr. Cole was born in Georgetown, Ont., and educated there. He joined the staff of the Knight Brothers Company in 1899, acting for them as shipper and lumber inspector, and later as cost accountant, until the spring of 1904, when the company's plant was destroyed by fire. Then he took charge of the office of the Magnetawan Tanning and Electric Company at Burk's Falls. In 1908 he was transferred to the head office at Toronto and appointed secretary, both of that company and of Tobey, Ltd., whose tannery is located at Collingwood. With the exception of about six months spent in Cleveland, Tenn., he has been associated with the above companies only. Mr. Cole's experience has been sufficiently varied to give him a good idea of modern business methods, and we bespeak for him a successful career in the important position he is about to take. His duties with the Knight Brothers Company, Ltd., will commence about December 1st.

Will Prairie Trade Again Go to the United States?

Editor Canada Lumberman: Grand Forks, B.C., Nov. 4th.

The lumber industry of British Columbia is now in a prosperous condition. The former over-production has disappeared and the prospects point to a severe shortage of lumber during 1917.

A number of the mills will not operate next year for many different reasons. Several of the larger plants suffered largely by floods, while others are cut out of their available timber. Others are out of business owing to over-capitalization.

The farmer on the prairie, although having 25 per cent. less crop, is receiving about 75 per cent. more for it. All through the provinces of Manitoba, Saskatchewan and Alberta, the retailers have allowed their stocks to become depleted, hoping for a reduction in prices. The retailers all want to buy lumber, while the stock in the hands of the mountain lumbermen is sixty million feet less than this time last year, and in the hands of four of the largest mills.

The forests of the States and Eastern Canada are being rapidly depleted of their supplies, and when the war is over and times get normal there will not be sufficient lumber to take care of the orders that will flow in.

There are several lumbermen in Ontario who own timber and mills in British Columbia, lying idle. Some of them own very valuable timber and very accessible. It is quite possible that they are not in touch with the industry in British Columbia and do not understand that the opportune time to operate has arrived. If the British Columbia mills cannot supply the demand for lumber it will naturally drive the business to the mills in the United States, and especially to those lying along the borders of the prairie provinces. If the retailer is forced to buy his lumber in the United States this money will be lost to Canada forever. The provincial government has assisted and will assist in keeping the money within the province, and it is quite possible that, if the true state of affairs were known to the Ontario lumbermen, they would decide to operate and assist in keeping the market for British Columbia and the money in Canada.

Needless to say, the mills now operating to any extent, from a selfish point of view, are not pointing out the above facts.—W. Mark De Cew, President and Manager, Western Pine Lumber Company, Limited.

Quebec Cullers' Report

The following comparative statement of timber, measured and culled to date, is furnished by the supervistor of cullers, Quebec, P.Q., under date of November 6th:

	1914—Cu. ft.	1915—Cu. ft.	1916—Cu. ft.
Waney white pine	593,080	397,280	143,400
Red pine	1,040	.....	.....
Oak	343,240	110,120	336,240
Elm	305,240	46,840	72,160
Ash	680	840	1,680
Butternut	.....	.....	40
Birch and maple	50,800	48,880	46,880

From the Canada Lumberman of Thirty-five Years Ago

A New Lumber Industry: A correspondent, writing from British Columbia, includes in a recent letter some interesting information in regard to the lumber and logging business of the province. The point from which he writes is New Westminster, located at the mouth of the Fraser River, and very near the boundary line between that province and Washington Territory. It is the largest manufacturing point for lumber in British Columbia, and will, no doubt, become the centre of one of the most important producing districts on the Pacific before many years. The country adjacent to it is rapidly settling up, and we are informed that the business of turning the timber wealth of the country into cash already occupies a large proportion of the people. The forests are the continuation of those immense timber tracts that have made Oregon and Washington Territory famous, and the trees contained in them are similar in size and other respects to those found there. Speaking of the remarkable size that the timber attains, this correspondent says: As the trees in the woods through which we passed, on the Hastings Road, were such monsters, I was curious to know how they could be cut down and hauled about. Miles upon miles of timber exists on the inlet, of the Douglas fir species, as well as cedar. Unless one saw these trees he would scarcely credit the fact that such did exist anywhere. In numerous instances they rise a perfectly limbless trunk for 200 feet, and then over another 100 feet above that with small limbs.

About three miles from Granville I saw trees felled that were 320 feet in length and 8 feet in diameter. There were hundreds like these all round. The woodman cuts a hole in the tree, about four feet from the ground, into which he inserts a board having sharp iron prongs. This resembles a springboard. On this he stands while swinging his axe. The axe is the same as is used in the East, but much longer in the handle, generally four feet; occasionally a shorter one is used for the outside cuts. As he enters the tree the resin runs like water, and every blow spatters it in every direction. So soon as the tree is down the woodman attacks another. His business is to lay it on the ground. Following him come the sawyers, who cut it into the required lengths; then the "barkers." Every inch of bark is peeled off before leaving the spot where it fell, to enable it to be moved round conveniently by the teams. In this camp an ox team of twelve oxen is employed to bring the logs to the road on which the traction engine runs. Strong pulleys, with endless chains, are used to get the log so the team can get a haul on it. Come away it must. Scarcely a word is uttered to these dumb brutes. The driver is merciful on the score of shouting, and uses a goad. He stands in the middle of the team, has a long pole, in the end of which is inserted short spikes. A few dabs of this into the hide of the bullock has the desired effect, and off they go, pulling all together for dear life as it were. They take to the "station ground," on an average, logs that will manufacture into 8,000 feet of lumber. The road on which the traction engine runs is constructed of split cedar, and hewed down perfectly level. In the centre of this roadbed, at distances of seven feet apart, are placed concave blocks of maple, on which the logs can ride. As they move along the "greaser" applies dog-fish oil to each one. The log being free of its bark, the oil takes effect, and along it glides, apparently with perfect ease. The engine makes four trips a day to and from the water, into which the logs are rolled, and thence are towed to the mill by a tug. Following the logs to the mill, we saw them hauled up the gangway and placed upon the carriage; two circular saws in very short order take off the slab, one saw being suspended and revolving over the other. The lumber cut is taken on board a vessel lying at the wharf, loading for Hong Kong.

British Columbia Forest Scale for September

The timber returns for the month of September, issued by the Forest Branch, show the total scale of sawlogs for the province to be 105,795,387 feet B.M., in addition to 423,412 lineal feet of poles and piling, and 23,551 cords of ties, shingle bolts, posts, etc. The returns according to forest districts are as follows: Vancouver, 73,556,121 ft. sawlogs, 144,275 lineal ft. poles, etc., and 16,755 cords of bolts, ties, etc.; Cranbrook, 13,086,889 ft. sawlogs, 40,962 lineal ft. poles, etc., and 3,351 cords of shingle bolts, etc.; Island, 11,461,412 ft. sawlogs, 3,080 lineal ft. poles, etc., and 465 cords of bolts, etc.; Vernon, 4,948,294 ft. sawlogs; Prince Rupert, 1,750,219 ft. sawlogs, 24,567 lineal ft. poles, etc., and 1,687 cords of shingle bolts, etc.; Nelson, 758,355 ft. sawlogs, 87,545 lineal ft. poles, etc., and 1,082 cords of bolts, etc.; Hazelton, 135,097 ft. sawlogs and 94,776 lineal ft. of poles and piles; Fort George, 99,000 ft. sawlogs; Kamloops, 20,250 lineal ft. poles and piles; and Lillooet, 7,957 lineal ft. poles and piles. Timber sales recorded during the month of September cover an estimated total of 9,444,224 ft. sawlogs, 37,100 lineal ft. of poles and mine timber, 3,550 cords of shingle bolts and cordwood, and 6,000 ties, estimated to produce revenue amounting to $21,334.

Plants of Vancouver Lumber Co., Ltd.

Fir Mill at Vancouver and Cedar Mill at Roche Point—Splendid Equipment for Handling Export, Local and Eastern Canada Trade

Mr. Chas. Plant, Toronto.

The recent opening of an office in Toronto by the Vancouver Lumber Company, Ltd., in order to take care of their trade in Eastern Canada was an event of much interest to the lumber trade, both in the East and in the West, and is an indication of the fact that the market for British Columbia lumber products in Eastern Canada, which has been more or less spotty in the past, has developed of late into one of sufficient extent and variety to warrant the special attention of British Columbia manufacturers.

We have drawn considerable attention to the increasing interest taken by the trade of Eastern Canada in the lumber products of the Pacific Coast, and we are pleased to have an opportunity in the present issue of giving our Eastern readers some idea of the facilities for production and shipment of lumber enjoyed by the Vancouver Lumber Company, Limited. Two large mills are operated by this company, the chief one being known as the Vancouver Lumber Company's fir mill, which is located on False Creek in the city of Vancouver. The other mill, at Roche Point, on Burrard Inlet, known as the cedar mill, is operated by a subsidiary company, under the name of the Vancouver Cedar Mills, Limited.

The fir mill has a sawing capacity of 200,000 feet in ten hours, its principal equipment furnished by Canadian Allis-Chalmers, Limited, being one double cutting and one single cutting bandsaw, two resaws, edgers, automatic air trimmers, etc.

A Stetson Ross timber sizing machine is located at the end of the sawmill in a wing, and beyond this wing are the skids to which the timbers are conveyed by travelling chains and rolls. From the skids the timbers are loaded on to cars or barges for export abroad. The sizing machine will dress timbers up to 20 in. x 30 in., and the longest length handled is 94 feet.

The filing room of the sawmill is located on the top floor and machine shops are on the ground floor.

The log pond in False Creek is a large one, and easily carries sufficient logs for such extensive operations as are carried on at this plant.

The power plant consists of an Allis-Chalmers 24 in. x 36 in. twin steam engine, a turbo-generator, Allis-Chalmers-Parsons type, of 750 kw. capacity, using the exhaust steam from the twin engine, and the usual auxiliary engines. The company also has its own electric lighting plant, which supplies current for illuminating the offices and mills. The boilers are fired with sawdust. The surplus edgings and trimmings are conveyed to a large burner, erected by the Muskegon Boiler Works, Muskegon, Mich. This burner is of the double core, water-cooled type.

In connection with the sawmill, the company operate seven "North Coast" dry kilns, with a capacity of 20,000 feet per kiln. At one end of the dry kiln is located a covered shed for cooling, sorting, and regrading the kiln-dried lumber, preparatory to its use in the planing mill or being stored in the main dry sheds, of which there are four, with a capacity of 1,000,000 feet each.

Flooring, ceiling, siding, and all kinds of mouldings are manufactured in the planing mill, located a short distance from the sawmill. The equipment of the planing mill consists of one American, four Woods, one Stetson-Ross, and two Berlin fast-feed matchers and two Woods stickers or moulding machines. The most important piece of equipment in the planing mill is the cedar bevel siding machine. This is a combination resaw and sizer, with a capacity of a carload or 60,000 feet of bevelled siding per day. All the machines in the planing mill are equipped with automatic feed tables; and the entire planing mill is driven by electric motors, which obtain their current from the central power plant.

The loading platform runs parallel with the planing mill and the dressed lumber shed. Two railroad sidings are operated, one running to the sawmill for the loading of timbers and the other running to the planing mill for loading finished lumber and yard stock. These are connected with the British Columbia Electric Railway, which affords connection with every railway running out of Vancouver. The company is thus enabled to make shipment to any point.

Cedar Mill at Roche Point.

The cedar mill operated by the Vancouver Cedar Mills, Ltd., is located at Roche Point, on the north shore of Burrard Inlet, about seven miles from Vancouver, and is one of the best equipped plants in British Columbia for the production of cedar lumber and shingles. It is on a site of about 17 acres, and has over 1,400 feet of water frontage. This site was originally acquired by the Red Fir Lumber Company, Ltd., who erected a substantial mill frame and large hotel building, which were subsequently taken over by the Vancouver Lumber Company, Ltd. Then the mill was remodelled in accordance with the most modern manufacturing ideas. This plant has two log intakes, the main intake looking after the logs that are suitable for manufacturing into cedar siding and other cedar lumber, the other intake being direct into the shingle mill. Shingle blocks are produced from logs entering both intakes, and are conveyed by travelling chains to the shingle mill, where they are cut into suitable sizes for the shingle machines, twelve in number, all upright, made by the Sumner Machine Works. Each of these machines has a capacity of 30,000 shingles per ten hours, and a chute beneath each machine conveys the shingles to the graders on the floor below. There the shingles are graded and packed and the bundles are conveyed by gravity rolls to the entrance to the three shingle dry kilns. When the shingles come out of the dry kilns they are put through a repressing machine, which tightens and blocks the bundles into a neat and symmetrical appearance. Then they are carried by gravity rolls to the water front and loaded in railroad cars on a barge. The lumber from the cedar sawmill is also conveyed to the barges by gravity rolls, and the barges are shipped to the fir plant at Vancouver. There the cedar lumber is manufactured in the planing mill into cedar bevel siding, etc. With the facilities and equipment now supplied by the company it is able to make shipment of its products in mixed or straight carloads, as may be desired by its customers.

The outstanding feature of the cedar plant is the extensive use made of transmission systems and gravity carriers. Wherever possible, the handling of stock is done mechanically, with the result that the operating force required does not exceed 85 men when every department is in operation at full capacity. The equipment of the cedar sawmill consists of log haul, log stop, Simonson turner, overhead

Plant of Vancouver Cedar Mills, Limited, Roche Point, Burrard Inlet, B. C.

Partial view of Vancouver Lumber Company's fir mill and yard, Vancouver, B.C.

canter, three block carriages with 72 in. opening, one 9 in. single cutting band mill, 10 x 32 direct steam-driven Wickes gang, 8 in. x 60 in. edger, 24 ft. overhead trimmer and slasher, with air lift for saws, and a very complete outfit of live rolls, transfers, etc. In the main line of rolls from the bandsaw and directly opposite the back edger table is loctaed a steam gang lifter for throwing the shingle cants from the live rolls to the transfer chains, which carry them to other live rolls for delivery to the cut-off machine. This machine carries a 60 in. circular saw, for cutting off the cants to the proper lengths for shingles. The filing equipment is located on the third floor, directly over the band mill. The main part of the cedar mill is 46 ft. wide and 152 ft. long. A wing on one side contains the gang cut-off machine, and is 32 ft. wide by 64 ft. long. The engine room is located on this side of the mill, in a wing 32 ft. wide and 32 ft. long. The engine is 18 in. x 24 in. Sumner twin slide valve engine, with balanced valves. It rests on solid concrete foundation, and has ample power for driving the mill at its fullest capacity. On the opposite side of the mill in a wing 24 ft. wide by 30 ft. long is located the lath equipment, consisting of lath bolter, lath machine, lath trimmer, transfers, and conveyers.

Shingle Mill Equipment.

The shingle mill equipment is located in a separate two-storey building adjacent to the north end of the lumber department. This building is 42 ft. x 150 ft. long, and is of heavy timber construction, substantially supported on concrete piers. The shingle blocks are conveyed to this plant by an endless chain from the cant cut-off machine in the sawmill, and by another conveyer from the log cut-up mill.

The shingle dry kilns are located to the west of the mill, a sufficient distance away to afford protection from fire, and are three in number, each being 20 ft. wide and 120 ft. long. They are fireproof, being of hollow tile and cement construction. After the shingles pass through the kiln they enter the cooling shed, where they remain a sufficient length of time to cool gradually. Then they are passed into the storage shed, still in the original load and on the same trucks on which they entered the kilns. This shed is 64 ft. wide and 108 ft. long, and has a capacity of several million shingles.

The steam plant for supplying steam to the engine dry kilns is located in a separate building north of the sawmill and east of the shingle mill. This building is 52 ft. wide and 82 ft. long, and is of heavy timber construction, with crib walls and substantial concrete piers. The steam plant consists of five high-pressure, double-butt strap horizontal tubular boilers, each 72 in. in diameter and 18 ft. long. Three of these boilers are set in one battery and two in another. The battery of three boilers is connected with an induced draft system of the Miller type, and the other battery has natural draft, with stack located outside the building. The boilers are furnished with Dutch oven furnaces, automatically fed with mill refuse by a conveyer from the sawmill. The battery of three boilers is for the sawmill and the battery of two boilers is for the shingle mill, but they are all piped together with the required valves between, allowing either of the departments to operate independently.

The refuse from the entire plant is conveyed a sufficient distance away to avoid all risk, and is consumed in an open fire, the dump being protected by a wire mesh screen 30 in. in height.

The capacity of the cedar plant is about 100,000 feet of lumber and 350,000 shingles in ten hours. It will be readily realized by the trade

View of Vancouver Lumber Company's fir mill from log pond, Vancouver, B. C.

Interior view of sawmill—Vancouver Cedar Mills, Ltd.

in Eastern Canada that with this large output and the output of the fir plant at Vancouver the company are in an excellent position for taking care of the requirements of the Eastern trade, either in straight or mixed car loads.

The timber limits of the Vancouver Lumber Company, Ltd., are mostly located on the mainland and islands, about 100 to 150 miles north of Vancouver. About half are held under old-time leases and the balance are licenses, and the timber on them is conceded to be of the best quality in British Columbia.

The chief markets of the company in the past have been on the Canadian prairies. They have also developed an extensive trade, however, in the United States and in parcel and cargo shipments by water to various markets across seas, as well as a local trade at Vancouver and other British Columbia points. Their extension into the Eastern Canadian trade is a logical development of their successful policy of expansion.

One of the best-known products of the Vancouver Cedar Mills, Ltd., is the "Big Chief" brand of shingles, which are manufactured on upright machines, specially designed for the production of a vertical grain shingle, and produced from the finest quality of cedar grown in the world. These shingles are among the finest that can be found upon any market. The "Big Chief" shingles are 16 in. long, 5 butts to 2 in., and each bundle measures full 10 in. in thickness when dried. They are 100 per cent. clear, 100 per cent. heart, and have 100 per cent. covering efficiency. They contain no sap, and are of random widths, but none less than 3 in. wide. The company are also among the few manufacturers in British Columbia who are authorized to manufacture and sell the "Rite-Grade" shingles, which are now being so extensively advertised. Besides these special brands, the company manufacture

Interior view of Vancouver Lumber Company's shingle mill, Roche Point, Burrard Inlet, B. C.

all the other grades of 5 to 2 (5 x) and 6 to 2 (3 x) shingles that have justly established British Columbia shingles as the best in the world.

The Vancouver Lumber Company, Limited, have their general offices at Vancouver and branch offices in the Excelsior Life Building, Toronto; at 343 South Dearborn Street, Chicago, and at 709 Great West Permanent Building, Winnipeg, Man. The officers of the company are as follows: J. E. Tucker, president, Lon Beach, Cal.; A. L. Clark, vice-president, Dallas, Texas; E. C. Knight, secretary and treasurer; E. S. Sanders, manager; Liggett N. Thompson, sales manager. Mr. Charles Plant is their representative in Eastern Canada, and has charge of their office at 701 Excelsior Life Building, Toronto.

Insurance on Standing Timber

Risks on standing timber against loss by fire have not been considered a profitable line of business by insurance companies in the past. A few exceptions could be mentioned in cases where specially fine risks have been insured, but as a practically general rule there has been no development of this line of insurance business. During the present year, however, policies have been written by the Phoenix Insurance Company of London, England, upon standing timber in Oregon and Washington, with certain restrictions, the rates varying from 1 to 1½ per cent. Risks are taken only upon timber that is accessible to markets and not unduly exposed to fire hazard, and only one risk is taken in each fire zone, or area indicated by the company. No risk is taken for a greater amount than $17,500 in any one such area.

W. R. Brown, in an article on this subject in "American Forestry," goes into some detail in discussing its possibilities. He summarizes the fire experiences within the territory of various fire prevention associations, and his figures include the 22,000,000 acres under the supervision of E. C. Allen in the twelve Western private fire prevention associations which he supervises; the New Hampshire Timberland Owners' Association, with 1,000,000 acres; the Northern Fire Protective Association of Michigan, with 2,000,000 acres; the St. Maurice Valley Fire Protective Association of Quebec, with an area of 8,000,000 acres—the total of four associations being 33,000,000 acres. The expenditure for forest ranging and fire prevention is approximately 1 cent an acre for the first three and ¼ cent an acre for the Canadian organization. In the Western associations the fire loss for the year 1910 was one-half of 1 per cent. In each association since that time it has been much less than that figure, except for 1914 in the Canadian association, when one fire got away and the fire loss of the year was three-fourths of 1 per cent. upon the timber valuation. Taking all four areas together and summarizing the figures for each which Mr. Allen gives, the average yearly losses respectively were as follows: 1910, .005; 1911, .000171; 1912, .0002328; 1913, .0012636; 1914, .00253; 1915, .00427.

The writer concludes from these figures that in such protective areas fire isurance should cost for the loss ratio not over one-half per cent. annually, with another one-half per cent. added for administration cost of the insurance plan. He gives some further experience upon which to base this conclusion. In Minnesota during the last ten years, with its forest wealth of $280,000,000, the average fire loss has been about $100,000, or one-thirty-fourth of 1 per cent. annually.

Fire the Greatest Enemy of the Forests

Mr. Elwood Wilson, superintendent of the forestry division of the Laurentide Pulp and Paper Company, Ltd., Grand Mere, P.Q., appeared before the Dominion Royal Commission in one of its recent sittings at Montreal and expressed the opinion that the next twenty-five years would see the disappearance of the wood pulp supply in Canada unless conservation measures were adopted. He stated that three things were essential, namely: The adoption of a scientific scheme of reforestation; a proper system of fire protection, such as that in use in British Columbia and on the lands under the control of the Laurentide Company; and a system that would do away with the dangerous disposal of waste now prevailing throughout Canadian forests. During the past thirty five years, he said, 30 per cent. of the pulpwood lands of Canada had been burned over and rendered useless for generations to come.

At the same session of the commission Mr. Carl Riordon, managing director of the Riordon Pulp and Paper Company, Ltd., stated that the long haul to Europe and the consequent high freight rates made it almost impossible for Canadian paper and pulp manufacturers to compete with the manufacturers of pulp in Europe, located chiefly in Sweden and Norway. He expected, however, that when the war was over, the higher taxes prevailing in Europe, the higher cost of production, and the higher cost of capital would increase the price of European pulp materially, and enable Canadian manufacturers to develop these markets more successfully.

Mr. R. H. Campbell, Director of Forestry for the Dominion Government, stated that the annual loss by forest fires in Canada might be placed conservatively at an average of $5,000,000. He considered that fire prevention was of greater importance at present than afforestation.

Transportation of Big Logs by Flumes

Economies Secured and Efficiency Promoted as Compared with Railroad Logging—Quantity of Water Required Remarkably Small.

By W. D. Starbird*

The advantages offered by the use of flumes in the transportation of logs are becoming better known and more appreciated by loggers all over the country as they have greater opportunities to familiarize themselves with their operation and observe the satisfactory results that are invariably being obtained with them.

The first flume ever constructed for the exclusive purpose of transporting logs and long timber, so far as I am informed, was that built for the Milwaukee Land Company, on Rochet Creek, Idaho, some six years ago. It proved a success beyond expectations, and demonstrated the value of this means for making accessable timber that could not be taken out at a practicable cost by any other method now in use. Since its construction several other flumes have been built at various points in the Inland Empire and British Columbia. The owners and operators of all are well pleased with the results they are getting, and wherever one has been used new friends and enthusiasts for the logging flume are being made.

In a paper read at a meeting of this organization shortly after the flume for the Milwaukee Land Company was completed I endeavored to give, in a general way, some idea of the many advantages of flumes in the transportation of logs and described in considerable detail their engineering, design, and construction. Since then I have written several other articles, all of which have been given publicity through the columns of the lumber journals. In all of these papers I have tried to convey some idea of the many important advantages to be obtained by the use of flumes in connection with logging operations and how readily they may be adapted to almost every condition and requirement of log transportation whenever there is an available supply of water to draw from and a descending grade.

It is with special reference to the question of water supply that I will deal in this paper. I have repeatedly stated in other articles written on this same general subject that much less water is required in the successful transporting of logs through a flume than is generally understood. I am confident that flumes as a means of transportation are being overlooked or discarded in connection with many difficult logging chances on account of lack of information or misinformation on this very important point, when their use would convert an unprofitable operation into a money-maker.

Flume Transportation for Large Logs.

This is no doubt especially true with reference to the handling of large logs here on the coast. Many loggers operating in coast timber probably assume, without investigation, that a flume is not practical for handling their timber on account of its large diameter and the length of logs cut. Knowing that a flume must be of large size to carry such timber, it is mistakenly concluded that an extremely large volume of water is also required. This is not a fact, however. The successful fluming of any log in a triangular flume box only requires sufficient water to slightly more than fill the space underneath it, when resting on the sides of the flume.

For example, take a log six feet in diameter. To flume such a log will require a flume box having sides 72 in. high, measured along their surface, setting at an angle of 45 degrees from perpendicular. To float it the flume must be completely filled with water.

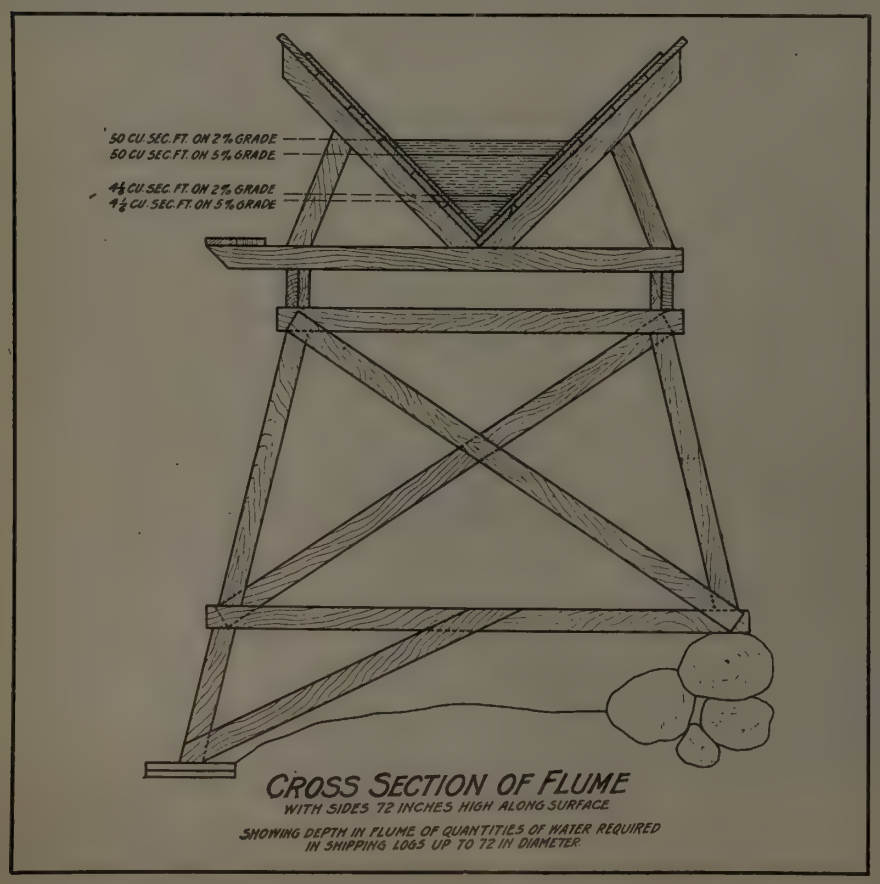
Water is commonly measured in cubic second feet, which is the number of cubic feet flowing past a given point in one second. The velocity at which it will flow depends on volume as well as grade. The quantity of water necessary to fill completely a triangular flume box, with sides 72 in. high, would, if the flow is unobstructed, have a velocity of about 16.75 feet per second on a 1 per cent. grade, and the volume would be about 300 cubic second feet. Such a large volume of water would not be available in many instances, where the conditions in all other respects would be favorable for a flume, and its use advantageous.

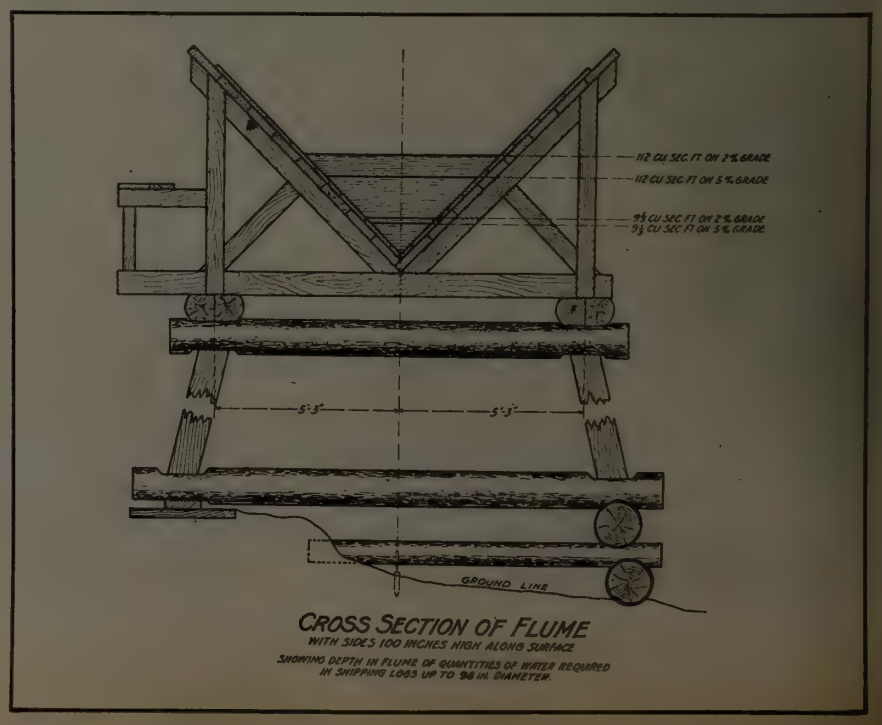
It has been fully demonstrated, however, that no such large amount of water is necessary for successfully operating such a flume in transporting a log six feet in diameter. When a log of this diameter lies in a triangular flume box, supported by its walls, on a 1 per cent grade, the space under it will only allow 11.33 cubic second feet of water to pass through. The log will operate as a dam to hold and accumulate in the flume all the flow of water in excess of this quantity until a sufficient head to float it is raised. This head will continue to be held with the log as it is carried forward, except for a small wastage underneath, due to its not moving as rapidly as the water.

Effect of Velocity and Momentum.

As the grades get steeper, logs will attain a constantly increasing velocity and momentum, which will add to their buoyancy to such an extent that a much smaller quantity of water, in proportion, will be required to keep them in motion. For this reason the amount of water that will carry logs over a 5 per cent. grade will usually be found sufficient on all steeper grades, unless they are being loaded into the flume on a heavier grade than 5 per cent., in which event more water will be necessary. Double the quantity of water that will pass under a log of the largest diameter to be handled, on the steepest grade up to 5 per cent. over which the logs are to be shipped in the flume, will be found ample for satisfactory fluming, and ordinarily one and one-half times what will pass under the log will be sufficient.

Therefore, the fluming of a log six feet in diameter over a 1 per cent. grade will require 11.33 cubic second feet of water, plus 5.67, one-half of that amount, making a total of 17 cubic second feet, or at most 22.66 cubic second feet, which is double the quantity that will pass under it when lying in the flume. This is only a little more than one-twentieth in the first instance and one-fourteenth in the latter of what is required to fill the flume full when the flow is unobstructed


50 CU. SEC. FT. ON 2% GRADE
50 CU SEC. FT. ON 5% GRADE
4½ CU. SEC. FT. ON 2% GRADE
4½ CU. SEC. FT. ON 5% GRADE
CROSS SECTION OF FLUME
WITH SIDES 72 INCHES HIGH ALONG SURFACE
SHOWING DEPTH IN FLUME OF QUANTITIES OF WATER REQUIRED IN SHIPPING LOGS UP TO 72 IN DIAMETER.


112 CU. SEC. FT. ON 2% GRADE
112 CU SEC. FT. ON 5% GRADE
9⅝ CU. SEC. FT. ON 2% GRADE
9⅝ CU. SEC. FT. ON 5% GRADE
5'-3"
5'-3"
GROUND LINE
CROSS SECTION OF FLUME
WITH SIDES 100 INCHES HIGH ALONG SURFACE
SHOWING DEPTH IN FLUME OF QUANTITIES OF WATER REQUIRED IN SHIPPING LOGS UP TO 96 IN. DIAMETER.

* Sawmill Architect and Consulting Engineer, 1009 Spalding Building, Portland, Ore. (Read at Session of Pacific Logging Congress.)

by logs. To flume the same size of log over all the varying grades from the flattest to the steepest that are practicable will require, at the most, about 50 cubic second feet of water, that amount being double he quantity required on a 5 per cent. grade to fill the space in the flume under a log of the size specified. This is not a very large stream of water, but it will suffice for the purpose of fluming these logs, as well as 300 cubic second feet, except for a little loss in shipping capacity, on account of the slower movement of the logs.

To give a more comprehensive idea of how small a stream this amount of water will make, it will fill a triangular flume box, on a 5 per cent. grade, to a height of slightly over 27 inches, measuring along the surface of its walls. To fill a 72 in. box on a 5 per cent. grade will require 673.74 cubic second feet of water. Note the difference between this amount and what is actually required for successful fluming.

To flume logs eight feet in diameter will require a triangular box 96 in. to 100 in. high, measured along its surface, and on a 2 per cent. grade, taking double the quantity that will pass under it, 70.5 cubic second feet of water, having a flow of about 15 feet per second and 54,000 feet per hour. On a 5 per cent. or steeper grade 112 cubic second feet of water will be required, figuring on the same basis, and its velocity will be, on the 5 per cent. grade, about 24 feet per second and 86,400 feet per hour. On a 2 per cent. grade its velocity will be about 17 feet per second and 61,200 feet per hour.

Great Carrying Capacity of a Flume.

An important factor in connection with the water supply required in fluming logs is the great carrying capacity of a flume, which makes it possible to transport a large quantity of timber in a comparatively short space of time. The larger the timber to be handled the greater this capacity becomes in proportion. Logs might be shipped end to end, if they could be gotten into a flume that fast. Generally speaking, logs are and should be loaded into a flume and started where the grades are flat. This applies to shipping from ponds, rolling in, chuting in, and every other means of getting them started in the flume. If necessary, the grade should be flattened at landing places.

As an illustrtaion to show the extraordinary capacity of a flume, take, for example, one built for carrying logs up to six feet in diameter, over varying grades from 1 per cent. to anywhere above 5 per cent. Let us assume that logs are going to be shipped from ponds and rollways along the line of the flume, where grades will average 2 per cent., which should be a fair average grade from which to start shipments in a flume.

In computing the shipping capacity of a flume we must take the velocity of the water on the flattest grade over which the logs are to be flumed, assumed in this case to be 2 per cent., and to carry them over the steeper grades we must have, say, double the quantity of water required to fill the space under the log on a 5 per cent. grade, which for a 72 in. log has previously been shown to be 50 cubic second feet. The unobstructed flow of this volume of water on a 2 per cent. grade will be approximately 14.8 feet per second and 49,680 feet per hour. Therefore, if logs could be placed in the flume, end to end, and they traveled at the same speed as the water, 49,680 lineal feet, or 1,552 pieces of an average length of 32 feet, could be shipped per hour. After making a liberal allowance for all retarding influences at least one log 32 feet in length could be shipped for each 100 feet of the flow of water in the flume, or 496 pieces per hour, if they could be started at that rate. It is, however, usually impracticable to get logs into a flume that fast, especially logs as long as 32 feet and over in length. Consequently the shipping capacity of a flume is limited to the number of logs it is possible to get into it, and not by the number it will carry.

The number of logs that can be loaded into a flume will depend on the method used. If shipping from a pond, there should be nothing to prevent starting two or three long logs, or as many as five or six short ones per minute, and under any circumstances it should be perfectly safe to assume that one log of an average length of 32 feet can be shipped every minute, or 60 per hour. This would allow 828 feet of water flow to each log placed in the flume, and a space of about 796 feet between logs, which would be unnecessarily slow shipping, as far as the flume is concerned, and should be doubled at least, especially if the water supply is limited. Reports from several flumes now in operation handling short logs state that five to six pieces per minute are being shipped.

Average Scale of Fir Logs.

Logs 32 feet in length, averaging from 10 in. to 72 in. in diameter, would scale, according to the Columbia River Official Log Scale, slightly more than 3,000 feet to the piece, but I am informed that the common run of Columbia River fir logs will scale on an average of from 1,000 to 2,000 feet to the piece. This would give a fluming capacity, in board feet, of from 60,000 to 120,000 per hour, if no more than one log per minute were shipped. Even at that rate, a flume will have such a large carrying capacity that it will transport the entire daily output from almost any logging operation, in from one to two hours. Therefore, a continuous available flow of water supply, equal in volume to from one-twenty-fourth to one-twelfth of what is required while shipping will be all that is necessary for a successful flume proposition, if this supply is held in storage while the flume is not in operation.

In this way, by using storage ponds, a stream of water the continuous flow of which is about four cubic second feet, will be sufficient to supply a fluming head for two hours out of each twenty-four, that will transport at least 120 logs up to six feet in diameter, averaging 32 feet in length and amounting to from 120,000 to 240,000 feet board measure, and 9 1/3 cubic second feet will handle the same number of logs of equal length up to eight feet in diameter. This is allowing a continuous flow, during shipping hours, equal in volume to the requirements, as previously shown, for fluming the logs of the largest diameter specified in each instance. If the extra large logs are sorted out and shipped separately, a much smaller supply of water will give an equal shipping capacity.

Storage ponds can usually be provided in connection with any flume proposition by building a dam at or near the head of the flume, where the required capacity can be secured. Ordinarily some suitable location for such a dam can be found where it can be constructed at a nominal cost, and where it will answer the combined purpose of storing both water and logs.

When for any reason this method of conserving the available water supply is not feasible or practicable, even greater shipping capacity and better results may be obtained from a more limited water supply by the use of a chain of automatically operating locks.

Since it has been fully demonstrated that logs can be successfully shipped through a triangular flume box by a head of water accumulated with the log operating as a dam, when the continuous flow is greater than what is required to fill the space under it, in the flume, it must follow that any other effective means for accumulating the necessary head will operate in a like manner.

Adaptability of Lock System.

When locks are used for this purpose they would consist of a number of small storage tanks or reservoirs, built into the continuous line of the flume at intervals, the frequency of which will depend on

View showing water banked around a large log, being flumed on a one per cent. grade—Crow's Nest Pass Lumber Co.'s Flume– near Wardner, B.C

View showing a very low head of water on a five per cent. rade—Boom sticks and piling that were successfully flumed with it

the amount of water available in proportion to the size of the logs to be shipped and the gradient on which they are to be operated. Their size and the length of each unit would be determined by the same controlling factors. They would be built along the same general lines as an ordinary box flume having a flat bottom and perpendicular side walls, and should be kept on or close to the ground, in order that they may be utilized as landing places in shipping logs. Any size of box, from six feet wide by four feet high to twelve or more feet in width by six or more feet in height, as may be required, will be practicable and can be used. Their length should be at least three times that of the longest log to be handled, and may be as much longer, as the conditions seem to demand.

They should be built on a very flat grade, regardless of how steep the grade may be along the line of the flume, in connection with which they are installed. The different units will be joined together by intervening sections of triangular flume box, the size and construction of which will be equal to the requirements for logs of the maximum diameter to be handled and uniform with that of the balance of the complete line.

These sections will be given enough gradient to take up and compensate for the flat grades of the locks, and may be as steep as are practicable on any other part of a flume line. At the lower or forward end of each lock its bottom will be gradually tapered in to a point and the walls flared outward to a connection with the triangular box, in a manner that will avoid any sharp angles. The connecting triangular flume box will be given a gradually increasing gradient from where it leaves this lock until the maximum necessary to bring it on a level with the next succeeding lock is reached. This gradient will be maintained to a point where it can gradually be flattened again and the triangular box brought to a junction with the lock on a level and gradient uniform with that of the lock. A square end in the lock will be all that is required for joining the two together, which will be done by framing the triangular box into the square end, keeping the top of both on the same level. A gate will be placed where the triangular flume commences at the lower end of the lock, so designed that it can be easily and quickly raised entirely out of the way or lowered into place.

Locks for Rollways.

Each of these locks constitutes a small storage reservoir, and provides the most economical means of getting logs into the flume. If properly built, in proportion to the requirements, logs may be safely rolled into them from skidways provided alongside, and the cost of their construction need not greatly exceed that of any other part of the flume in connection with which they are used. Any number of them at more or less frequent intervals along the line of the flume may be utilized as required, either for loading in logs or accumulating a shipping head of water.

In the operation of a flume provided with a chain of such locks the procedure would be to lower the gate in the one from which shipping is to be commenced. As soon as it fills with water from the supply, assumed to be continuously flowing through the flume, logs will be rolled in, up to its holding capacity, the gate raised, and fluming out of the logs started. As fast as more space for logs is provided in the lock they will be rolled in, and the operation of rolling in and fluming out continued until the head of water is reduced below what is necessary for these purposes, when the gate will be closed until a new head is accumulated.

The gates in all the succeeding locks below the one from which shipping is done will be kept open, as each lock will operate automatically in accumulating a head and discharging it with the logs passing through. This will be accomplished by the water rushing in with and in advance of the logs from above faster than it can discharge through the narrowed mouth at the lower end, the gradient of which is flat and so constructed and arranged that it will operate in a similar manner to the neck of a bottle, only allowing to pass through the quantity of water required to carry the logs of the largest diameter it was designed for handling.

Cost of Locks or Reservoirs.

In considering the cost of locks or reservoirs such as have been described, it must be taken into account that they are a part of the continuous flume line, and each lineal foot of their length replaces that much triangular flume. Therefore, the difference between what it costs to construct a foot of triangular flume and the cost per foot of the locks will be their only actual cost in relation to the complete line. This additional cost will result from the greater amount of material required more than from extra labor, and should not amount to more than $1 to $1.50 per lineal foot, depending on their size. Their length would be from 80 to perhaps an extreme of 200 feet, and two or three per mile of flume would be the limit required. On this basis it would add from $160 to $900 per mile to the cost of the complete line of flume. The cost of a single storage dam might easily exceed their cost in connection with a flume several miles long. It is, of course, impossible to make any definite figures along this line because of the widely differing conditions that may control each separate installation.

In connection with this subject some information and data on the cost of flumes and their operation will probably be of interest. So far as I know, there has not yet been a flume built for handling logs as large as eight or even six feet in diameter, and therefore, no definite figures can be given regarding the cost of constructing or operating them. Taking, however, the actual detailed cost of flumes built for handling logs up to five feet in diameter as a basis for figuring, the estimated cost of engineering and constructing one for handling logs six feet in diameter will be from $8,000 to $10,000 per mile, and that of one for eight foot logs $10,000 to $12,000 per mile.

The cost per thousand feet for handling logs through a flume, including the cost of maintenance, varies according to the volume of shipping and the length of the flume. Reports from several flumes that have been in use for two or more years show that it does not exceed 25 cents per thousand at most, and may be reduced to 12½ cents, or even less when very large quantities of timber are flumed.

Advantages and Availability of Flumes.

There are several features regarding the availability, advantages, and economy of flumes in the transportation of logs that stand out prominently:

1. Their feasibility, wherever there is a water supply and descending grades.
2. The small amount of water actually necessary for their operation.
3. Their adaptability to almost any conditions.
4. Their extraordinary capacity, even when the available water supply is extremely limited.
5. The low cost of maintenance and operation, and, in conclusion, the cost of constructing a flume when built to handle small timber, is much less than that of a railroad, and when built to handle timber of the largest size will not exceed and seldom equals that of a railroad, constructed under similar conditions. The cost of steel and railroad equipment is high and getting higher, while the only cost of the lumber in a flume will be that of logging and sawing, plus the stumpage value of the timber used.

The cost of transporting logs by flume is much less than by railroad. To operate a railroad requires experienced, expert labor, frequently hard to secure and not always dependable. In the operation of a flume no skilled labor is required, and, in fact, very little of any kind, all of which would seem worthy of careful consideration when choosing a means for log transportation.

Canada's Foreign Trade in Wood Goods.

Canada's exports of forest products during the twelve months ending September were as follows: 1916, $53,952,950; 1915, $47,241,070; 1914, $42,191,112.

During the twelve months ending July the imports into Canada included wood and manufactures of wood to the following values: From the, United States, $9,251,617; from the United Kingdom $171,320; total, $9,650,358. During the corresponding period of 1915 the total was $9,986,244.

Exports of wood and manufactures of wood during the twelve months ending July were as follows:

	Twelve months ended July.			
		1916.		
Articles exported.	1915.	Total.	To U.K.	To U.S.
Logs	$1,134,282	$ 996,342	$ 65,448	$ 930,554
Lumber—Deals, pine	1,107,941	1,673,182	1,613,471	35,391
Spruce and other	7,716,382	9,832,764	8,649,532	330,351
Laths, palings and pickets	2,074,066	2,380,327	17,559	2,352,577
Planks and boards	19.383,550	25,759,934	2,241,771	21,811,025
Shingles	3,263,358	3,637,262	.....	3,708,825
Timber, square	474,711	424,173	388,884	32,677
Wood blocks for pulp	6,397,389	6,254,717	.....	6.254.717
Wood-pulp	9,205,359	12,931,681	939,525	11,246,765
Wood and manufactures of—Total	$54,004,776	$68,630,154	$16,382,454	$48,272,588

An order-in-council has been passed by the Dominion Government granting a drawback of 99 per cent. of customs duties paid on materials used in the original construction of ships measuring over 500 tons gross tonnage, built in Canada, to be exported for outside registry. The vessels must be constructed so as to obtain a registry in Lloyds satisfactory to the Minister of Customs, and their export upon completion must, in each case, be authorized by order-in-council. Quite a number of vessels on foreign order are now being built in Canada, but in each case arrangements have to be made with the Government for permission to export. Under the general regulations of the War Measures Act the export of vessels to non-British countries is prohibitive, but the Government has power to permit exportation in all cases where conditions warrant.

Are you prepared to supply the inevitable demand of your customers for British Columbia Structural and Finish Lumber, Shingles, Doors and Furniture?

ROOMS

WHERE do we spend most of our lives?

BETWEEN the four walls, floor and ceiling of ROOMS.

DO the nature and appearance of these SIX sides of a room have any influence on our lives?

UNQUESTIONABLY, since they constitute our principal environment from childhood to old age.

WHAT qualities is it desirable the sides of a room should possess?

A FLOOR which you like to walk on. WALLS which form friendly surroundings. A CEILING which is not a monotonous expanse. DOORS and FIXED FURNITURE which are a combination of utility and beauty. THE WHOLE of harmonious, restful colors and agreeable texture, dustless, and easy to keep clean and polished. A PLACE you enjoy being in.

DO YOU KNOW of any material which so completely answers all these requirements as WOOD?

Can anything equal a well laid WOOD FLOOR?

Is there any material which is more permanently satisfying for WALLS than WOOD PANELS?

What can surpass WOOD for a beamed CEILING?

Has any material ever been found which can give the same degree of satisfaction for DOORS and FURNITURE as WOOD?

WOOD possesses a vitality, has a softness and warmth of color and texture which makes it THE MATERIAL to LIVE with. WOOD is strong, durable, tenacious, dustless, sanitary, and easy to keep clean and polished.

A ROOM FINISHED IN WOOD IS HEALTHFUL, COMFORTABLE, COMPANIONABLE, SERVICEABLE, ATTRACTIVE and HOMELIKE

BRITISH COLUMBIA'S forests supply a number of woods, such as **DOUGLAS FIR, WESTERN SOFT PINE, WESTERN RED CEDAR,** and **WESTERN LARCH,** which for finish work are of superior merit, and their **cheapness places wood finish** within the **reach** of **every home builder.** As an architect, or as a dealer or worker in Building Materials, you will want to inform yourself in regard to these woods, which within ten years will dominate the lumber markets of the world.

For descriptive bulletins and samples, address

B. C. LUMBER COMMISSIONER,

Excelsior Life Building, TORONTO, ONTARIO

WANTED & FOR SALE DEPARTMENT

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Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch. each insertion, pavable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted-Lumber

Wanted to Buy

Maple Squares 18 inches to 48 inches long; 1 in., 1¼ in., 1½ in., 1¾ in., 2 in. and 2¼ in. squares.—Apply to A. K. Hansen & Company, Quebec. Que. 20-t.f.

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Wanted

Wanted 600 piles, 50 ft. long, 6 in. tops; 200,000 feet log run basswood; 150,000 3-inch spruce to be shipped during the winter. Will pay cash as soon as cut or will advance money to make the cut. H. V. BERRY, Fort Plain, N. Y., U.S.A. 22-23

For Sale-Lumber

For Sale

Pine, Birch, Spruce, for Sale, suitable for shell box manufacturing. Apply The Office Specialty Mfg. Company, Limited, Newmarket, Ont. 22-24

For Sale

CEDAR POSTS—Ready for immediate shipment. 2,000 sound Cedar Posts, 3 in. to 6 in. diameter tops, 9 ft. long, unpeeled. Inquiries solicited.

BARTRAM BROS., LIMITED,
22-23 Ottawa, Ont.

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que.

For Sale-Machinery

For Sale

Goldie & McCulloch Corliss Engine, 16 x 38, 150 horse power; Berlin Matcher, No. 90, good as new; Grand Rapids Engine and Generator for 150 lights.

R. LAIDLAW & CO.,
22-22 Toronto, Ont.

Machinery Wanted

If you have any machinery for sale right here in this column is the place to advertise it. Every man who reads here is looking for a machine—if you have that machine you can do business. Let us quote you on an ad. 20-23

MACHINERY FOR SALE—One pair carriage sett works, with shafts and spring, Wm. Hamilton make. One Lath Mill. One Bolter. All in good condition and cheap.

Papineauville Lumber Co., Ltd.,
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FOR SALE

1—Wicks Gang.
1—Ideal Engine, 13 in. x 12 in.
1—Plain Engine, 16 in. x 24 in.
1—Plain Engine, 5 in. x 7 in.
1—Boiler, 72 in. x 16 in.
1—Boiler, 54 in. x 12 in.
2—Upright boilers.
1—Cookston water heater.
Several steam pumps.

CHAS. PEDWELL,
16-t.f. McVicar, Ont.

FOR SALE

We have the following second hand machines to offer, ask us about others not listed, if you are interested.

1 Egan 30 in. 2 drum sander.
1 McGregor Gourlay 30 in. 2 drum boss sander
1 Jackson Cochrane 36 in. 3 drum sander
1 Egan 42 in. 3 drum sander
1 Cowan 42 in. 3 drum sander
1 Cowan 48 in. 3 drum sander
1 C. M. C. 8 in. 4 side sticker
2 Ballantyne 12 in. 4 side stickers
1 Egan 36 in. single surfacer
1 Harper 26 in. single surfacer
1 Cowan No. 220 24 x 10 single surfacer
1 McGregor Gourlay QY 15 in. planer and matcher
1 McGregor Gourlay QY 9 in. planer and matcher
1 Jackson Cochrane 54 in. band resaw, 5 in. blade
1 Jackson Cochrane No. 165 rip saw

P. B. Yates Machine Co., Limited
Hamilton, Ont.
19-t.f.

Wanted-Machinery

Secondhand Refuse Burner, 24 ft. diameter preferred. Give full particulars and price. The Knight Bros. Co., Ltd., Burks Falls, Ont. 21-t.f.

Burner Wanted

Wanted, Secondhand Standard Steel Burner, 20 to 25 ft. in diameter. Must be in good condition. Give full description with price, and state where same could be delivered in case of purchase.

FRASER LIMITED,
21-24 Fredericton, N. B.

Wanted-Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

A YOUNG MAN wishes to make a change. Buying or Sales force preferred. Fifteen years in inspection work. Both rail and water shipments. Box 476, Canada Lumberman, Toronto, Ont. 22-24

MARRIED MAN, THIRTY YEARS OLD, ten years' experience in office work as Accountant, speaking both languages, desires to change, best of references. For particulars write to P. O. Box No. 69, Three Rivers, Que. 16-24

WHOLESALE LUMBER SALESMAN, with four years' experience in New England on road for Boston house selling Western lumber, wants to make a change for a position to represent Western firm in New England States. Box 474, Canada Lumberman, Toronto, Ont. 22-22

ONTARIO LUMBERMEN owning Timber and Mills in British Columbia. Now is the time to operate. B. C. Mills cannot supply the demand. Prices highest and going higher. Manager large company in Interior B. C. will be available February 1st; twenty-five years' experience; will get results. Not operating on account of death of owner. Address 479, Canada Lumberman, Toronto, Ont. 22-23

Wanted-Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

FIRST CLASS MILLWRIGHT WANTED at once to install machinery in saw mill. The Turner Lumber & Pulpwood Company, Lake Edward, Que. 20-22

SALESMAN WANTED by large British Columbia shingle mill, to sell shingles on a commission basis. Must be able to handle large output. Apply Box 477, Canada Lumberman, Toronto, Ont. 22-23

WANTED — TROROUGHLY COMPETENT MANAGER to take charge of mills and limits in province of Quebec. Must be able to speak French and English and be thoroughly capable, from stump to mill. State fully experience, present position and salary required. Address Box 475, Canada Lumberman, Toronto. 22-t.f.

Business Chances

For Sale—Controlling interest in a Saw and Planing Mill, capacity 25,000 feet. Could be increased considerably. Mill on rail and tide water. Unlimited timber supply. For particulars apply to R. H. Young, Squamish, B.C. 21-24

FOR SALE—FOUR-MACHINE SHINGLE MILL in British Columbia, on salt water, with well protected booming grounds and deep water. Railway and steamboat service; spur to dry-kiln. Equipment new and most modern, including circular log cut-off, power splitter and knee-bolter, also bolt cut-off. Ample power; dry-kiln capacity for night shift. Good bolt supply. Apply Owners, Box 478, Canada Lumberman, Toronto, Ont. 22-22

Valuable Box Factory For Sale

The undersigned will receive offers for the purchase of that valuable property known as the CZERWINSKI BOX FACTORY, situated on Logan Avenue and Tecumseh Street, Winnipeg, Canada. This property comprises what is believed to be the finest box factory in Western Canada, fully equipped with the latest and best machinery for box manufacturing and ready for immediate operation. It also includes the factory site, consisting of about 2½ acres of land close in to the business centre of the city, and possesses unexcelled trackage facilities. Street cars pass the factory door. This is a magnificent opportunity for any person wishing to engage in box manufacturing. The whole may be purchased at a very great bargain.

Further information may be obtained upon application to H. E. DENEEN, Assignee of the Czerwinski Box Company, Limited, 300 Electric Railway Chambers, Winnipeg, Man. 22-t.f.

For Sale

Twenty acres Elm and Basswood, also 40 acres of Virgin Cedar near station. S. A. Price, 71 Lakeview Avenue, Toronto, Ont. 20-23

For Sale

Planing Mill and Lumber Yard in Town of Sudbury, Ont. Electric power, 40 h.p. motor, planer and matcher, surfacer, rip-saw and dado saws, sticker, circular resaw, crosscut saw, turning lathe, mortiser, tenoner, borer, sander, sash and door clamp, shaving baler, automatic knife grinder, fan and blowing system, knives, etc. Mill now running, dressed lumber buildings, barn. No better location in town. Splendid rail facilities, and no doubt the best thriving town in Ontario.

Address, Box 457, Canada Lumberman, Toronto, Ont. 18-t.f.

Miscellaneous

For Sale

One hundred square miles of Pine and Spruce limits well situated on the St. Maurice River, on which at least 400,000,000 feet of lumber will be found. Price $350,000, payable $150,000 cash and the balance in four annual payments, with interest at 6 per cent. For full particulars apply to La Cie des Bois du Nord, 71a St. James Street, Montreal. 21-21

Tenders for Pulpwood and Pine Limit

Tenders will be received by the undersigned up to and including the 1st day of December next for the right to cut pulpwood and pine timber on a certain area situated on the Pic River and other territory adjacent thereto, in the District of Thunder Bay.

Tenderers shall state the amount per cord on pulpwood, and per thousand feet, board measure, on pine, that they are prepared to pay as a bonus in addition to dues of 40 cents per cord for spruce, and 20 cents per cord for other pulpwoods, and $2.00 per thousand feet, board measure for pine, or such other rates as may from time to time be fixed by the Lieutenant-Governor-in-Council, for the right to operate a pulp mill and a paper mill on or near the area referred to.

Such tenderers shall be required to erect a mill or mills on or near the territory and to manufacture the wood into pulp and paper in the Province of Ontario—the paper mill to be erected when directed by the Minister of Lands, Forests and Mines.

Parties making tender will be required to deposit with their tender a marked cheque, payable to the Honourable the Treasurer of the Province of Ontario, for twenty-five thousand dollars ($25,000), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said $25,000 will be applied on account of bonus dues as they accrue, but the regulation dues, as mentioned above, will require to be paid in the usual manner as returns of cutting of wood and timber are received.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.
Toronto, August 28th, 1916.

N.B.—No unauthorized publication of this notice will be paid for. 18-22

Sleighs For Sale

Twenty-five sets logging sleighs, in good condition. The Peterborough Lumber Company, Limited, Peterborough, Ont. 20-1

Teams Wanted

We want to hire six or eight teams for winter haul, with or without teamsters. Work to commence about January 10th, 1917. Write Box 392, Huntsville, Ont. 21-22

Timber Limits For Sale

Can be quickly and profitably disposed of by advertising them on this page. This is where buyers of timber property look for opportunities to invest. If your "ad" is here the investor will see it. Canada Lumberman, Toronto, Ont.

AUCTION SALE
of
Timber Limits, Mill Property, Etc.

The undersigned will sell by Public auction, on Thursday, the 30th of November, 1916, at the offices of Wm. A. Cole, Auctioneer Hope Chambers, 63 Sparks Street, Ottawa, the following well equipped mill, also timber limits situate at Matts Bay, 31 Mile Lake, about 70 miles from Ottawa.

Limit No. 59, River Gatineau, 3 sq. miles.
Limit No. 483, Grand Lake, Gatineau, 40 square miles.

more or less, under government licenses. These limits contain Basswood, Spruce, Balsam, Pine, Hemlock, Cedar, Red and White Birch, etc., roughly estimated about 24,000,000 feet lumber and 100,000 cords pulpwood.

Plant consists of Waterous 8 ft. Improved Double Cut Band Mill, Jenckes Engine and 2 Boilers, Alligator Boats, Logging Gear, Waggons, Sleighs, Harness, etc., Camping Outfit, Dwellings, etc.

Plant has only been in use some three years and is in condition to start operations at once.

Terms cash. Sale at 10.30 a.m.

For further particulars apply to

A. W. STEVENSON, C. A.,
802 E. T. Bank Building,
22-22 Montreal, Que.

Tenders for Pulpwood and Pine Limit

Tenders will be received by the undersigned up to and including the 1st day of February, 1917, for the right to cut pulpwood and pine timber on a certain area situated on the Black Sturgeon River and other territory adjacent thereto, in the District of Thunder Bay.

Tenderers shall state the amount per cord on pulpwood, and per thousand feet board measure, on pine, that they are prepared to pay as a bonus in addition to dues of 40 cents per cord for spruce, and 20 cents per cord for other pulpwoods, and $2.00 per thousand feet, board measure, for pine, or such other rates as may from time to time be fixed by the Lieutenant-Governor-in-Council, for the right to operate a pulp mill and a paper mill on or near the area referred to.

Such tenderers shall be required to erect a mill or mills on or near the territory and to manufacture the wood into pulp and paper in the Province of Ontario.

Parties making tender will be required to deposit with their tender a marked cheque, payable to the Honourable the Treasurer of the Province of Ontario, for ten thousand dollars ($10,000), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said $10,000 will be applied on account of bonus dues as they accrue, but the regulation dues, as mentioned above, will require to be paid in the usual manner as returns of cutting of wood and timber are received.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.

Toronto, 1916.

N.B.—No unauthorized publication of this notice will be paid for. 21-22

FRASER LIMITED'S
LIST OF
Second-hand Lumbering Machinery

1 Auto Shingle Saw Sharpener,
Hanchett Swage Works,
Cat. No. 748.

1 Circular Clapboard Resaw.
Dunbar,

1 Circular Saw Grinder,
Covel,
Cat. No. 35

1 Dougle Clapboard Planer,
Woods,
Cat. No. 46.

1 Double Clapboard Planer,
Dunbar.

1 Dynamo, direct current,
Akron Manufacturing Company,
Cat. No. 1396.

1 Edger, iron frame,
St. John Iron Works,
6 ft. 4 in. x 2¾ in. arbor.

1 Engine, centre crank,
16 in. x 16 in.

1 Engine, side crank,
14 in. x 16 in.

1 Engine Flywheel,
25½ in. face, 14 ft. diameter, 7½ in. shaft.

1 Fan, 16 in. suction, 16 in. discharge.
Sturtevant,
Cat. No. R.H. 3669.

1 Friction Clutch Pulley,
28 in. diameter.
11½ in. face.

1 Gang and 2 sets of saws,
Wicks, 54 in. gate.
Cat. No. 1.

1 Gunshot Feed,
8 in. diameter, 37 ft. long.

1 Knife Grinder
S. A. Wood,

1 Planer and Matcher,
S. A. Wood,
Type No. 27.

1 Pump,
6 in. x 3½ in. x 9 in.

1 Pump,
Snow Steam Pump Works,
3 x 2 x 3, No. 55985.

1 Rotary Carriage, wood, right hand arbor,
5 ft. 9 in. x 3⅛ in.

5 Saws, inserted tooth, edger, 18 in. diameter,
11 gauge, 3 in. pitch, 4½ in. bore.

1 Saw, inserted tooth, rotary, 46 in. diameter,
9 gauge, 3½ in. pitch, 2 in. bore.

1 Saw, inserted tooth, rotary, 48 in. diameter,
9 gauge, 3½ in. pitch, 2 in. bore.

3 Saws, inserted tooth, rotary, Simonds, 52 in.
diameter, 8 gauge, 4 in. pitch, 2¼ in. bore

2 Saw Gummers, wooden frame.

1 Set Works, hand,
Waterous Engine Works,
No. 4 double acting.

14 Shingle Machines,
McF. T. & A.,
Dunbar Type.

1 Small Band Saw Grinder,
Baldwin, Tuthill & Bolton,
Cat. No. 2.

1 Steam Boiler, 16 ft. long, 6 ft. in diameter,
140 3 in. tubes.

1 Steam Cylinder,
Waterous Engine Works,
7 in. diameter, 30 in. stroke.

1 Steam Cylinder,
Waterous Engine Works,
10 in. diameter, 30 in. stroke.

1 Steam Nigger, Oscillating,
Waterous Engine Works,
Size 3-0, No. 109.

1 Twin Engine,
Whitter Machine Co., Boston, Mass.,
12 in. stroke, 7 in. diameter.

1 Upright Engine (Mark F15),
W. E. Hill Company,
4½ in. diameter, 6 in. stroke.

Also a large assortment of Belts, Pulleys and Shafting.

Prices, Descriptions and Complete List, with all particulars, sent on application to—

FRASER LIMITED
FREDERICTON - N. B.

Union Lumber Co.
Limited

Complete Stock

White Pine
Red Pine
Spruce

5 Cars Dry 32 in. Mill Run White Pine Lath

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

Slump in German Woodworking Industry

A Berne correspondent of the Press Association states that Germany's great woodworking industry has suffered enormously through the war. At the end of 1915, in the first sixteen months of the war, no less than 8,300 factories and workshops had been closed out of a total of 20,900 existing before the war.

The home trade was worse than the foreign, since with the call to arms the creation of new homes and households practically ceased. Hence there was little demand for furniture or household utensils. The export trade, which was very great, has also suffered severely. Toys and pianos, and other musical instruments, to the value of nearly 200,000,000 marks, or 10,000,000 sterling, were sent abroad in 1913; last year's total is estimated at less than 25 per cent. of this sum. Unlike so many other industries, the woodworking factories have found little employment in the war. At first they were engaged in making baskets for munitions, and later other employment was discovered for them. One piano factory has been turning out barbed wire, and a furniture factory has been making shells, but for the most part the wood workers have been of little use in the munition field. Every week more factories are being shut down.

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We are Buyers of
ALL GRADES
WHITE PINE, SPRUCE and HEMLOCK LATH
Will contract for entire output and pay spot cash
Send full particulars as to grade, quantity and prices
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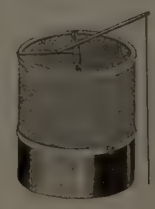

Wire Cloth for Refuse Burners

Our spark arrester is substantially built and will last for years. Don't wait until a fire has visited your property, equip your mill at once.

Prices on application

Canada Wire & Iron Goods
Co. Limited
HAMILTON, ONT.

Review of Current Trade Conditions

Ontario.

Reports received from a number of lumber manufacturers in Northern Ontario show that the output of logs during the coming winter will be considerably reduced, the decrease varying from 25 per cent. to 50 per cent. at different points. The shortage of labor is the chief factor responsible for this situation. During the summer of 1916 the output at the mills has been considerably less than in former years, also as a result of the shortage of labor for operating the mills. Dry stocks are already becoming scarce in many parts of Ontario. Enquiries from Canadian points and from United States points indicate quite a revival in trade. Apparently retailers have commenced to feel anxious about their supplies, both for next year and for the next few months. Contracts are now being made for stocks at considerable advances over the prices that prevailed early in the fall. The volume of sales is much better than it was a year ago.

There has been a tendency on the part of hardwoods recently to lag in some respects. This can be definitely traced to the fact that in connection with the production of shell boxes the Imperial Munitions Board have been favoring the box with a veneer diaphragm rather than the box with the solid hardwood diaphragm. As the great majority of this veneer stock is imported from the United States, the local hardwood trade suffers to that extent. Otherwise, the hardwood trade has been reasonably good. Factories are busy, but the shortage of labor is a serious drawback, and is preventing many of them from producing at their full capacity. The United States demand for hardwoods is good, with a slight tendency to hold back during the past two or three weeks on account of a certain amount of hesitation caused by the presidential elections. Throughout the producing centres in Canada and the United States available stocks are low, and the same thing applies to yard stocks. The outlook, therefore, is that producers can count fairly definitely on a good demand for their output. The piano trade, the furniture trade, and the flooring trade are all active, and are consuming considerable quantities of stock. This is using up all the lower end and is rapidly eating a hole into the good stocks. A material shortage is reported in 1 in. and 1½ in. first and seconds birch in Canada. Other sizes and grades are also reduced in stock to some extent. With two months yet to go in the present year and any sort of an adequate car supply, the trade will undoubtedly find that their requirements of dry stock to carry them from the beginning of 1917 up to the next sawing season will be very inadequate. The demand for 2½ in. birch for rifle stocks in the United States continues quite strong, and the supply is pretty low. The shortage of foreign cars in Canada is hampering shipments to the other side, and, so far as producers are able to see, it looks as though the situation in this regard will be worse before it is better.

Eastern Canada.

Further advances are reported from St. John, N.B., in the price of deals for future delivery. The allied governments are taking this material for construction purposes in the war zone, and are paying good prices, as high as $30 per M. f.o.b. the wharf having been paid for long deals of good average widths. The demand is improving, and the mills are showing a greater inclination to sell rather than hold out for higher prices. All the mills in the St. John section are sawing English deals. Ocean freight rates are about 275s per standard. Stocks of deals at St. John are not heavy. Good prices for deals have resulted in many rotary mills operating in the woods, and these are getting from $3 to $3.50 per M. for sawing. The high cost of provisions and labor, however, are likely to keep down the profits on such operations. The New England market continues firm at a base price of $28, and it is expected that $30 will be reached before next spring. The spruce board market in New England and the market for cedar shingles are not so encouraging, prices being at best $17 per M. for boards 1 x 4 in. and up at the mills and $3.60 per M. for white cedar extra shingles delivery Boston. Some of the St. John mills will carry over good stocks of logs and others will have none at all. Logging operations are now in full swing.

Continued improvement is reported from Montreal, both in the wholesale and retail lines. Prices have been advancing, and are expected to show further increases, as the demand continues strong. Activity in the export trade has increased with the approaching end of the season. It is expected that the total exports this year will be equal to those of last year.

Boston reports state that buyers are more inclined to come into the market lately than they were a month ago. At the same time the volume of production has decreased greatly, and the result has been firmer quotations. Spruce frames are now steady at $28, according to Boston reports, and $29 is expected during November. Random dimension is also firmer, the range of prices, Boston deilveries, being as follows: 2 x 3, $22.50 to $23; 2 x 4, $23.50 to $24; 2 x 5, 2 x 6, and 2 x 7, $22 to $23; 2 x 8, $27 to $28; 2 x 10, $27.50 to $28; 2 x 12, $28.50 to $29. Spruce boards are said not to be quite so firm as frames, but some improvement is reported, prices being $21 for covering boards, 5 in. and up wide, 8 ft. and up long. Good makes of white cedar extras, according to Boston reports, are bringing $3.60, and fair white cedar extras $3.50. Quotations on clears are from $3.20 to $3.30. Lath are stronger at $4.35 to $4.50 for 1⅝ in. and $4.80 for 1½ in.

United States.

Business in the United States showed no signs of slowing up as a result of the presidential campaign. Now that the elections are over, we can look forward to even greater activity than there has been during the past few months. The reason for the failure of the elections to interfere with business was that the whole country had so much more to think about that was of importance. From all parts of the country reports are received of extraordinary activity, many plants having orders on hand that will keep them running to capacity during practically all of 1917.

In the lumber industry, as in every other line, the car shortage continues to cripple shipments. Even a reasonable percentage of the cars required is not being furnished by the railroads. Efforts are now being made by several of the larger railroad lines to increase their rolling stock. During October orders were placed for over 25,000 cars. More than 30,000 freight cars are now under negotiation. It is reported that the Union Pacific will soon place orders for cars that will require 15,000,000 feet of wood in their construction and that they will specify Douglas fir. In the Eastern States the erection of new industrial plants continues on an extensive scale, a great portion of them being of mill construction, requiring large quantities of heavy timber. Building conditions throughout the country are favorable, and a good demand is reported from all sections. Unquestionably there is an enormous demand for lumber throughout the United States, and, with sufficient transportation facilities, manufacturers and distributors of lumber would have no complaints to make.

The Southern pine trade has felt the car shortage greatly, because of the increased demand and strengthening prices. Many mills have closed their plants and others have withdrawn their output from the market. Still others are restricting the quantity of orders accepted. Retail yards in Southern pine-consuming territory are expecting a good fall and winter trade. There is a good demand for Southern pine timbers for export, and shipments have increased considerably. For the week ending October 28th the West Coast Lumbermen's Association members produced 69,527,740 feet, which is 11.33 per cent. below normal. Orders were 4.19 per cent. below normal production and 7.45 per cent. above actual production. Shipments were 20.99 per cent. below normal production and 10.90 per cent. below actual production. Orders exceeded shipments by 13,171,884 feet, or 17.53 per cent.

Hardwood manufacturers, both in the North and South, report a good demand for all their products and stiffer prices. They find, however, that because of the increasing cost of production the price advances do not yet represent an increased profit. A better demand is reported for thick stock in Northern hardwood, and the trade is finding difficulty in obtaining what it requires. Automobile factories, furniture factories, and vehicle factories are all buying extensively. The monthly stock report of the Hardwood Manufacturers' Association shows a large decrease in stocks of fire and second plain white oak, poplar, and the higher grades of chestnut. Hemlock is in good demand and prices are stiffer, but increased prices have not compensated for the higher cost of production as yet.

Great Britain.

Spruce values have risen considerably of late in Great Britain, especially for the deal sizes, and the prospects are for still further improvements. Eleven-inch spruce deals are worth anything from £30 upwards; 9 inch are quoted at from £27 10s to £29, and 7 inch at from £25 to £26. Merchants are already considering the possibility of prices returning to those of last spring. Unsold stocks are still fairly large in some districts, but it is expected that the end of the import season will soon have an effect upon this situation. There is still an extensive spot business in London, and there are practically no signs of it slackening off at present. Arrivals are up to the average and deliveries are well maintained. A hardening tendency continues in connection with values. Some sizes are confidently expected to run short before spring shipments arrive. This applies particularly to

View of Mills in Sarnia.

BUY THE BEST

Retailers and woodworking establishments who like to get A1 NORWAY and WHITE PINE LUMBER always buy their stocks from us because we can ship them on quick notice. It pays to have the goods, but it pays better to "deliver" them.

We also make a specialty of heavy timbers cut to order any length up to 60 feet from Pine or B. C. Fir.

"Rush Orders Rushed"

Cleveland-Sarnia Sawmills Co., Limited

SARNIA, ONTARIO

B. P. Bole, Pres. F. H. Goff, Vice-Pres. E. C. Barre, Gen. Mgr. W. A. Saurwein, Ass't. Mgr.

deals, which are not any too plentiful even at present. The requirements of the army in connection with the operations in France and Belgium have been increasing, and are expected to do so during the progress of the great push. At Foy, Morgan & Company's recent auction sale, 3 x 8 and 3 x 7 inch unsorted Quebec spruce sold at £28 5s. Fifth quality 3 x 7 and 3 x 6 inch Quebec spruce brought £24. The way in which buyers are taking up stocks at the auction sales indicates that they are inclined to pay big prices for any goods that can be handled at once.

The spruce situation at Liverpool shows very little change. Higher prices are confidently expected in the near future. First cost prices are expected to be higher, and importers are recognizing the fact that Canadian manufacturers are sharing in the labor difficulty and higher costs that are affecting the situation in Great Britain. In regard to future business, shippers are apparently refusing to consider anything except advances upon spot values, claiming that higher prices are necessary to meet the increased freight rates that are expected, as less tonnage is likely to offer for lumber during the next few months. The Manchester market is rather quiet, on account chiefly of high prices, shortage of men, and absence of building activity. Prices show practically no change. Spruce is not so strong as it has been, the enquiries being very light.

At Glasgow the trade continues on rather a quiet basis. A little more enquiry is reported from shipbuilding sources, and it is expected that this will increase, as there are signs of activity in connection with the construction of mercantile vessels. There is a better enquiry for spruce, and prices are firm. Transactions are reported on a basis of £25 to £25 10s for scantling, £26 to £27 for 7 inch and 8 inch and £27 10s to £29 10 s for 9 inch and wider. Stocks of 11 inch deals are very light, and higher prices are being quoted.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

St. John Trade in Much Better Condition

St. John, N.B., Nov. 8.—(Special to the Canada Lumberman.)—During the last two weeks we have had further increases in the price of deals for future delivery. Seemingly the allied governments want certain supplies for building in the war zone, and are paying good prices. Of course, this is all war prices, and possibly is no criterion of a steady market. Nevertheless, the prices are being paid, one concern having sold long deals of good average widths as high as $30 per M., f.o.b. their wharves. The demand is increasing, and practically all the mills are disposed to sell rather than await higher prices, as it seems too long a risk. No mills in this section are sawing for the American market, all sawing English deals. Ocean freights range around 275 shillings, which is excessive, but not quite so high as in 1915 and the early winter of 1916. Stocks at St. John are not heavy in respect to deals from St. John mills. Many rotary mills are going in the woods this winter, as the prices being offered by the deal merchants are good and at first glance look profitable, but when the high price of provisions is taken into consideration, along with the extreme wages, many will be disapoointed when the spring of 1917 opens and they begin to figure where they stand. Portable mills are in great demand all over the country, prices for sawing ranging from $3 to $3.50 per M. This is much higher than paid previously.

It is to be hoped that the prices now prevailing, along with the demand, will remain steady and not fall off during the coming year. When one looks at the position of the operator it is hard to say that he is deserving of any other treatment than this. Prices in New England are still holding firm at a $28 base price, and it now looks as if a further increase would take place at any time. In fact, it is felt that by spring a base price of $30 will be reached, with a good demand. The only market which is not good through New England is the spruce board and cedar shingles. No fancy prices can be had for either article, and buyers need some coaxing to pay $17 per M. for boards at the mills, IXX and up, or $3.60 per M. for extra cedar shingles delivered Boston rate of freight.

The next month will see about all the mills at St. John idle, as the season is fast drawing to a close. Some of the mills will carry over a good stock of logs and others will have none. No doubt a large quantity of bank logs will be cut this winter, for which good prices are now being offered. With the extreme high prices being offered for both logs and lumber, it is no time to gamble, but it is far better to sell on a safe price.

During the last ten days an association of lumbermen from Eastern New England was formed and a meeting held at Bangor. All the largest and many smaller mills were represented, along with many log operators, and as soon as possible this association will be in full swing, and will no doubt fill a long-felt want, as for a long time it has been a cutthroat business from the manufacturers' standpoint. This association should be successful from the start.

Logging is now in full swing all over the river, and no doubt if we have a good winter and plenty of help the cut will be normal.

Pacific Coast States Report Increasing Orders

The weekly review of the lumber market, issued by the West Coast Lumbermen's Association of Seattle, Wash., under date of November 1st, says: Unshipped lumber orders for transcontinental rail delivery now exceed 9,000 carloads, according to the weekly trade barometer of the West Coast Lumbermen's Association. There has not been a time in recent years when unfilled orders have shown such an accumulation—not even in the severe car shortage of 1907. Last week, in the transcontinental trade, new business taken on amounted to 2,410 carloads, while shipments by rail only amounted to 1,529 carloads. Orders for future rail delivery exceeded rail shipments for the week by approximately 20,675,000 feet, or 35.34 per cent. As a result of the further tightening in rail shipping facilities curtailed production became more marked, 117 mills reporting the actual manufacture of 69,527,740 feet of lumber. That is computed as being 11.33 per cent. below normal.

Temporarily easier ocean tonnage conditions gave impetus to shipping at tide water mills, the week's figures showing the clearing of 10,628,671 feet in coastwise cargoes and 7,818,044 feet in overseas cargoes, making a total of 18,446,715 feet and establishing a record week for the year 1916. Export orders accepted during the week amounted to 6,352,000 feet, while California and Alaskan business fell off slightly, only totaling 3,921,705 feet. All cargo shipments for the week exceeded all cargo orders by 8,173,010 feet.

Montreal Trade Much Improved

Montreal, Nov. 8.—(Special to the Canada Lumberman.)—The improvement in the lumber market recently noted has been accentuated during the last fortnight, and wholesalers and retailers report a decidedly better trade. With the larger demand prices have stiffened, the pronounced scarcity of some lines being a material factor in the rise in values. The buying of lumber for shell boxes is a very important influence in the heavier purchases, and, as the Imperial Munitions Board have, it is reported, just received bids on tender forms sent out for a million more boxes—4.5 and Bethlehem boxes—the demand on this account means that business will continue brisk for some time. The general feeling is undoubtedly optimistic, and wholesalers who quite recently declared there was nothing doing now state that they are busy and that the enquiries are excellent. The furniture factories are full of orders, and, owing to the heavy enlistment for overseas, are unable to give prompt delivery—in fact, have had to refuse business.

The British Government have sent out enquiries for a very large number of shooks, in addition to those now being made in this country for the same account. The shooks are to be of spruce, and the dry lumber required totals 3,250,000 feet of 5/8 in. finished thickness, lumber dressed T. and G. ½ in., and 750,000 ft. ⅞ in. finished. The specifications are so strict that lumbermen declare it is impossible to fill them at the price offered for the shooks. Some go so far as to say that lumber of the description required cannot be obtained, and that it is not grown in this country. It might be possible to secure a certain amount by selecting portions of vast quantities of lumber, but this, of course, is commercially impracticable, especially in view of advancing prices and the disappearance of suitable dry lumber. The specifications were sent from England, and were, it is declared, drawn up in ignorance of the conditions which obtain here. It looks as if the specifications were made without enquiry as to the possibilities on this side, and the experience gained under the few orders for shooks previously placed here warrants the statement that there will be difficulty in placing further contracts unless the specifications are modified.

The British Government have appointed, in Montreal, an agent, who will have oversight of all imperial orders for lumber placed in Canada.

Last month's building permits are valued at $352,942, a decline of $140,344; for the ten months the total is $4,139,934, a decrease of $865,592.

Enquiries from the United States are very good and have lately

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FOR ALL COOKING
WHERE MILK IS NEEDED

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For these, and other reasons, it is known all over Canada as

THE LUMBERMAN'S MILK

Pure and Genuine—See Government Bulletin No. 257 on MILK POWDER
Used by Canadian Government for Soldiers in Camp and Barracks

A postcard will bring a sample and complete directions for use. Two Dollars will bring a trial ten pound tin, making ten gallons

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Lath Machine

From our many years of experience we evolved this "Dunbar" Original Lath Machine. Every improvement that could be suggested, every time-tested idea for the betterment of product and for greater speed, has been incorporated in this machine. We believe it has no equal, and there are a great number of mill men throughout Canada who share this belief with us. Carefully constructed of high grade materials and designed to work steadily under the hardest conditions.

Steam and Gasoline Logging Engines

Conditions in Canada necessitate an engine that will stand any amount of strain and hard work in the lumber industry. With this idea in mind we have brought out the "Dunbar" engines perhaps a little stronger than is really needed. They do their work easily and willingly, and stand a great amount of hard usage. Built entirely in Canada for the Canadian lumber trade.

Clapboard Machine

You will need no excuse for the quality of your product if you use the original "Dunbar" Clapboard Machine. Expert in every detail. This machine will give you the very best service under most trying conditions. It will turn out work without delays. It will need practically no repairs and will increase your output. We cannot recommend it too highly because it is giving this very service to lumbermen in all parts of this country.

Send for catalogues of any or all of these machines.

Dunbar Engine & Foundry Co.

WOODSTOCK, N.B.

improved. Some spruce recently sold fetched the highest price received by the seller this year.

Complaints are made of the shortage of cars, particularly on the I.C.R., this naturally delaying trade.

As the end of the season approaches firms exporting to the United Kingdom are rushing their goods to the other side. More space has lately been available, with rates about stationary. The season has proved much better than at first seemed probable, and it looks as if the total shipment will not be behind that of the previous year. Some firms have done comparatively little, the high freights and poor markets, especially lately, having a restraining effect. On the other hand, it is known that some exporters will exceed their former total. The shipping by tramps has, to a certain extent, offset the limited amount of space on liners.

The position of the pulp market remains about the same. Sulphite is still buoyant, and is likely to remain so for a considerable period. Contracts have just been made for delivery next year at very high prices. There is a great scarcity in Europe, which will cause a strong demand on Canadian mills. Ground wood is very firm and scarce. Newsprint continues in great request, and, with the increasing consumption, prices will probably remain at a high level.

Timber Trade of the British Empire

Encouragement of Inter-Imperial Trade—The Tariff Problem—Co-operation Between Practical Man and Scientific Investigator

Under the auspices of the Timber Trade Federation of Great Britain, an excellent address was delivered recently by Prof. Percy Groom, M.A., D.Sc., F.L.S., at the London Chamber of Commerce, his subject being "The Empire's Timber Trade: Its Future and Technology." In his introduction Prof. Green referred to the need for co-operation between the practical man and the technical expert. Continuing, he said:

Great Britain has, I believe, awakened from her apathy. It is now realized that the real trade warfare is between nation and nation, not between employer and employe, nor even among trade rivals of the same country. It is recognized that each industry in the country should organize so as to defeat the foreign trade foe. To accomplish this, fundamental problems concerning the maximum production and adequate supply and transport, with the difficult associated questions of labor, will have to be solved.

In this organized trade warfare of the future several ideas are now more or less widely accepted:

1. That our industries shall be fostered and protected by some kind of tariff duty.

2. That the British Empire shall utilize its resources to the maximum possible. This implies on the one hand promotion of trade within the Empire, and may involve the tariff policy known as colonial preference.

Thirdly, and I wish to emphasize this as much as possible, whether or not tariff changes are introduced, there should be the closest application of scientific principles to industry.

Protection without increased rate of production is a premium conferred upon physical idleness; protection without improved organization and improved application of scientific principles is a premium placed upon a mental lethargy, and in either case protection acts as a narcotic.

In view of the impending changes of conditions of the timber trade the most thorough and complete organization of the timber and wood-consuming industries is a paramount necessity; for the complex problem has to be solved as to how the conditions of these industries are to be changed so as to promote national, and even imperial, interests without seriously disturbing the timber trade. It is obvious that every member of the timber trade in this country should be able to contribute his views and thus should become part of such an organization.

But what are the impending changes of conditions? These are not merely, on the one hand, changes as regards capital available or as regards demands for wood to repair damage done in the war and catch up arrears of work. The mental attitude of our nation and empire is a new one. There is little doubt that definite protective tariffs will be adopted. But, so far as timber is concerned, it is not a mere question of grading the tariffs as regards raw material or manufactured articles. The question will also arise as to the extent to which woods grown within the British Empire shall be given tariff preference. There is little doubt (in fact, I have none) that more than one country of the British Empire will ask for such preference as regards its woods and wooden products. Apart from recognizing the grand response made by the self-governing countries of the Empire in this war, the British nation is generally in favor of utilizing to the fullest the resources of the British Empire. The principle itself is already decided. The questions are the extent to which this principle can be applied to the timber trade, and, if accepted, the means by which it can best be applied. Is the Government, with such advice as it elects to take, to decide this matter as a whole or in detail Or will the timber trade take organized action and prepare its case and advice? Timber merchants have already had experience of the Government's conduct of timber affairs, and will know if they desire this long-lasting and revolutionary change to be dealt with in the same manner.

If the timber trade decide to take action the time seems to have arrived for determining how the facts are to be collected, and the case drawn up to represent the views of all the wood industries of the country.

If it were deemed advisable to form a general intelligence committee to perform this work, such a committee could also deal with the matter of ensuring the fullest co-operation between technical science and the wood industries.

These matters are outside the main subject of this address, because they are beyond the confines of technical science. Yet I venture to mention them because, if science is to be of the utmost service to an industry, it must be in touch with the industry as a whole. That implies organization of the latter.

Science and the Timber Trade.

Now arises the question, How can technical and scientific research aid the timber industry in this country and contribute to the fullest utilization of the timber resources of the Empire?

Here I would like to emphasize the fact that such research would be of commercial value, even if no change of tariff or policy were impending or accomplished.

In reference to the application of science to daily life or industry, one fact worthy of note is the frequent largeness of the commercial return or the great enhancement of value of the resulting product. This fact is illustrated by very varied applications of scientific discovery. For instance, scientific research stamped out Malta fever, and the mere commercial saving on the capitalized expenditure represents a business profit of 30,000 per cent. To take an example provided by Drs. O. Witt and Max Mueller, the value of wood under successive treatment rises as follows:

	£	s.	d.
Cubic metre of wood in forest, value, say..		3	0
Changed to mechanimal wood-pulp		7	6
Changed to chemical wood-pulp		15	0
Changed to paper	1	15	0
Changed to wood-pulp yarn	2	5	0
Changed to artificial silk	7	10	0

In order to gain some idea of the aid that technical science may render to the timber industry and to the promotion of use of the woods of the British Empire it is necessary to glance at our wood imports. In 1913 we imported:

Conifer wood (softwood) logs and sawn, nearly		£23,000,000
Conifer wood (pitwood)	"	4,500,000
Conifer wood (wood-pulp)	"	5,500,000
Oak logs, etc.	"	1,750,000
Additional hardwood	"	4,000,000
Manufactured wood of various kinds	"	4,500,000

or a total of over £43,000,000.

Of this £43,000,000 the country loses much by the inevitable wastage in cutting and preparing the wood. Research is needed in order that this waste material can be utilized to the best advantage.

Another part of the timber is lost by decay and premature destruction, for instance, in coal-pits and buildings. Research is needed to decrease this loss in the most economical manner. For increased preservation of timber involves national saving, but from the timber merchant's point of view tends to prevent the substitution of other material in place of wood.

Our Timber Imports.

A part of the gigantic expenditure on imported timber involves a loss to the British Empire, in that we are importing from foreign countries woods that could be economically replaced by others grown within our Empire.

The British Empire includes within its confines a larger amount and wider range of timbers than is possessed by any other state. Our timbers vary from the softwoods of Canada to jarrah, karri, and other eucalypts of Australia, teak, padouk, and satinwood of India, mahog-

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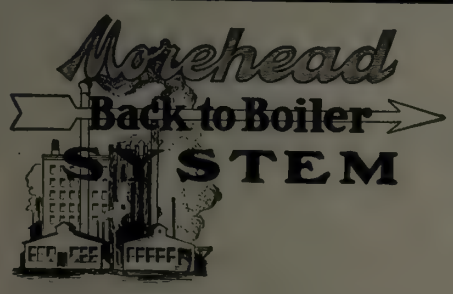

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anies and cedars of West Africa and Honduras, greenheart of Guiana, boxwood of South Africa, and hundreds of less known woods, many of which are valuable and obtainable in quantity. Research is wanted as to the properties and uses of these woods, especially the less known ones. Some will be found useful and valuable, but others often light in weight may be regarded for the moment as useless as timber. Though obtainable in quantity, they represent obstructions to the forester and to the timber dealer. Again there we come to the necessity for investigation of utilization of waste material.

The dominant fact in our imports of timber is the enormous item (more than £30,000,000 annually) represented by softwood. The great deficiency in the British Empire, and this country itself, is in the supply of cheap, readily accessible, coniferous timber. How, then, can we save as regards this item?

Afforestation will do something to fill this gap possibly forty years hence. By checking the decay of pitwood alone we should probably be able to save the import of £1,000,000 worth and a large sum similarly in buildings.

Can we find in our Empire substitutes for some of this coniferous wood? Outside the aid that Canada and Newfoundland can give us, the question may at first sight seem a foolish one, considering the proximity of our supplies of Baltic fir. But I will examine several items.

In 1913 we imported wood-pulp amounting in value to nearly £5,500,000. It may seem a startling statement to make that the world's policy in regard to wood-pulp is a wrong one, yet the statement is partially justified and will be true at least before long. The conversion of cheap coniferous wood capable of use as timber is wrong, because the world's supply of such is absolutely and relatively decreasing, while the consumption (apart from wood-pulp) is rising. For this reason alone only such wood should be used for pulp-making as is a bye-product in sylvicultural operation of growing full-sized timber or is a bye-product of the clearing of the country for agricultural purposes. But another consideration steps in. This material, soon destroyed after conversion into paper, should be grown where production is most rapid. Now, if a plant has sufficient water, its rate of production of material of plant substance, whether this be timber or not, is very greatly increased by every rise of temperature. For instance, one giant thick Malayan bamboo grows a yard in height every day, thus attaining its height of 120 feet in comparatively few days. The place of production of paper material is in the hot country, and particularly of that of cheap pulp should be the moist tropics. Research on the light tropical woods will provide suitable material. Time fails me to deal with the difficulties involved at present, apart from price and transport, and the fact that means must be found to utilize the waste, which is greater than in the case of the coniferous wood-pulp.

While on the subject of wood-pulp, one question appears to me to require answering. That is, why we allow wood-pulp to be imported into England from countries that actually import the wood from which it is prepared. The import of timber direct would give us the useful bye-products of the sulphite industry. A similar question arises in connection with the match industry, for I believe that Sweden imports much aspen from Russia and sends it here in the form of matches. Sweden in 1913 sent us more than £290,000 worth of matches. Among the soft light woods of the British tropics we can probably find some appropriate for match-making, our imports of matches being in 1913 about £500,000. Wood for making pulp must be cheap, whereas wood for making the best matches is costly, so that the exploitation of colonial wood for this purpose is a promisig proposition. Another costly coniferous wood for which a substitute is required is the pencil cedar. In this connection I may mention that the German Government, in its endeavor to promote the use of German colonial woods, compelled certain government departments to use pencils made with a pencil cedar from German East Africa. This is only one case of the general German policy to advertise and promote the use of its colonial woods.

Other examples of enquiries that might be instituted are the substitution of hardwoods for pit-props in deep coal mines or for paving blocks in certain kinds of streets. For instance, on reference to the latter the question arises, Why does the jarrah paving last so much better in Australia than in France or England? Can we improve our methods of paving so as to economically permit jarrah or other hardwoods produced in the Empire to be used more widely in preference to Baltic pine under certain types of traffic

In addition to all these investigations concerning the saving of imported softwood and its possible replacement by imperial-grown hardwoods, investigations and advertisement of the prospective uses of some of the less-known Canadian softwoods are desirable.

But, as a whole, the main question of supplies of cheap softwood can be solved only by afforestation.

Prof. Groom then devoted attention to a consideration of the different varieties of hardwoods secured from various parts of the Empire. In conclusion, he said:

Another important subject for investigation is that of the utilization of waste products, these being in the form of slabs, small fragments of wood, shavings, and sawdust. Those merely engaged in sawing and planing timber will know the resultant wastage; this wastage will be increased if the amount of raw timber imported is increased at the expense of prepared wood, and where the wood is further manipulated the waste products increase. To show the vastness of the amount thus lost, I may mention that I know one establishment which in normal times has an annual wastage representing timber of about £20,000. Now, in reality every so-called waste fragment of wood represents so much power by which we can do work, for so long as the wood can be dried by the sun it can be profitably employed to produce power to drive engines, either by use directly as fuel or by yielding gas and charcoal, or it can be utilized to produce light. These facts are also of significance in forest countries where coal has to be imported from far away. Waste wood can be utilized to produce or help in the production of substances used in the manufacture of explosives such as cordite, acetone; antiseptics such as creosote, carbolic acid, iodoform; solvents such as both common kinds of alcohol and acetone; food material in the form of grape sugar; celluloid and collodion, and artificial silk. It can be moulded in melted wood. Some of these processes are already adopted abroad, and even to some extent in England. Some, such as the manufacture of alcohol, require encouragement by modifications of the existing law. The chemical utilization of wood especially lends itself to co-operative efforts in large towns, and to the cases of unmarketable woods in the tropics where water is obtainable, and even sometimes in this country (for instance, in the case of oak-coppice). Although largely the matter is not one of investigation, for we have much knowledge on the subject, yet in some cases greatly improved methods and improved machinery will follow upon research.

The Wood-consuming Trades Interested.

Moreover, in large towns industries manufacturing small articles, such as boot heels, toys, and the like, could be established.

Any comprehensive scheme of research should include within its purview investigation of the problems concerning industries largely using wood. Such a dependent industry, for instance, is the manufacture of pianos. Pianos to the value of many thousands of pounds are annually imported into this country from Germany, those pianos ranging in quality from the cheapest to the best in existence. I have little doubt that with research conducted by the co-operation of piano makers with a physicist, a steel expert, and a timber technologist we should soon learn the secret of making pianos with the rich yet mellow tone that renders the best German pianos so famous. This is one of the numerous cases in which consultation among representatives of various wood-using industries would be of the greatest benefit, and such consultation may have far-reaching results owing to the close linking of industries. An interesting case I may mention is that of the African bass trade, which before the war was captured by Germany to such effect that, on the one hand, this bass attained a higher price than the superior Brazilian material, and, on the other hand, we import large quantities of bass-brooms from Germany, though the raw bass material is largely from our own colonies.

Laboratories and Workshops.

The question arises, How is this co-operation between the timber trade and dependent industries and technical science to be practically accomplished? How are the problems requiring solution to be formulated and solved?

The investigations require the services not merely of timber technologists, but also of engineers and chemists on the scientific side, and of practical workmen engaged in industry on the other side. They demand not merely laoratories, but also workshops.

As regards the financial aspect of the question, the Government has issued the now well-known White Paper, subsidizing scientific research bearing upon industry. Each industry has to formulate its problems.

An Imperial Timber Bureau.

As a scheme for discussion I might suggest the establishment of an imperial timber bureau, placed in London, and in connection with an institution having not merely a timber department, but well-staffed and equipped chemical, physical, and engineering and fuel departments, as well as workshops. The bureau would be in the closest touch with the various countries of the British Empire, and the timber and allied trades be available for supplying technical advice, conducting investigations, and diffusing information among the trades and professions dealing with wood.

Small works might have to be established, or experiments in existing works might be made with the permission and co-operation of their owners. The working of such a scheme in co-operation with the timber industry, and especially the Timber Trades Federation, would, I believe, lead to the vast increase in the exploitation of woods grown in the British Empire, to the establishment of neglected industries, to the decrease in the amount of waste, and decreased loss through decay.

On the last item alone the saving to the country should annually reach seven figures. The question is how far the timber industry will feel disposed to take advantage of the Government offer and how far it will co-operate in this practical yet technical scheme, whose importance is national and even imperial.

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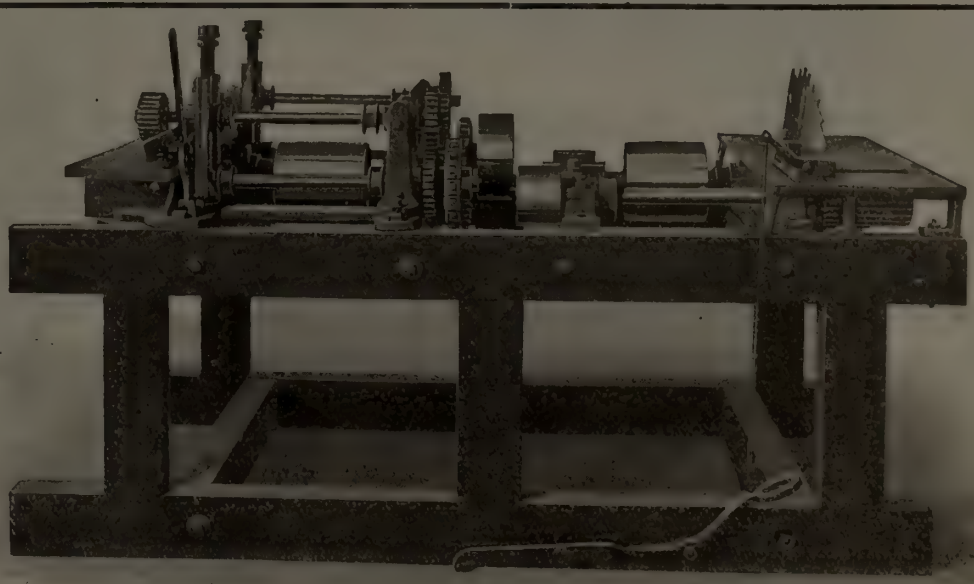

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A Chart for Quickly Determining Belt Slip

We often read about "per cent. of belt slip," without knowing exactly what we are reading about. Now, belt slip is something very definite—so definite that it can be measured with a rule and a watch, and the purpose of this chart is to simplify the effort connected with measuring belt slip.

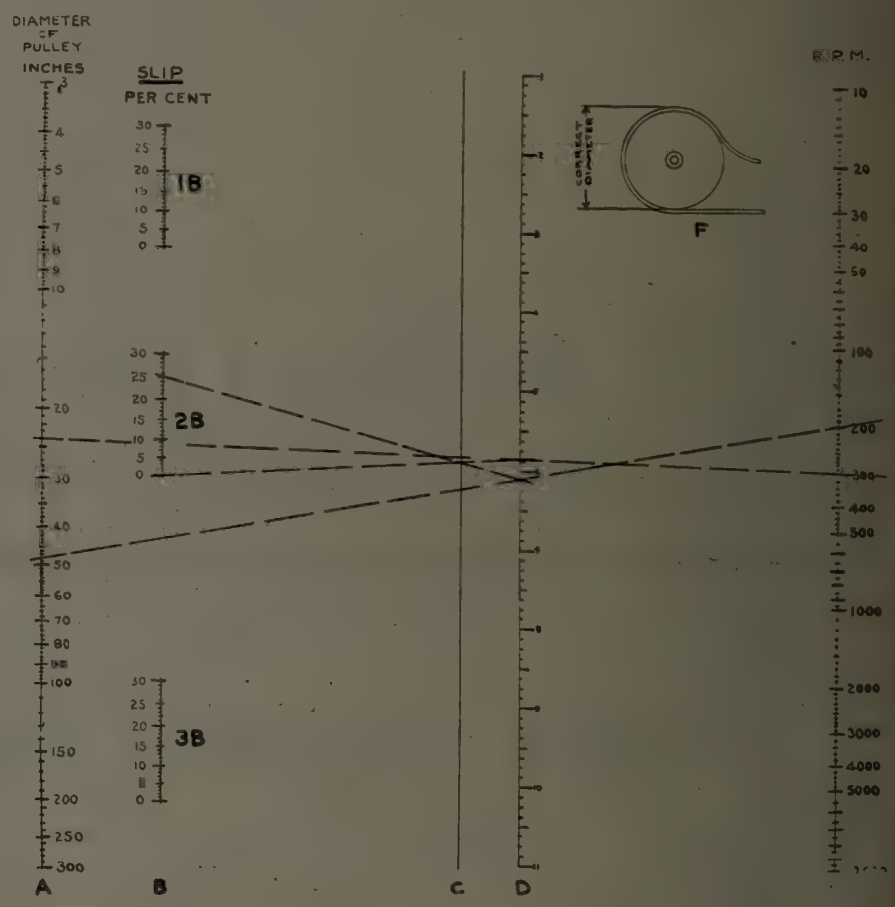
If you want the formula on which the chart is based, this is it:

$$\text{Per cent. of slip} = \left(1 - \frac{d\,n}{D\,N}\right)$$

Where d = diameter of driven pulley in inches;
n = r.p.m. of driven pulley;
D = diameter of driving pulley in inches;
N = r.p.m. of driving pulley.

In the first place, sketch "F" on the chart shows the correct way to increase the diameter of a pulley when a belt is on it. It is the same as measuring from "middle to middle" of belt so far as the result is concerned, but, more convenient.

Unless the belt thickness is considered you may sometimes get some surprising results, and you may say that "there is no such



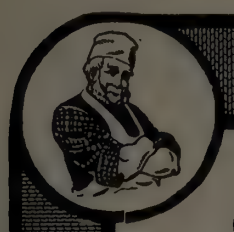
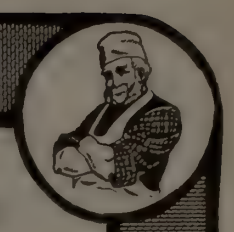
thing" as slip in your belt, and you may condemn this chart as being a "false alarm." So make measurements accurately if you want accurate results.

The best way to explain the chart is to give an example, so we will take this exaggerated case: The diameter of a driving pulley is 48 inches, and it runs at a speed of 200 r.p.m. (note the dotted line drawn from 48, column A, to column E, and note where it intersects column D. The point of intersection with column D is what we are after). Next, the diameter of the driven pulley is 24 inches, and it runs at a measured speed of 300 r.p.m. (Note, again, the dotted line between these two points and the intersection between 5 and 6 in column D. This point of intersection is what we want).

Roughly, each little space in Column D represents 14 per cent. of belt slip. Since the two points we have located are about two spaces apart the total belt slip is, roughly, 28 per cent. Actually, according to the above formula, the slip is 25 per cent. To get the exact slip on the chart without doing any computing, draw a line from the "upper point" to "0" of either "1B," "2B," or "3B." I have chosen "2B" be cause it is closest to the points of intersection. Note the point of intersection of this latter line with column C, and through that point of intersection and the "lower point" in column D the last straight line is drawn, and it will be found to cut "2B" at 25. The slip, therefore, is 25 per cent.

I have chosen an exaggerated case for the sake of simplicity. A little experience with the chart and you can tell closely "with your eye" whether or not there is any serious slip, remembering that each space in column "O" represents about 14 per cent. slip, a half space 7 per cent. slip, etc.

If the two main lines between columns A and E intersect at the same point in column D, there is no slip. In this example, if we

GOOD FLOUR FOR YOUR CAMP

The best economy in the world is to buy that commodity which, being good, is the cheapest value on the market. This simply means, when choosing flour, don't be altogether influenced by price, but get a wholesome, nourishing, uniform product that will bake up into appetizing food. That is why we recommend for your camp

Cream of the West Flour

The Hard Wheat Flour that is guaranteed for Bread

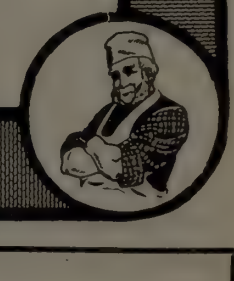
For years this flour has been held up as an excellent example of the "pure food" idea, and we are jealous in guarding that reputation. Your men will readily respond to your efforts in giving them good food with more work and cheerful dispositions, which means a big money saving to you.

Our horse feed is distinctly good. Bullrush Crushed Oats (best grade Western oats) and Geneva Feed (crushed oats and cracked corn) are both worthy of attention for your stable.

THE CAMPBELL FLOUR MILLS CO., LIMITED

TORONTO PETERBORO

MONTREAL—W. J. McAuley, B-24 Board of Trade Bldg.
QUEBEC—Paul F. Gauvreau, 84 St. Peter St.
HALIFAX—C. E. Chote & Co.
Special Representative—H. E. Rains, 112 Lawrence St.



Jenckes Boilers

We make a Specialty of

Horizontal Tubular Boilers

for Saw Mill work. They are made in an extensive plant built and equipped for the purpose with all modern appliances.

The three prime elements of Design, Material and Workmanship receive equal and most painstaking attention, ensuring a boiler warranted to give perfect satisfaction and long service.

The Jenckes Machine Co., Limited

Sherbrooke Montreal Cobalt So. Porcupine St. Catharines Toronto Vancouver Nelson

remove all belt slip the driven pulley will run at a speed of 400 r.p.m., the lines between columns A and E will both intersect the same point in column D, and "1B," "2B," and "3B" become useless, of course.

In using this chart you don't have to really "draw lines," at all. Just lay a straight edge across or stretch a fine thread across and note the points of intersection.

It will be noted that the range of the chart is very wide; from 3-inch pulley diameter to 300 inches, and from 10 r.p.m. to 10,000 r.p.m. It therefore will easily cover all ordinary cases.

Widely Known Lumber Trade Journalist Passes Away

J. D. Crary, founder, publisher and managing director of the New York Lumber Trade Journal, and one of the founders of the New York Lumber Trade Association thirty years ago, and its secretary, died on November 1st, at his residence, in Brooklyn, N.Y., after a long illness. The late Mr. Crary was a man of signal ability, and left the impress of his personality upon the lumber trade, with which he was closely associated almost throughout his whole life.

Who Knows About This?

Prince Rupert, B.C.

Editor Canada Lumberman:—

We would like to know if there is a book of any description published for the purpose of estimating the amount of lumber used in boxes of various sizes. If you can give us the name of the publishers we will greatly appreciate it.—Georgetown Saw Mill Co., Ltd.

Are the Forests Worth Protecting

As long as Pacific Coast lumbermen are willing to sell these great yellow fir trees, that took 400 years to grow, for $9 at the mill, I don't see why we should bother to prevent forest fires. . . . The retail price of fir lumber in Australia is $56 a thousand. A difference of $2 a thousand here at the mill they would not notice or bother to change their retail price for. The only change they ever made in their retail prices is to advance or lower them $6 a thousand.—H. R. MacMillan, before the Western Forestry and Conservation Association.

Lumber companies operating in the woods of Northern Minnesota are preparing for one of the most active seasons in the history of that territory. It is expected that approximately 500,000,000 feet of lumber will be cut this fall by nine lumber companies, who will employ more than 10,000 lumberjacks.

Great Britain's Imports of Wood Goods

Imports into the United Kingdom during the nine months ending September, 1915 and 1916, included the following:

	1915.		1916.	
	Quantity. Cwt.	Value. £	Quantity. Cwt.	Value. £
Wood and timber (hewn)—	Loads.		Loads.	
Russia	17,436	47,199	23,594	124,023
Sweden	10,805	50,754	17,405	90,229
Norway	21,388	75,893	5,876	34,457
United States	138,159	893,583	84,488	827,779
British East Indies	26,672	514,750	16,310	363,565
Canada	23,070	167,616	9,800	133,797
Other countries	10,990	147,497	10,852	175,760
Total	248,520	1,897,292	168,325	1,749,610
Wood and timber (sawn or split) fir—				
Russia	411,968	1,937,936	372,976	2,706,581
Sweden	1,130,299	4,922,754	959,294	6,742,086
Norway	281,315	1,268,040	238,585	1,784,732
United States	237,760	1,204,194	193,215	1,818,907
Canada	794,990	3,551,017	585,820	4,609,853
Other countries	8,286	60,025	2,841	20,377
Total	2,864,618	12,943,966	2,352,731	17,682,536
Wood and timber (sawn or split, planed or dressed) unenumerated—				
United States	21,166	185,012	10,491	120,306
Canada	38,102	195,189	23,147	211,753
Other countries	12,211	64,484	14,744	89,837
Total	71,479	444,685	48,382	421,896

FOR SALE

One Used Lombard Steam Log Hauler

Where a haul to stream or mill is five miles or more this sturdy machine will pay its way in a short time. Substantially built. Able and willing to haul a tremendous weight over uneven ground.

We have a machine that has completed the hauling for one customer, which we offer for immediate shipment at a special price.

Write Us Today

The Jenckes Machine Co., Limited

SHERBROOKE, QUE.

Montreal Office—E. T. Bank Building
Toronto Office—Traders Bank Bldg.
Vancouver Office—Exchange Bldg.
Ontario Factory at St. Catharines
Warehouses carrying stocks—Cobalt, South Porcupine, and Vancouver.
Western Agents—Canadian Western Foundry & Supply Co., Calgary and Edmonton, Alta.

Others May Imitate But None Can Excel

Smart-Woods Eiderdown Sleeping Robes and Bags

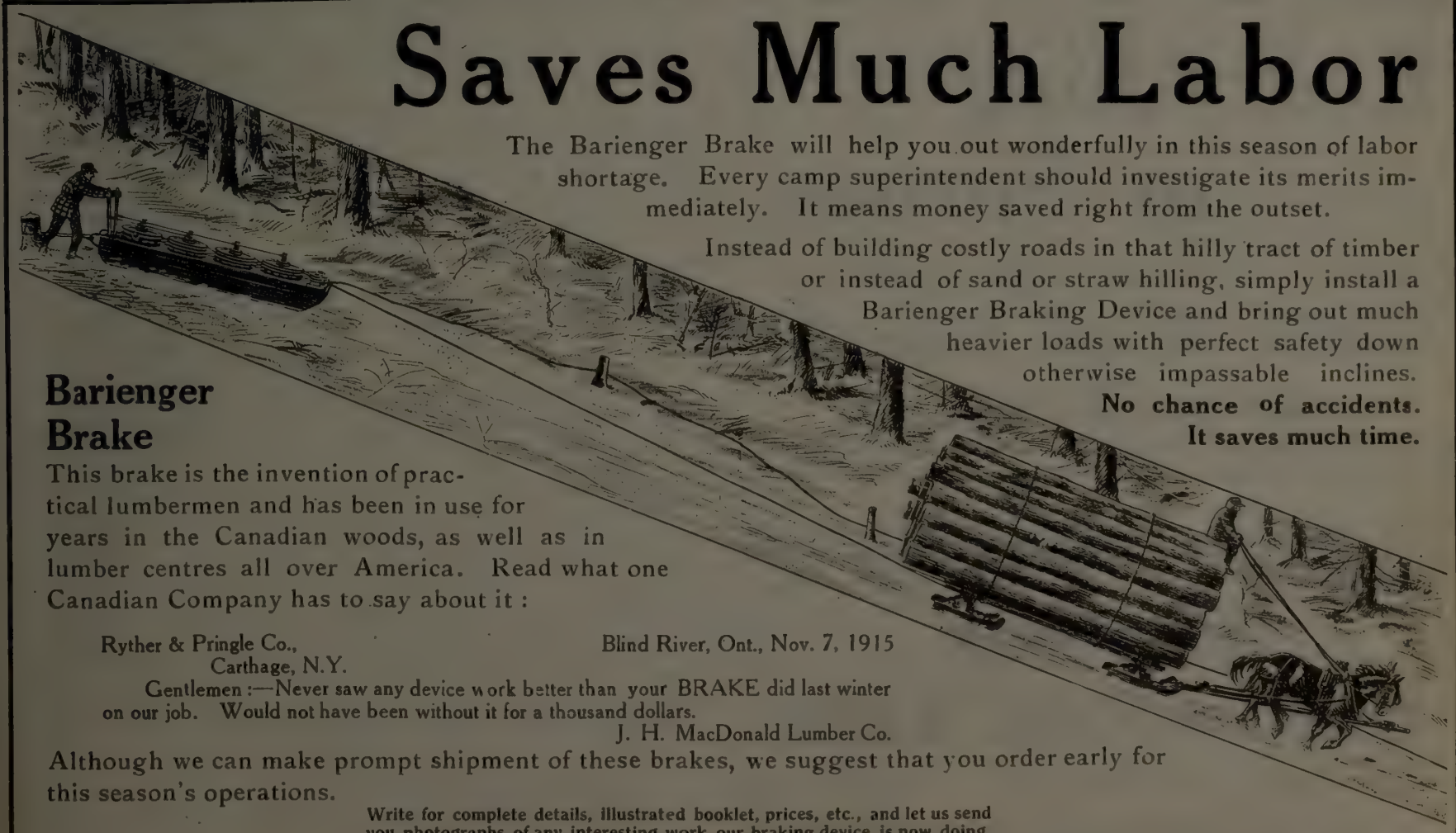
There's a Reason — Send for a Sample and Learn the Whys and Wherefores for Yourself. A Post Card is all

Addressed To your Nearest City

Smart-Woods LIMITED

OTTAWA, TORONTO, MONTREAL, WINNIPEG.

Saves Much Labor



The Barienger Brake will help you out wonderfully in this season of labor shortage. Every camp superintendent should investigate its merits immediately. It means money saved right from the outset.

Instead of building costly roads in that hilly tract of timber or instead of sand or straw hilling, simply install a Barienger Braking Device and bring out much heavier loads with perfect safety down otherwise impassable inclines.

No chance of accidents.

It saves much time.

Barienger Brake

This brake is the invention of practical lumbermen and has been in use for years in the Canadian woods, as well as in lumber centres all over America. Read what one Canadian Company has to say about it :

Ryther & Pringle Co., Carthage, N.Y.

Blind River, Ont., Nov. 7, 1915

Gentlemen :—Never saw any device work better than your BRAKE did last winter on our job. Would not have been without it for a thousand dollars.

J. H. MacDonald Lumber Co.

Although we can make prompt shipment of these brakes, we suggest that you order early for this season's operations.

Write for complete details, illustrated booklet, prices, etc., and let us send you photographs of any interesting work our braking device is now doing.

Ryther & Pringle Company, - Carthage, N. Y.

THE EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS-DIEU-RIEN
MONTREAL - Canada

Head Office at Montreal.

SPRUCE
ROUGH or DRESSED

Saw Mills at
MONT LAURIER, QUE.
STE. MARGUERITE, QUE.

Dressing Mills at
ST. JEROME, QUE.

"Sound Wormy White Pine"

We have accumulated the following Wormy Pine, which we offer at special prices. It is a regular grade of Mill Run except that it is wormy.

2 cars 3 x 6 and wider 10 to 16 feet.
1 car 4 x 5 " " 10 to 16 feet.
3 cars 4 x 6 " " 10 to 16 feet.
3 cars 4 x 8 " " 10 to 16 feet.
2 cars 4 x 10 " " 10 to 16 feet.
1 car 4 x 12 " " 10 to 16 feet.
2 cars 6 x 6 " " 10 to 16 feet.
1 car 8 x 8 " " 10 to 16 feet.
Also some 2 inch.

Write or phone for prices.

Herman H. Hettler Lumber Co.
Midland, Ont.

Everything in Spruce

Dressed and in the Rough

Campbell, MacLaurin Lumber Co.
Limited
Board of Trade Building, MONTREAL

Pine, Spruce Hemlock Hardwoods, Lath

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber. Lath and Shingles
Offices—500 McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

The Hendun Lumber Company, Ltd., has obtained a charter, with head office at Timmins, Ont.

Work has started on the erection of a planing mill for Hector McLean Orillia, Ont. The building will be one storey, 50 x 90, frame construction, brick boiler house. The owner will be in the market for engine, boiler, and planing mill equipment.

Reports from Port Arthur, Ont., state that a large wood pulp mill will be erected there in the near future. It is stated that the plant will have a capacity of 150 tons of wood pulp per day, in three units of 50 tons each, and that the cost of the plant will be $1,000,000. It will be located in the north end of the city, at Bare Point, where the municipality has given the company 100 acres of land. A large paper mill will be added at a later date.

Heavy rains have resulted in raising the level of the Ottawa River to such an extent that the two pulp mills at the J. R. Booth plant, which were closed down some time ago because of low water, are running again and giving employment to about 800 men. The rain has also swelled the Gatineau River, and thousands of logs which were stranded on sandbars are passing down to the Gilmour and Hughson mills, which have been reopened.

Dominion Hardwoods. Ltd., manufacturers of hardwood specialties, Deseronto, Ont., who recently lost their plant by fire are building a complete factory for the manufacture of broom handles, pail handles, tie plugs, fish boxes, and fish floats. The plant will be modern in every respect, equipped with the latest machinery, and will be in operation about the end of November. The building and equipment has cost between $50,000 and $60,000. The broom handle plant will have a capacity of from 35,000 to 40,000 handles per day. The pail handle plant will have a capacity of 100,000 handles per day. The company are very favorably situated in regard to timber, having an assured supply from option and otherwise for twenty years.

An agreement has been signed by the Ontario Government granting to Mr. J. A. McAndrew, of Toronto, the right to cut timber from 180 square miles of unoccupied lands in the Townships of Hanna, Reaume, Mann, St. John, and Aurora, in the District of Temiskaming, upon condition that large mills be erected within the territory for the manufacture and treatment of timber and wood and wood products, giving employment to 100 hands. The lease of this area was decided upon by the Government early in 1914, when tenders were invited, but Mr. McAndrew's tender was not approved until October 14, 1916. A joint stock company will be incorporated, with subscribed capital of $500,000, to erect the mills. Exclusive of sawmills, the expenditure upon woodworking plants must be $100,000, according to the agreement, and the daily output of these plants shall be the product of 75,000 cords of wood. The lease is for 21 years. It is likely that the plant will be erected in Cochrane or at a point on the Frederickhouse River. A rossing plant will also be erected for the treatment of pulpwood. Articles to be manufactured will include box shooks, cigar boxes, laths, broom and pick handles, wooden spools, doors and sash, and all wood accessories. Plans for the woodworking plant are now being prepared.

Eastern Canada

The reorganization of the Brompton Falls Pulp and Paper Company has been completed.

The Bury Pulpwood and Lumber Company, Hereford, P.Q., have been registered. Those interested are S. E. Watts and T. H. Van Dyke.

George A. Chappell and Claude C. Chappell, Amherst, N.S., have purchased from W. F. Beatty a tract of timberland at Second River, Colchester County, N.S., and are starting to operate upon it immediately.

Edmond Charlebois, whose woodworking factory at Lachute, P.Q., was recently destroyed by fire, has commenced to erect a new building, which will be of brick construction and much larger than the former one.

Plans have been completed for increasing the output of the St. Lawrence Pulp and Lumber Corporation, a subsidiary of the North American Pulp and Paper Company, to 75,000 tons annually. Its present capacity is 37,500 tons of sulphite pulp.

The sash and door factory belonging to Ed. Charbonneau, at Lachute, P.Q., was recently destroyed by fire. The loss is estimated at $15,000, with some insurance. The owner will probably rebuild and will be in the market for machinery for steam power.

The sash and door factory belonging to Adelard Paquette, St. Hughes, P.Q., was recently destroyed by fire. The loss is estimated at $15,000, with $20,000 and the insurance at $10,000. The owner will rebuild, and will probably require machinery for steam power.

T. H. Somerville, St. John, N.B., and H. J. White, Moncton, N.B., have been appointed inspectors in connection with the disposal of the property of the Thomas B. Calhoun Lumber Company, St. John, N.B., on behalf of the creditors. J. F. H. Teed, St. John, N.B., has been appointed assignee. The

Calhouns formerly operated mills at Calhoun, Westmoreland County, and at Gaspe, P.Q. They also operated extensively in Nova Scotia.

The Chicoutimi Pulp Company, a subsidiary of the North American Pulp and Paper Company, will increase its pulp mill capacity to 130,000 tons annually. Its present capacity is 80,000 tons of mechanical pulp. This plant is one of the largest mechanical pulp exporting plants in America.

La Compagnie d'Usinage et Garage de Chicoutimi has been incorporated, with head office at Chicoutimi, P.Q., and capital stock of $20,000, to carry on business as dealers in lumber, etc. Those interested are A. Bilodeau, W. Dufour, H. Bouchard, L. Hudon, and A. Bilodeau, all of Chicoutimi.

The Nashwaak Pulp and Paper Company, which is reported to have taken over the business of the Partington Pulp and Paper Company, St. John, N.B., is preparing to make an extensive cut of logs upon the Nashwaak River during the coming winter. It is estimated that they will take out 20,000,000 feet. This will be an increase of 4,000,000 feet over last winters output.

Savoie & Co., Manseau, P.Q., have recently added several new machines to their dressing mill equipment. They have also increased the power plant in this mill, and now handle on an average two carloads of lumber for dressing in transit daily. The company have also opened two ranges, seven miles long, to colonization, and have built a good road in the middle of the district. They are building a sawmill to manufacture lumber and timber required by settlers, and report that they have already had considerable success, having sold sixty 80-acre lots to settlers.

Western Canada

The Dominion and Western Lumber Company, Ltd., Saskatoon Sask., have been registered.

The shingle mill belonging to P. W. Fau Vel, at Burnaby, B.C., was recently destroyed by fire.

The sawmill belonging to Sidney Smith, Matsqui, B.C., which was recently destroyed by fire, is being rebuilt.

S. D. Trethewey has sold his mill and other property at Clayburn, B.C., to Messrs. Oliver, of Vancouver, and Witson and Sweeney, of Clayburn.

A report from Prince Rupert, B.C., states that a project is under way for developing pulpwood areas on Queen Charlotte Island, to be handled by a mill on the islands, with headquarters at Prince Rupert.

Burrard Sawmills, Ltd., has been incorporated, with head office at Vancouver, B.C., and capital stock of $25,000, to carry on business as loggers, sawmill and shingle mill proprietors, lumber manufacturers, etc.

The Coast Central Mill Company, Ltd., has been incorporated with head office at New Westminster, B.C., and capital stock of $20,000, to carry on business as dealers in and manufacturers of timber, logs, lumber, shingles, etc.

The Fraser River Shingle Company Ltd., has been incorporated, with head office at Vancouver, B.C., and capital stock of $10,000, to carry on business as shingle and timber merchants and as dealers in shingles, logs, timber, shingle bolts, lumber, wood, etc.

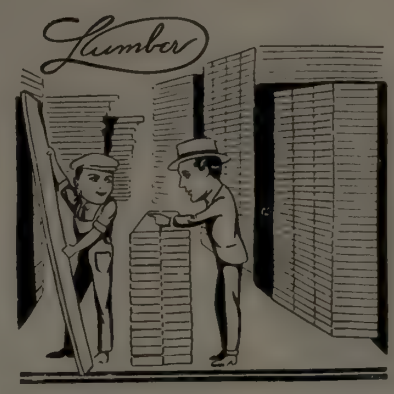
Sealed tenders are being received by the Minister of Lands for British Columbia until the 29th day of November, 1916, for the purchase of license X603, to cut 3,247,130 feet of yellow pine and fir on an area adjoining lot 2089, Trout Creek, Kamloops District. Two years will be allowed for the removal of the timber.

Sealed tenders are being received by the Minister of Lands for British Columbia until the 22nd day of November, 1916, for the purchase of license X695, to cut 11,180 cords of cedar shingle bolts on an area adjoining lot 14, Olson Lake, New Westminster District. Two years will be allowed for the removal of the timber.

A scarcity of logs has resulted in the closing down of the sawmill of the Columbia River Lumber Company, Ltd., at Golden, B.C. The log shortage is the outcome of the difficulty in securing labor in the logging camps. The total cut during the four and a half months' operation at the mill this year has been 20,500,000 feet. If it had not been for the early closing and the time during floods in the summer the output for the season would have been about 35,000,000 feet.

Timber inspector George-D. McKay reports that if the supply of labor keeps up logging operations on the British Columbia coast will probably be maintained all winter. The logging output during October scaled over 70,000,000 feet in the Vancouver district. Very few mills have any stocks of logs in their booming grounds. Nearly all of them are living on a hand-to-mouth basis, using up the logs as rapidly as they arrive. However, there is a great labor shortage, and some of the camps may be compelled to close.

A recent report from New Orleans, La., states that the British Admiralty will furnish a number of vessels for the shipment of a portion of 30,000,000 feet of Southern yellow pitch pine which is on order for Europe. A large amount of this will go to the British Government, and is being sent forward by the Standard Export Lumber Company of New Orleans. The shipments will be made from Gulfport, Miss., and Beaumont, Texas, by January 1st. One steamer carrying 3,000,000 feet of the order has already sailed from Gulfport.



In Our Vast Piles of Lumber

is just the kind and grade you need for your work. And what's more, it's all selected stock, thoroughly kiln-dried—no waste to our lumber. Tell us your wants and let us estimate. You will be pleased with the quality and price.

The McLennan Lumber Co.
LIMITED
Wholesale and Retail
21 Dorchester Street W. - MONTREAL, QUE.
Telephone Main 8656. Private exchange to all departments

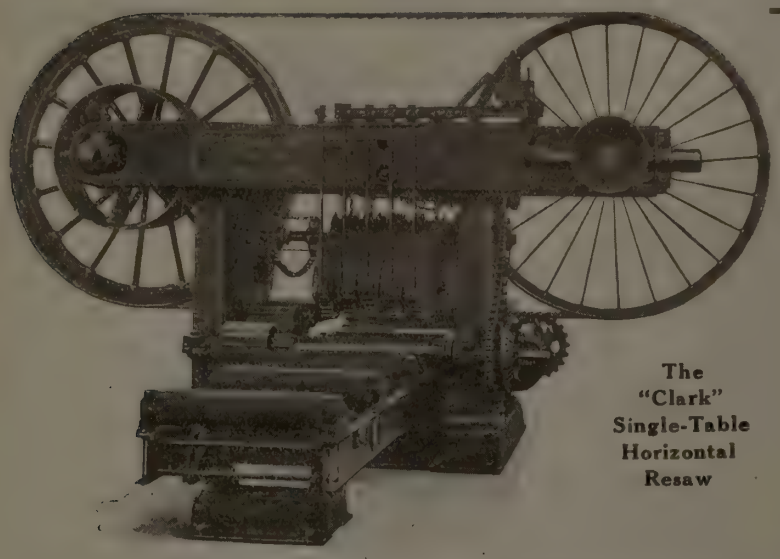
H. BOURGOUIN
Dominion Express Bldg., 145 St. James St., Montreal
WHOLESALE LUMBER AND TIMBER
Dressed and Rough
White and Red Pine, Spruce, Hemlock, Banksian Pine, Birch, Maple, Dimension Cedar, B. C. Fir, Yellow Pine, Railway Ties, Fence Posts, etc.
Prompt shipment. Satisfactory stock. Good service Write for Prices.
A. F. B. AUSTIN, Manager

Your Blower System

If you contemplate installation of a new blower system or an extension of your present one, write us, as we have a unique proposition to offer. There is no heating, clogging or shaking with our system.

Prices on application

The Toronto Blower Co.
156 Duke St., Toronto



The "Clark" Single-Table Horizontal Resaw

Ever Consider Why These Machines are so Popular?

The possibility for fast and accurate production—is the answer

Some of the special features of the "Clark" Horizontal Resaw are—

The method of returning stock through machine, eliminating expensive return system—The use of the lower part of saw blade, this means the resaw sets on mill floor where every part is accessible. Entire table twenty-four feet long raises and lowers—Elimination of sawdust around wheels as all dust and bark passes through frame to conveyor below. Hand or Steam Set-works—Range of thickness from ½ in. to 14 in., made in two sizes, 66 to 84 inches.

Many other special features are described in our Resaw catalog. Mailed on request.

We will introduce Jan. 1st our New Portable Band Mill complete. If interested write us for Catalogue.

BUILT BY

CLARK BROS. CO., Olean, N.Y., U.S.A.

Garlock Packings

Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

Style No. 777

Style No. 150

The Garlock Packing Co.

Hamilton, Ontario

Branches: Calgary, Montreal

Branches: Toronto, Winnipeg

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

"Brazel Patent" SNOW PLOWS

Known in every Camp from the Atlantic to the Pacific as the most satisfactory Snow Plow made.

Combination Model, Lumberman's Snow Plow, can be used either with or without Rut Cutter.

One man to operate. Adjusting wheels close together make change for light or heavy work in an instant. Wings placed to throw snow 9 ft. wider than sleigh track or narrower if desired. Height of mouldboards prevent snow falling back on track. BRAZEL PLOWS cut 6 in. wider than logging sleighs, roll snow outside track and away from roadway. Cut off knolls, fill up holes and leave a perfectly level road. Cut off dirt and manure heaps from an ice road leaving a clean roadbed. Roll up and push entirely away from the road, 12 inches of loose snow each time the plow passes over.

THE BATEMAN-WILKINSON CO., LIMITED
300 Symington Ave., Toronto, Can.

Successors to THE WILKINSON PLOW CO., LIMITED
Catalogue and prices on application.

TORONTO, CANADA

Made in Canada

"AMPHIBIA"

for 40 Years

"AMPHIBIA"

"Leather like gold has no substitute."

The Sawmill Belt

It requires something extraordinary in belting to stand up to the rough, wet and oily service of the saw mill. Amphibia, "The Saw mill Belt," is made for this kind of work. The leather used is specially tanned from choice hides. It is waterproof as a leather, and all the materials used in making Amphibia belting are also waterproof.

Try a sample run of Amphibia belting on the toughest run in your mill—the result will make you our customer.

Sadler & Haworth

Tanners and Manufacturers *Established 1876*

FOR 40 YEARS TANNERS AND MANUFACTURERS OF THE BEST LEATHER BELTS

MONTREAL, 511 William Street

TORONTO 38 Wellington St. East

ST. JOHN 149 Prince William St.

WINNIPEG Galt Building

VANCOUVER 107-111 Water St.

How Is *Your* Work Going?

"Sit down, Thompson; how's the work going?"

"It isn't going—it's ***dragging***."

"What's the matter—men sore?"

"No! There s no complaint. Grub is good; men seem willing enough—but they don't put their heart into the work."

"Say, Thompson, why don't you get real beds for the men, ***like the one I'm sitting on?***"

"Holy mackerel! I ain't running a Ritz-Carlton Hotel at my camp."

"I don't mean brass beds and Ostermoor mattresses; I mean sanitary steel bunks ***with real springs***. They will be money in your pocket."

"You mean money ***out*** of my pocket."

"No, sir! The trouble with your men is lack of rest. They don't get a good night's rest on those hard, wooden bunks of yours that can't possibly be kept free from vermin; they can't do a day's work. Those old bunks are costing you a pile of money, because they are keeping the men from doing their best work.

"Tell you what, Thompson, rip out the old wooden shelves that your men are trying to sleep on—put in ***'Alaska' Sanitary Steel Bunks***—and you'll find that your men will turn out about 25% more work. I proved it myself, and so did Miller." (***So have many others.***)

Alaska Sanitary Steel Bunks Cost More, But are the Cheapest in the End.
It's Not Too Late to Equip *Your* Camp With Them. May We Quote You?

The Parkhill Manufacturing Co., Limited

MONTREAL — WINNIPEG
GUARANTEED ALASKA BEDDING
TRADE MARK REGISTERED

Successors to
THE ALASKA FEATHER & DOWN CO., LIMITED
Makers of Steel Bunks, Bedsteads and Bedding
400 St. Ambroise St. :-: MONTREAL
"ALASKA on an article means HIGH-GRADE EVERY PARTICLE"

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa, Deputy Minister.
December 20th, 1912.

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	27 00	28 00
1 x 6 common and dressing ...		28 00
1 x 8 common and dressing ...	27 00	29 00
1 x 10 common and dressing ..	31 00	32 00
1 x 12 common and dressing ..	32 00	34 00
1 x 10 and 12 mill cull stocks		23 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		28 00
5/4 and 6/4 x 5 m.r., m.c. out		28 00
5/4 and 6/4 x 6 m.r., m.c. out		28 00
5/4 and 6/4 x 8 m.r., m.c. out		29 00
5/4 and 6/4 x 10 m.r., m.c. out		32 00
5/4 and 6/4 x 12 m.r., m.c. out		34 00
2 x 10 common		29 00
2 and 3 x 12 common		30 00
1 x 8 box and common	23 50	24 50
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings	25 00	27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		22 00
2-in. mill run Norway		23 00
Norway, c and cf. 1-in.		32 00
Norway, c. and cf. 1½-in.		32 00
Norway, c. and cf. 2-in.		32 00
Spruce mill run 1-in. and 2-in.		23 00
Spruce mill culls		18 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ...		17 00
1 x 6-in. x 9 to 16 ft.		21 00
1 x 8 in. x 9 to 16 ft.		21 00
1 x 10 and 12 in. x 9 to 16 ft.		23 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		19 00
1-in. No. 2, 6-ft. to 16-ft. ...		16 00
2 x 4 to 12, 10 and 16 ft. ..		20 00
2 x 4 to 12-in., 12 and 14 ft....		20 00
2 x 4 to 12-in., 18 ft.		22 00
2 x 4 to 12-in., 20 ft.		24 00
2 x 4 to 12-in., 22 ft.		25 00
2 x 4 to 12-in., 24 ft.		26 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		16 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet: 8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain..		31 50
Fir flooring, 1 x 4, edge grain..		35 00
Fir flooring, 1 x 4, flat grain ..		26 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 35
XXXX 6 to 2 3/16-in.		3 45
XXXXX		3 60

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	40 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1st and 2nds, 4/4	44 00
Birch, No. 1 com, and bet., 4/4	35 00
Birch, 1st and 2nds, 6/4 and 8/4	46 00
Birch, 1st and 2nds, 10/4 and 12/4..	60 00
Birch, 1st and 2nds, 16/4	62 00
Basswood, 1sts and 2nds, 4/4	42 00
Basswood, No. 1 com. and bet., 4/4..	35 00
Basswood, No. 2 and 3, common	18 50
Basswood, 6/4 and 8/4, 1sts and 2nds.	45 00
Basswood, 6/4 and 8/4, com. and bet.	38 00
Basswood, 4/4, No. 2 com. and bet...	30 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft Elm, No. 1 com. and bet., 4/4	33 00
Soft elm, No. 2 and 3 common	17 50
Soft elm, 6/4 and 8/4, 1 and 2	42 00
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	37 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1st and 2nds, 4/4	40 00
Hard Maple, common and better, 4/4	33 00
Hard maple, 12/4 & 16/4, 1sts and 2nds	50 00
Red oak, plain 1st and 2nds, 4/4 ...	60 00
Red oak, plain, No. 1 com., 4/4	42 00
Red oak, plain No. 2 com. 4/4.....	32 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain 1sts and 2nds, 4/4	60 00
White oak, plain, No. 1 com., 4/4...	42 00
White oak, plain, No. 2 com., 4/4....	32 00
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	60 00
Red and White oak, plain, No. 1 com. 5/4 and 6/4	45 00
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00
Red and White oak, plain, 1sts and 2nds, 8/4	70 00
Red and White oak, plain, No. 1 com. 8/4	50 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00
White oak, ¼ cut No. 1 common	57 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$52 00	54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ...	29 00	30 00
Pine, No. 1 dressing shorts ...	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ...		24 00
Pine, 1-in. x 5-in. s.c. strips ...		25 00
Pine, 1-in. x 6-in. s.c. strips ...		27 00
Pine, 1-in. x 7-in., s.c. strips ...	24 00	25 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	27 00	28 00
Pine, 1-in. x 10-in. M.R.	28 00	29 00
Pine, s.c. sidings, 1½ and 2-in.	30 00	32 00
Pine, s.c. strips 1-in.	24 00	25 00
1¼, 1½ and 2-in.	26 00	28 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00	22 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	18 00	19 00
1" x 3", 12'-16'	21 00	22 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	22 00	24 00
Pine, mill culls stock, 1 x 12 ..		22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16' ...	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	20 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	28 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet.....	80	85
According to average and quality, 30 to 35 feet	50	60

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00

Birch Planks

1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00

Cuts and Better

4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00

No. 1 Cuts

1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00

No. 2 Cuts

1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in.. 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide 62 00	65 00

No. 3 Cuts

1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide 43 00	48 00

Common and Dressing Mill Run

1-in. x 4-in.	27 00
1-in. x 5-in.	27 00
1-in. x 6-in.	28 00
1-in. x 8-in.	28 00
1-in. x 10-in.	30 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00

No. 1 Barn

1 inch	33 00	45 00
1¼, 1½ and 2-in.	36 00	45 00
2½ and 3-in.		45 00
4 inch		50 00

No. 2 Barn

1 inch	28 00	36 00
1¼, 1½ and 2-in.	30 00	36 00
2½ and 3-in.		38 00

No. 3 Barn

1 inch	26 00	30 00
No. 1, 1, 1¼, 1½, 2-in.	26 00	30 00

Box

No. 1, 1, 1¼, 1½, 2-in.	22 00	25 00
No. 2, 1¼, 1½, 2-in.	24 00	25 00

Mill Culls

Mill run culls, 1-in.		19 00
1, 1¼, 1½ and 2-in.		20 00
No. 2	17 00	18 00

Lath

No. 1, 32-in. pine	1 85
No. 2, 48-in. pine	4 50
No. 1, 48-in. pine	5 00
No. 3, 48-in. pine	4 00
Hemlock Lath 48 in.	4 00

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	6 ft.	8 ft.	10 ft.	14x16 ft.
S. 1 S. and 1. E.				
2 x 4, 6, 8..	15 00	18 00	21 50	22 50
2 x 10	19 00	19 50	22 50	23 50
2 x 12	19 00	20 00	24 50	24 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	22 50
2 x 4, 10, 18, 20	24 50
2 x 6, 8 to 16	22 50
2 x 8, 8 to 16	22 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	30 50
2 x 10 and 2 x 12; 8-16 ft.	27 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	29 50
2 x 10 and 2 x 12; 24, 36, 28, 30, 32 ft.	31 50

No. 1 Common Boards

4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50

Flooring

4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00

Shiplap—Finished

6 inch	23 00
8, 10 and 12 inch	24 00

Siding

6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00

Lath

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE—ROUGH TIMBER

3 x 6 in,; 8 to 16 ft.	28 10
3 x 8 in.; 8 to 16 ft.	25 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	28 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	30 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	21 50
2 x 4 in.; 12 and 14 ft.	22 50
2 x 4 in.; 10 and 16 ft.	23 50
2 x 4 in.; 18 and 24 ft.	24 50
2 x 4 in.; 22 and 24 ft.	25 50
2 x 4 in.; 26 to 32 ft.	27 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.....	24 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.....	26 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.....	27 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.....	29 00
2 x 14 in.; 10 to 16 ft.	29 00
2 x 14 in.; 18 and 20 ft.	31 00
2 x 14 in.; 22 and 24 ft.	32 00
2 x 14 in.; 26 to 32 ft.	34 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	25 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	26 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	27 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	28 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	30 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	28 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	28 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	29 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	29 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 50
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ...	23 50
No. 2 Shiplap, 6 in.	22 50
No. 2 Shiplap, 8, 10 and 12 in.	23 50

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 85

LATH

Fir lath, ¾ x 1¾ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ¾ x 1½ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00

(Continued on page 56)

THAT BIG ITEM
TIME

Let the Accurate and Unfailing International Compute it

It is one thing to buy a commodity—another thing to get it, and still another matter to be sure of full measure.

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MONTREAL
W. A. Wood, Jr., Sales Agent
Cartier Bldg., Cor. McGill and Notre Dame Sts.
Phone—Main 7025

CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	62 00
No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	44 - 46	28 - 30	14 - 16
5/4 to 8/4	46 - 48	30 - 32	16 - 18

SAP BIRCH

4/4	39 - 41	26 - 28	16 - 18
5/4 and up	39 - 41	26 - 28	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in.		98 00
Selects, 1 to 2 in.		88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	72 00	74 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	48 00	50 00
No. 1, 1 x 10	38 00	40 00
No. 1, 1 x 8	37 00	38 00
No. 2, 1 x 12	38 00	40 00
No. 2, 1 x 10		37 00
No. 2, 1 x 8		35 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	30 00	31 50
No. 3, 1 x 8	30 00	31 00
Canadian spruce boards	25 00	27 00
Spruce, 10 in. dimension	28 00	30 00
Spruce, 12 in. dimension	29 00	31 00
Spruce, 9 in.		29 00
Spruce, 8 in. and under dimen.		28 00
10 and 12 in. random lengths, 10 ft. and up		29 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	22 00	24 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	22 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50	23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled		22 00
1⅝-in. spruce laths		4 25
1½-in. spruce laths	3 80	4 00

New Brunswick Cedar Shingles

Extras	3 50	3 60
Clears		3 30
Second clears	2 30	2 40
Clear whites	2 00	2 20
Extra 1s (Clear whites in)		1 60
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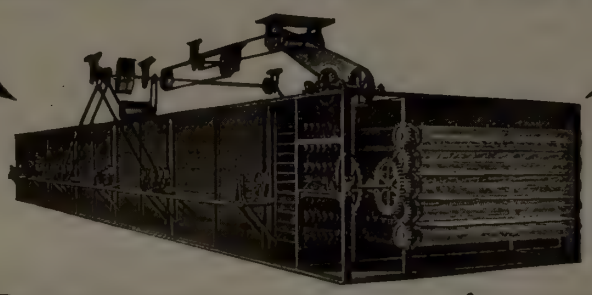

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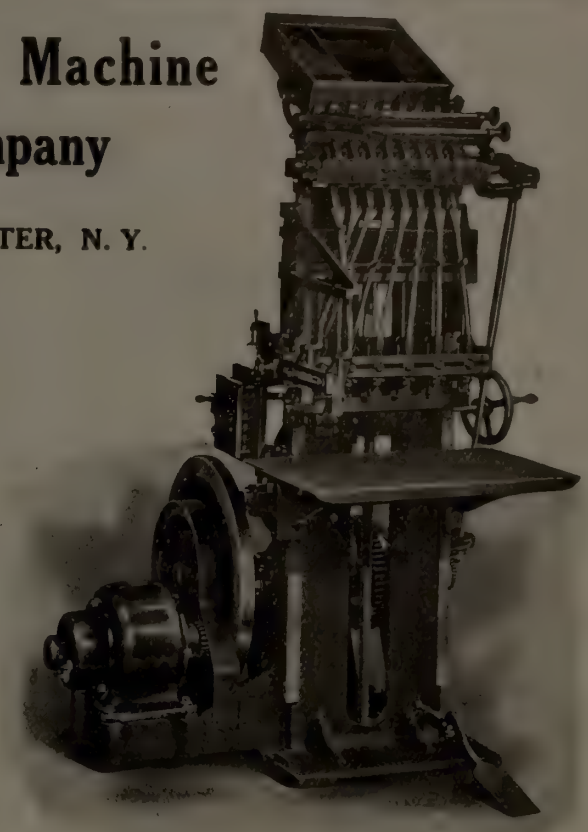

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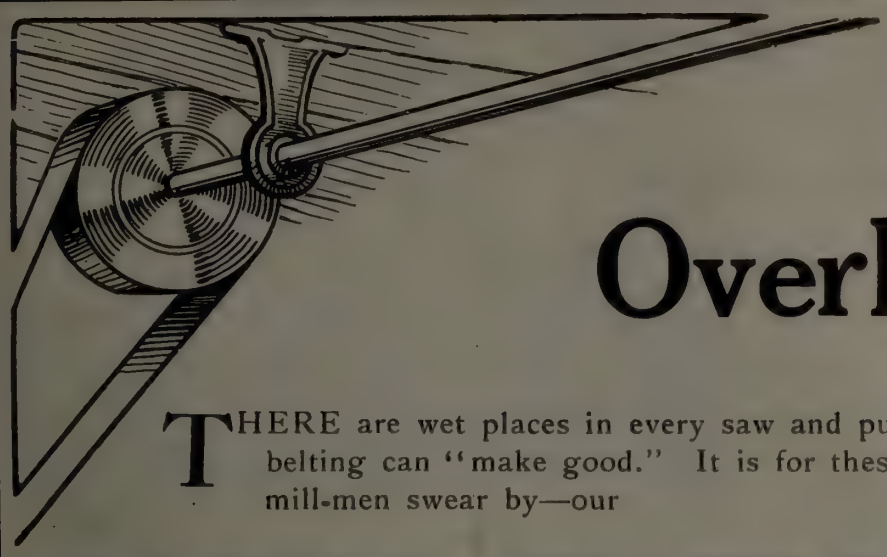

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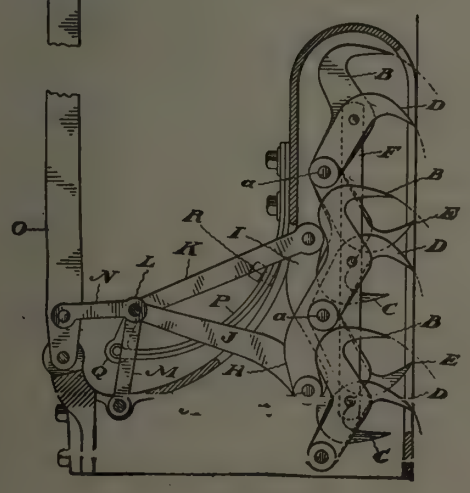

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Canadian Link-Belt Company, Ltd.
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McLennan Foundry & Mach. Works
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Payette & Company, P.
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Fesserton Timber Company
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Heeney, Percy E.
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(Continued on page 64)

The Babbitt Metal that's at the Front in Efficiency and Economy

HARRIS HEAVY PRESSURE

"The Babbitt Metal Without a Fault," is guaranteed to give EXCELLENT SERVICE. It will not crack or squeeze out. It will run cool at any speed. It is copper coated and copper hardened. It is best for all general machinery bearings. Order a box from our nearest factory.

It is Made in Canada. What We Make We Guarantee.

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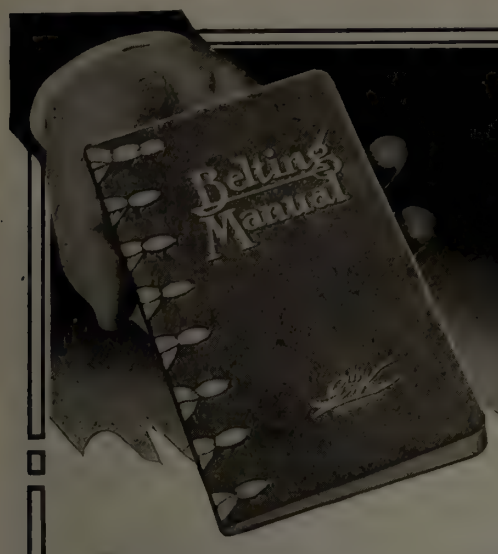

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THE BELTING MANUAL, a hand book of 96 pages, substantially bound, is the most complete and concise book published on belt transmission. It tells

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—scores of other "hows" which are constantly coming up in your Power Transmission problems.

We want to send a copy of this book to every Mill Manager, Superintendent, Purchasing Agent, Foreman, Master Mechanic, Engineer or others who are actually responsible for the selection, installation and up-keep of belting equipment.

If you haven't a Belting Manual write us on your business stationery and a copy will be sent by return mail.

The Graton & Knight Mfg. Co.

Oak Leather Tanners and Belt Makers

Worcester, Mass., U. S. A.

Representatives in Canada:

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Special "CC" Steel Loading Chain

For Lumbermen's Use

Light and Exceedingly Strong

The Columbus Chain Company

Lebanon, Pa. **Columbus, Ohio**

Address Communications to Columbus, Ohio

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IN MANY SUCH FILING ROOMS AS THIS ALOXITE SAW GUMMING WHEELS ARE MAKING RECORDS IN MAKING GOOD

CLEAN, fast, cool, cutting wheels they are, that cut without "protest"—creating no undue heat—cutting without drawing the temper or case hardening the saw—requiring but little dressing and showing long life.

In a Michigan mill, under their conditions, an Aloxite wheel recently worked 129 days—always cutting fast, free and cool and was not dressed once.

Suppose you put in a trial wheel—then ask the filer

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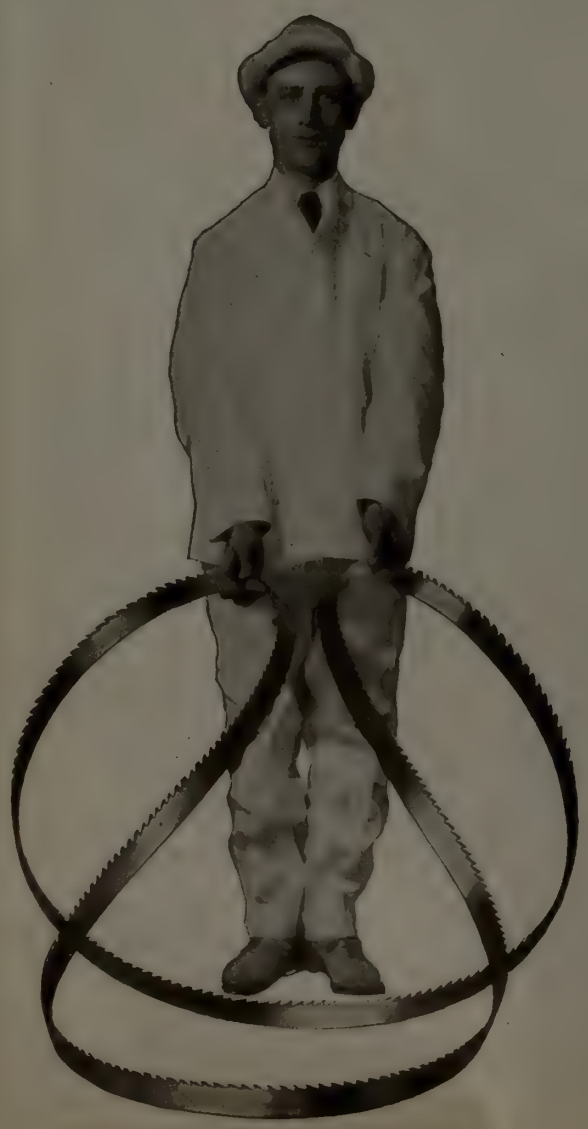

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BAND and RE-SAWS

We have achieved an enviable reputation for supplying SAWS which stand up to their work longer, with less re-fitting than any other SAWS in the world. If there is any doubt in your mind, we stand ready to prove it to you.

A Perfect Saw for Every Purpose

Send for our 248 page book on Saws. The most valuable and interesting Saw book ever published. Tells you just what you want to know about SAWS, MACHINE KNIVES and SAW FITTING TOOLS.

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Makers of Sterling Saws

Factory—HAMILTON, ONT.

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PETERBOROUGH, ONT.

Government Contractors and the largest Manufacturers and Dealers in Canada of

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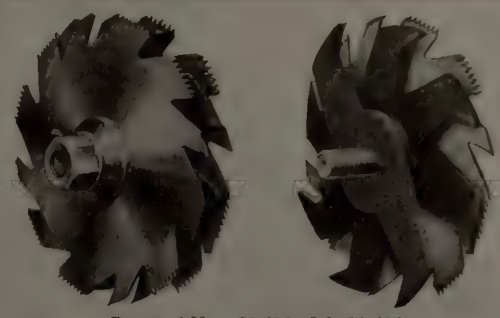

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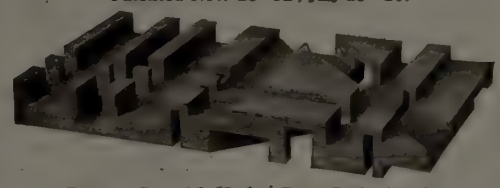

Grooves Cut with Huther Bros. Dado Heads

Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

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1103 University Ave.
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Locomotives on trunk line railroads have the advantage of the best facilities for inspection and repairs.

Logging locomotives face different conditions. They must work day after day in the hardest service, and often in localities where repairs cannot be made without great inconvenience. That is why we build our logging locomotives from interchangeable stock parts. With this system every part must fit every other locomotive of the same size and design, and long delays waiting for duplicate parts are avoided. Interchangeable parts kept on hand at our Works for prompt shipment

MONTREAL LOCOMOTIVE WORKS, LIMITED,

DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. **Get Catalog "H."**

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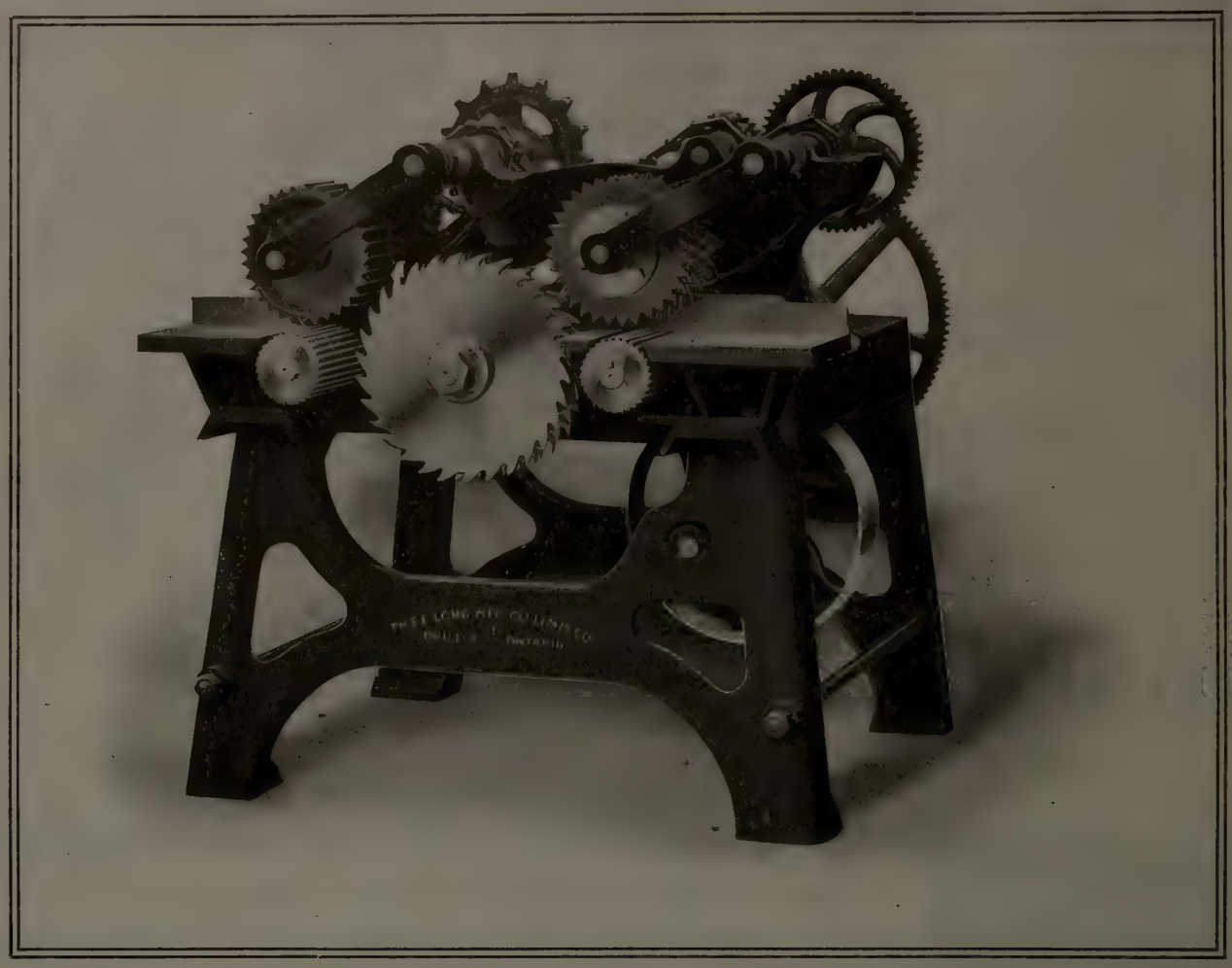

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No. 2 Bolter

This No. 2 Bolter is the ideal machine for the mill of medium production using a single band or circular. It will handle **all** the slabs from such a mill with ease.

The frame is of unit construction, the three saws are of 16 inches diameter adjustable for lath, pickets or slats and the feed rolls are power driven.

For a solid substantial machine of ample capacity you cannot beat our No. 2 Bolter.

Ask us for catalogue.

The E. Long Manufacturing Company, Limited

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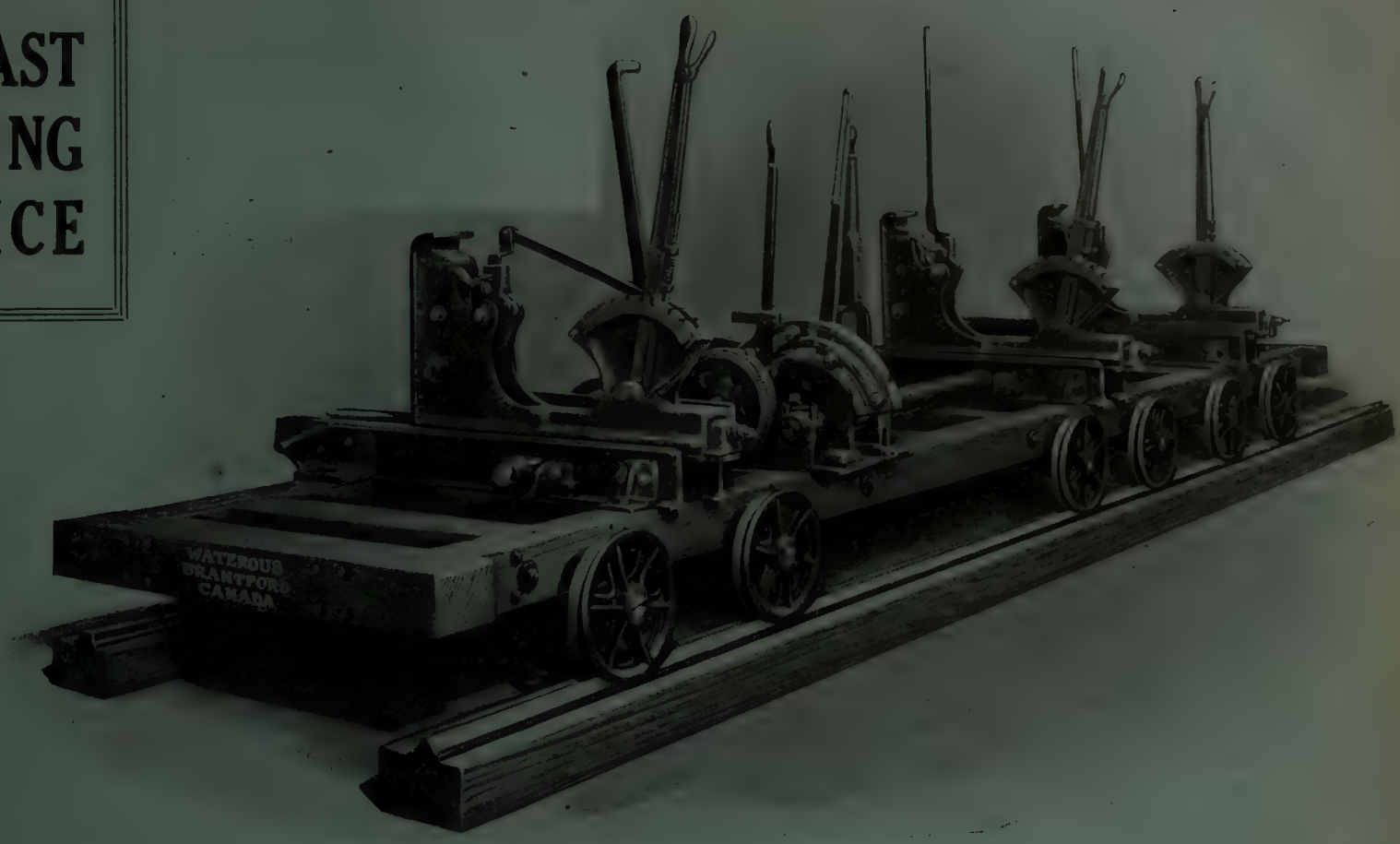
FOR FAST CUTTING SERVICE



Waterous Carriages

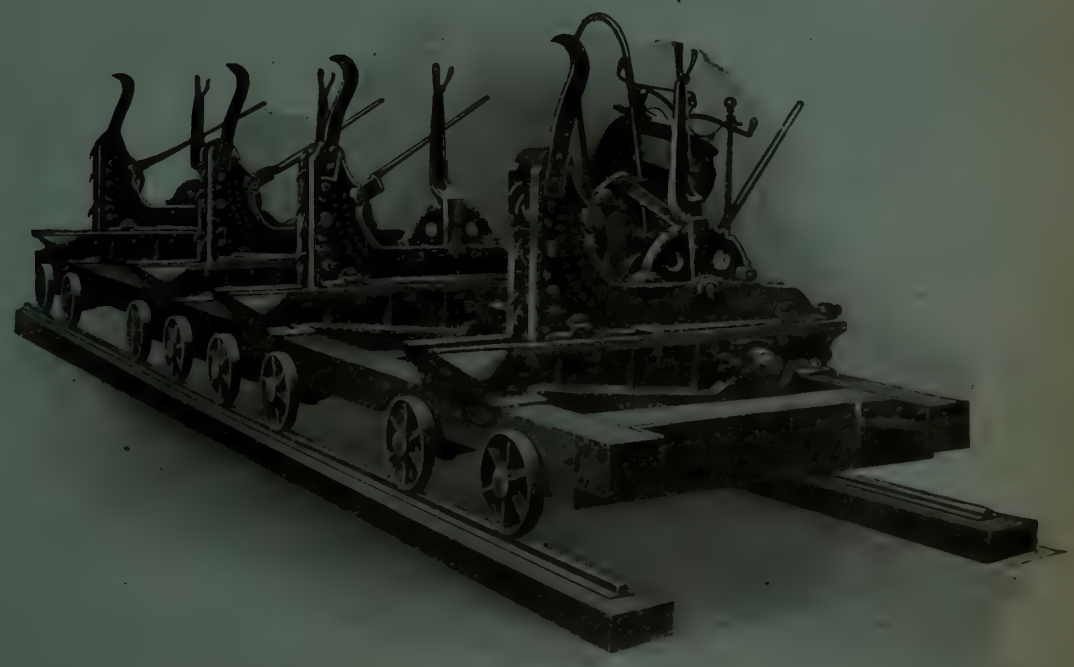
Steel Girder and All-Steel—For Every Size Mill

We build Saw Carriages.

Double Girder Carriages
With log openings of 24 in. to 50 in.

All-Steel Rack Carriages
With opening 36 in. to 72 in.

All Steel-Screw Carriages
With openings 60 in., 72 in., and 84 in.



No matter what size your mill or what kind of logs you are handling we have the right carriage for your use.

Our carriage equipment is of the very best. Waterous Dogs will hold the logs in place to stay; Waterous Setworks are accurate and durable; Waterous strength of construction will hold the carriage up to its work under the rack and wear of severe usage longer than most makes.

Write us for catalogues and prices

The Waterous Engine Works Co., Limited, Brantford, Canada

H. B. Gilmour
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"FROST KING" METAL

$5,000,000.00
worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price 30c per lb., Fort William and East; West of Fort William 35c per lb., delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, 40c per lb.; West of Fort William, 45c, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

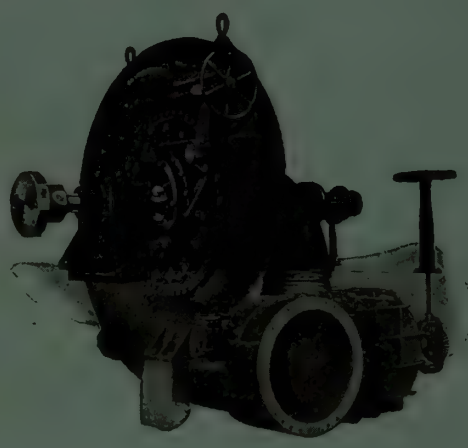
Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

Smith Hydraulic Turbines

for driving the

Paper Mill and Pulp Grinder



This type of equipment specially designed for high head developments.

Our particular claim for these turbines is service, the kind of service that responds to the demand

Promptly and Efficiently

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General Mill Supplies MONTREAL

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The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

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Send for Catalogue and Price List.

Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants.

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Wood Worker

THERE IS NO LOSS

from leaks at pipe joints
where Dart Unions
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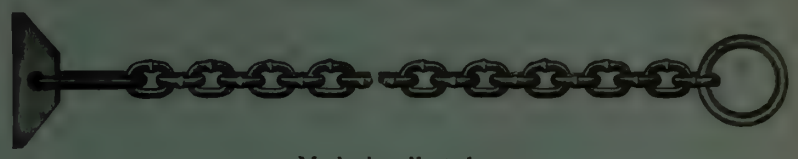
Your Jobber Sells Them.



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Electric-Welded Boom Chain

We also specialize

Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

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YOU CAN SAVE 15 to 50% POWER COST

in your exhaust systems for conveying and removing Shavings, Sawdust, Bark, etc., by using

Canadian Slow Speed Mill Exhausters

Facts are facts. Ask the users—and there are hundreds of them—what they think of the investment. Then you will use a "Canadian" on your next job.

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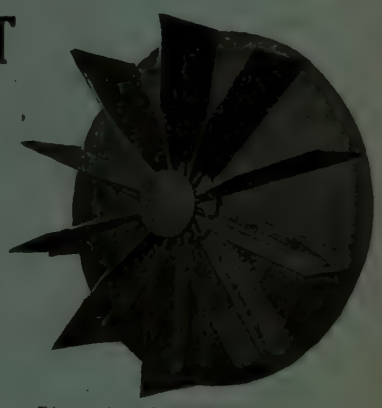

Blast wheel for stringy material.

"TOWER"
HAIR BELTING

Woven from Camel's Hair Yarn

Manufactured and guaranteed by

Turner Bros. Canada Limited
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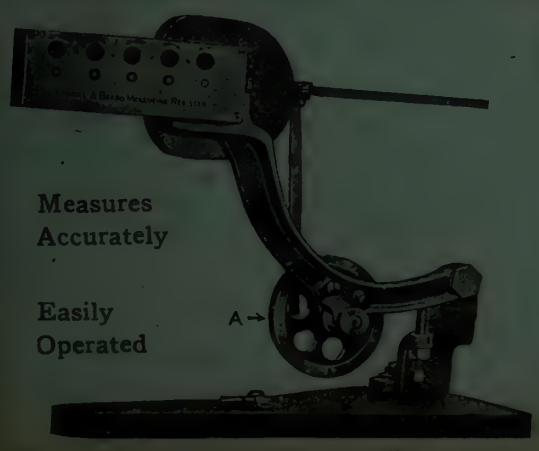
WHEN IS A PUMP NOT A PUMP?

When its efficient service is not to be relied on.
It will pay you to get acquainted with **REAL PUMPS**
as built by

The Smart-Turner Machine Co., Limited
HAMILTON - CANADA



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The Morrison Lumber Measuring Register can be used in the saw mill, planing mill, woodworking plant and retail lumber yard. It can be quickly attached to any machine and is guaranteed to accurately measure every stick as it is fed under the wheel of the register. It saves you money, time and labor.

Write for detailed information.

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J. M. T.
Steam
Specialties

We make a high-grade line including Reducing Pressure Valves, Pop Safety Valves, Injectors, Ejectors, etc., etc.

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using Standard Slotted Plates same as a Flat Screen

For Sulphite, Sulphate, Ground Wood and Paper Stock

We also manufacture

Pulp Grinders

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Pulp Stone Truing Tools

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"Record Improved" Quick Opening Gate Valve

with Patented Clean Outs

Made of Cast Iron, Bronze and Acid Resisting Metal

Specifications and prices on request

Canadian Pulp Mill Machinery Co. Limited

18 Tansley Street, MONTREAL

Bartram Brothers

Limited

Ottawa, Canada

Wholesale Lumber

SPECIAL

Merchantable Spruce

1915 Sawing

2 x 4 x 10/16	122,000 ft.
2 x 5/6 x 10/16	393,000 ft.
2 x 7 x 10/16	76,000 ft.

1916 Sawing

2 x 4 x 10/16	150,708 ft.
2 x 5 x 10/16	165,169 ft.
2 x 6 x 10/16	167,244 ft.
2 x 7 x 10/16	109,530 ft.

Hemlock

Send us your enquiries—we have dry stock and can furnish your requirements.

Birch, Ash and Maple

We have a few cars in stock and can make prompt shipment.

For Good Business

Stock Good Lumber

B. C. Douglas Fir

TO deserve good business and hold it you need the best there is in lumber—"T. & G." Quality.

We can supply promptly anything you may need in B.C. Fir Timbers, Flooring, Ceiling, Trim, etc., also B.C. Red Cedar Shingles.

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Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

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Bone Dry, 1915 Cut

50,000	1x4&5	No. 1 Spruce
25,000	1x8	"
40,000	4x4	"
35,000	3x6	"

Hemlock *1915 Cut*

70,000	2x4—14	No. 1 Hemlock
30,000	2x6—10	"
25,000	2x6—12	"
10,000	2x6—14	"
1,013	2x9—14	"
18,000	2x10—14	"
12,000	2x10—16	"

3 Cars 3 x B.C. Shingles in Transit

Left Vancouver October 1st

The Long Lumber Company

HAMILTON, ONT.

FOR SALE: Standing Timber, in Large or Small Blocks and Sawmill Machinery

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 3-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Hand Machine for cut-off saws.

POWER PLANT

1 Double Duplex, high pressure Water Pump.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 80 h.p. Generator, 250 volt.

1 80 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

HIGH GRADE

We Have on Hand at Present a Large Stock of

SPRUCE LUMBER

in 1″, 1¼″, 2″ and 3″ Merchantable and Cull

Also a Large Stock of

SPRUCE LATH

SEND US YOUR ENQUIRIES

MUIR, KIRKPATRICK & SHARPE

1325-8 Traders Bank Building

TORONTO - - - CANADA

EVERYTHING IN LUMBER, LATH AND SHINGLES

LUMBER

Murray & Gregory, Limited

Head Office:
ST. JOHN, N. B.

Established 1868

Quebec Office
ST. CAMILLE, Bellechase Co., P.Q.

SAW MILLS

St. John, N.B., St. Camille and Lake Frontier, Que., cutting SPRUCE and PINE Lumber for British, United States and Canadian Markets.

Also

LATH, SHINGLES, PULPWOOD and RAILWAY TIES

Manufacturing and Grading Right

Trade *Mark*

Address all enquiries to our Head Office, ST. JOHN, N. B.

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Veterinary Remedies

are the surest, the most economical and the best medicines with which to equip your stables. They have been on the market for twenty-five years and still retain their superiority over all others.

Johnson's Horse Liniment No. 1	Per Gal.	$5.50
Johnson's Horse Liniment No. 1	Quarts, Per Doz.	16.00
Johnson's Horse Liniment No. 1	Pints, Per Doz.	9.00
Johnson's Horse Colic Remedy	Per Gal.	6.00
Johnson's Horse Colic Remedy	Quarts (8 Doses each) Doz.	17.00
Johnson's Horse Colic Remedy	Pints (4 Doses each) Doz.	9.00
Johnson's Veterinary Healing Ointment (Gall Cure)		
....2 lb Tins	each 2.25 Doz.	24.00
¼ lb. Tins	Per Doz.	3.50
Johnson's Concentrated Condition Powders, 1 lb. Pkgs.	Doz.	4.00
Johnson's Horse Worm Powders, 1 lb. Pkgs.	Per Doz.	2.50
Johnson's Purging Balls	Per Doz.	2.50
Johnson's Antiseptic Dusting Powder (For Drying and Healing Sores)	Per Doz.	8.00

Our Family Van Remedies are as follows:—

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All Drugs and Patent Medicines at Market Prices.

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Collingwood, Ontario

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The fact that our stocks are complete and well assorted assures you of **Satisfactory Service, Good Grades** and **Right Prices.** We want your inquiries and orders when in the market for

Railway Ties and Pulpwood
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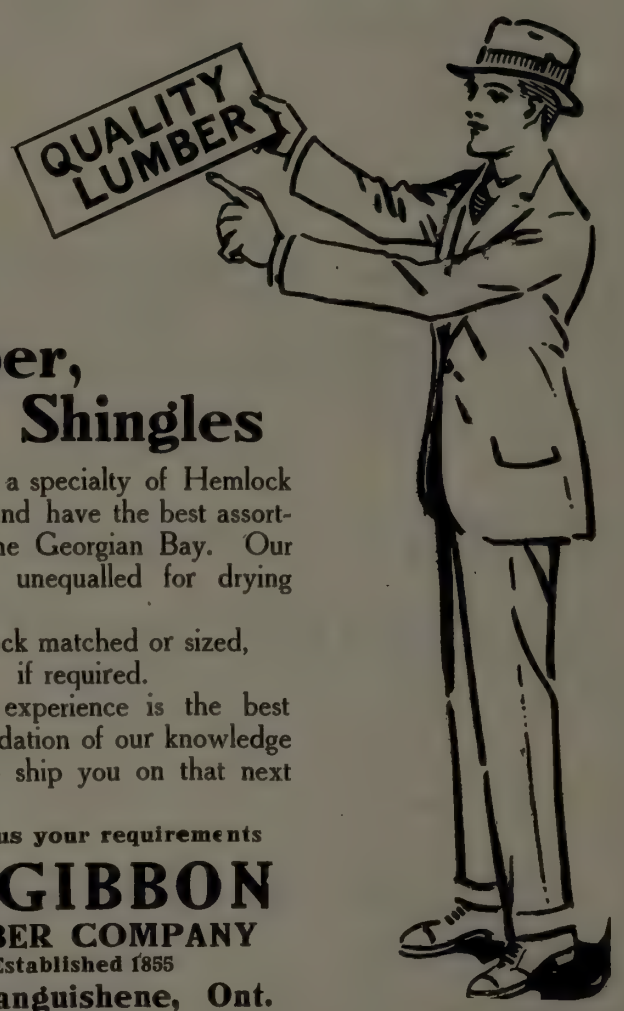

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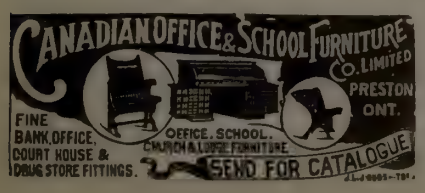
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25200	ft.	2 x 4	10/12	Hemlock
9666	"	2 x 4	14	"
43000	"	2 x 6	10	"
46804	"	2 x 6	12	"
14952	"	2 x 6	14	"
23070	"	2 x 6	16/18	"
52264	"	2 x 8	10	"
72688	"	2 x 8	12	"
58563	"	2 x 8	14	"
48850	"	2 x 8	16/18	"
44312	"	2 x 10	10	"
62160	"	2 x 10	12	"
58845	"	2 x 10	14	"
59235	"	2 x 10	16/18	"
10230	"	2 x 12	10/12	"
29600	"	2 x 12	14/18	"
231280	"	4/4		"

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Manufacturers and Strictly Wholesale Dealers in Lumber

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Toronto

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Interior Trim Mill Work

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Merchantable 100,000' 1" Spruce
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Mills: Byng Inlet, Ont.

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Smart foot-power.

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24" Fay double drum.
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18" Crescent disk.
8" belt sanders (wood frames).

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10" Houston four side.
6" Cowan four side.
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36" American double surfacer.
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26" revolving bed, double surfacers.
24" Major Harper planer and matcher
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18" Little Giant planer and matcher.

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Preston variable power feed.
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No. 3 Crescent universal.
No. 2 Crescent combination.
Ideal variety.
12' Defiance automatic double cut-off.
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6 ft. Crescent iron frame swing.
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42" Fay & Egan power feed.
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26" Crescent pedestal.
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Humphrey No. 8 giant slab re-saw.
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Humphrey automatic lathes (6).
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Clear Fir Finish, rough and dressed.
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We Dress from 1 to 4 Sides up to 16-in. x 20-in., 60-ft.

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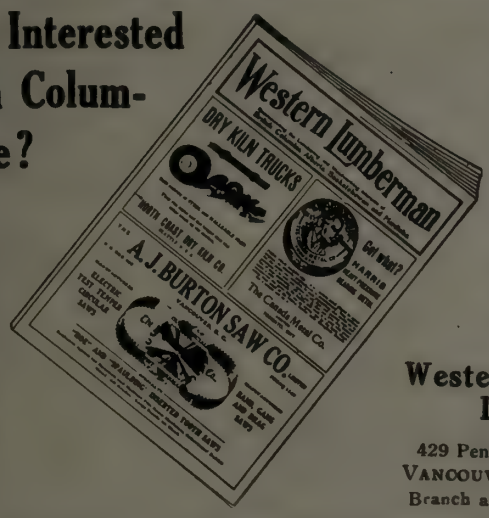
The immensity of the Lumber Industry will within a few years make this Province the most important in the whole Dominion.



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½ x 5 and ½ x 6 Cedar Bevel Siding.
1 x 8 to 12 Clear Cedar Finish, Rough or Dressed.
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Stearns Quality

Michigan Forest Products

Hardwood, Hemlock, White Pine

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40 Million Feet Dry Stock
in pile containing a complete
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Grades— GUARANTEED —Quality

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Reg. U.S. Pat. Off.

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QUARTERED OAK **PLAIN OAK**
POPLAR **ASH**

Yards at—Nashville, Tenn. Basic, Va.
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We can ship you promptly any of the above Stock, Carefully Inspected

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Rough Timbers, Dimension, Flooring, Ceiling, Siding, Interior and Exterior
Finish of all kinds including Mouldings. Fir, Spruce and Cedar Lath

Prompt shipment of Fir timbers in all sizes and up to 80 feet in length

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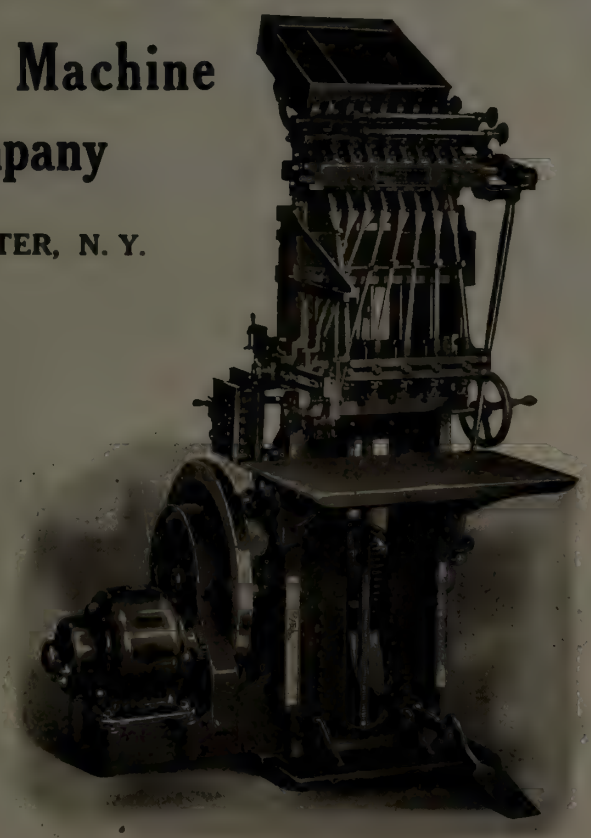

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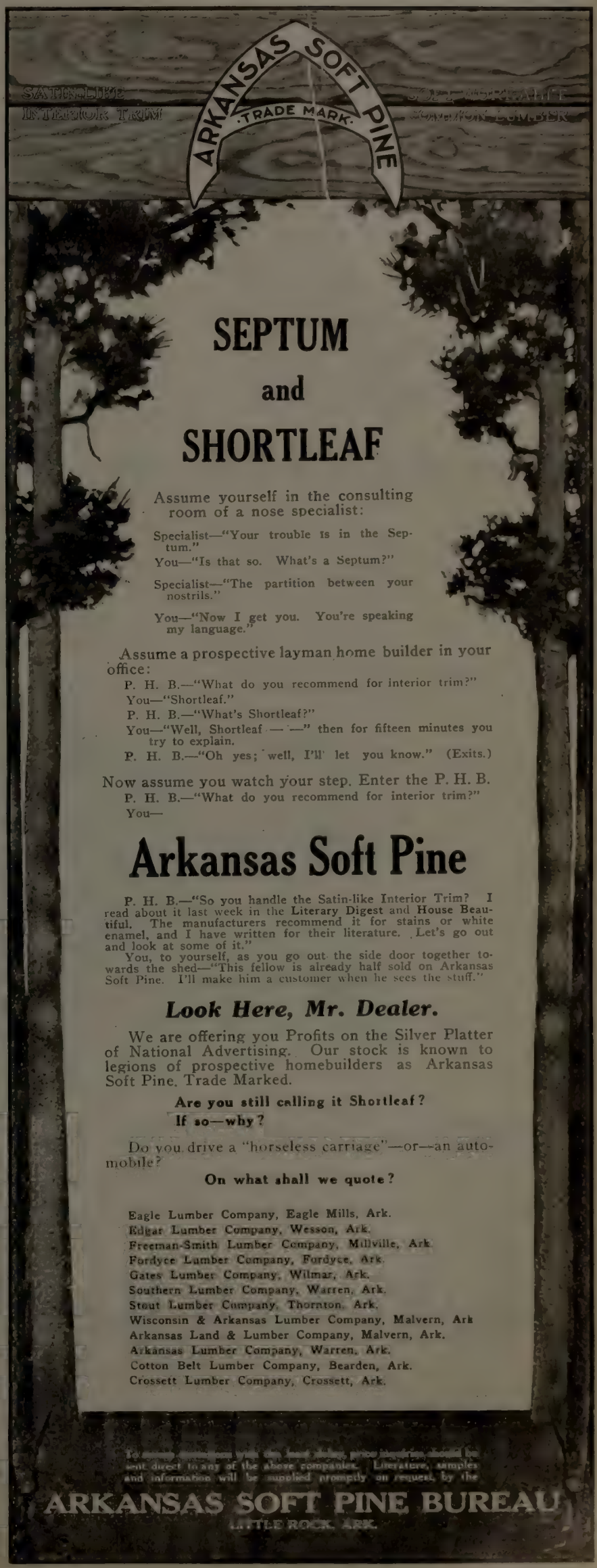

SEPTUM and SHORTLEAF

Assume yourself in the consulting room of a nose specialist:

Specialist—"Your trouble is in the Septum."

You—"Is that so. What's a Septum?"

Specialist—"The partition between your nostrils."

You—"Now I get you. You're speaking my language."

Assume a prospective layman home builder in your office:

P. H. B.—"What do you recommend for interior trim?"

You—"Shortleaf."

P. H. B.—"What's Shortleaf?"

You—"Well, Shortleaf — —" then for fifteen minutes you try to explain.

P. H. B.—"Oh yes; well, I'll let you know." (Exits.)

Now assume you watch your step. Enter the P. H. B.

P. H. B.—"What do you recommend for interior trim?"

You—

Arkansas Soft Pine

P. H. B.—"So you handle the Satin-like Interior Trim? I read about it last week in the Literary Digest and House Beautiful. The manufacturers recommend it for stains or white enamel, and I have written for their literature. Let's go out and look at some of it."

You, to yourself, as you go out the side door together towards the shed—"This fellow is already half sold on Arkansas Soft Pine. I'll make him a customer when he sees the stuff."

Look Here, Mr. Dealer.

We are offering you Profits on the Silver Platter of National Advertising. Our stock is known to legions of prospective homebuilders as Arkansas Soft Pine. Trade Marked.

Are you still calling it Shortleaf?
If so—why?

Do you drive a "horseless carriage"—or—an automobile?

On what shall we quote?

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5 Cars 6/4 L. R. Hickory
2 Cars 6/4 Indiana Oak
10 Cars 4/4 Indiana Elm
10 Cars 4/4 to 4 in. White Ash
20 Cars 4/4 to 4 in. White Oak
SAP GUM
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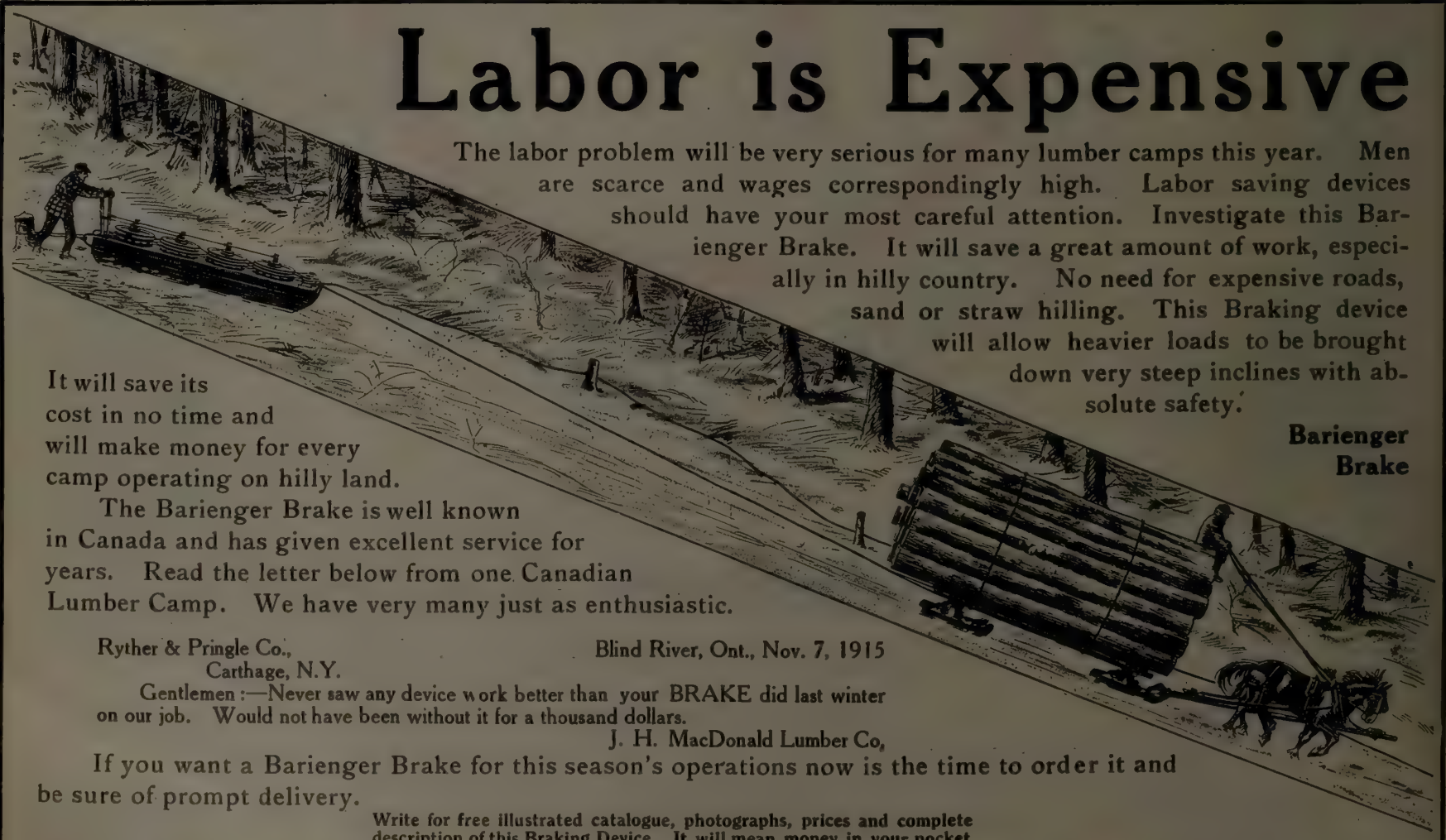

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MONTREAL TORONTO WINNIPEG

Canada Lumberman & Wood Worker

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Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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The General Trade Situation

The car shortage which has been handicapping business so greatly in the United States during the past month and for which there seems to be very little relief in sight as yet, has fortunately not been of anything like the same dimensions in Canada in connection with transportation up Canadian railroads. While there is considerable delay and difficulty in connection with shipments from New Brunswick, Nova Scotia and Quebec points into Ontario, on account of the scarcity of cars, the situation elsewhere in Canada is not so acute as is usual at this time of year and the indications are that at an early date plenty of cars will be available for a normal volume of trade. In fact the real trouble today is not so much shortage of cars as shortage of labor for loading and unloading cars at points of origin and consignment. Recently this shortage of labor has given rise in some cases to embargoes upon shipments to certain important markets, such as that which was put into effect by the C. P. R. in connection with shipments into Toronto early in November. If there were a fair supply of labor today there would be reasonably satisfactory loading and discharge of shipments. Of course, the shipment of lumber into Canada from United States points is affected by the shortage of cars in that country, but from a number of reports that we have received from large shippers we are able to state that Canadian shipments are not really suffering from a car shortage, something for which we have to be extremely thankful in these days of general industrial disturbances.

The lumber trade situation in Canada today is encouraging. During the past month or two there has been an unquestionable improvement in all lines. The demand which had been to a considerable extent stationary almost since the outbreak of the war, with the exception of that for shell boxes and other war materials, has commenced to improve. The statistical situation of the industry has been bettered steadily during the past two years. Production has been curtailed to a great extent by natural rather than by artificial causes, and during the present winter it will be curtailed to a far greater extent than ever before. The retail trade have learned of this situation and are now buying stocks, knowing that next year they will be able to sell anything they have on hand at prices considerably in advance of those prevailing today. Large consumers are coming into the market extensively for similar reasons, foreseeing that they will have to pay more next year for their stocks than they are paying today. This situation has been brought about logically by the scarcity of the supply, the high cost of production and the fact that demand is steadily increasing. Today, it begins to look as though the buying movement will reach much greater proportions within the next month or two than it has already attained and that the new year will find most of the yards and consuming industries supplied with stocks to carry them through until spring. For this reason we expect a decline in the volume of trade during the early months of 1917.

The hemlock situation is interesting. At the mills today, manufacturers are asking $19 to $20 for No. 1 hemlock, good sizes. Delivered at Toronto the price comes to about $21.50 to $22, and we hear that some manufacturers are considering the advisability of asking higher prices still. Without wishing to restrict the improvement in the hemlock trade, we cannot avoid expressing some of the views we heard while calling upon the wholesale trade, namely, that manufacturers of hemlock must not overlook the yellow pine situation. Stocks of yellow pine that will take the place of the above stocks of hemlock are being offered today delivered at Toronto for $21.75 to $23. There is practically no margin between the two lines. From past experience the hemlock manufacturers know what happens when the flood gates for yellow pine are opened. Hemlock simply has to take a big drop when this happens. It may be the better course now not to ask higher prices for hemlock unless the situation in connection with yellow pine improves sufficiently to warrant such a step beyond any doubt.

The export trade situation is also interesting today. The latest information we have regarding ocean freight rates is not encouraging. It indicates another extensive increase. A month ago it was possible to get space from east coast points to Glasgow for 260 shillings per standard. Today, very little space is offering, and for it the shipping companies are asking 325 shillings per standard. The course of ocean freight rates during the past year and the present situation in connection with the submarine activity of Germany lead to a general feeling that space will be more expensive next year than ever before. In September, 1915, the rate was about 150 shillings. In November, charters were made from Boston to Glasgow at 180 shillings. Then the rate advanced from 185 shillings in December to 260 shillings in February and "first open water" quotations reached 400 shillings, as compared with 175 shillings to 250 shillings a year ago. No contracts are yet reported for "first open water," 1917, it being still considerably too early for such business.

Metal or Lumber Clad Barns—Which?

A recent issue of the Uxbridge Journal, published at Uxbridge, Ontario, contains an article headed "A Lumber or Metal Clad Barn—Which?" It is interesting reading because of the subtle way in which an attempt is made to convince the farmer that a metal clad barn is more permanent and cheaper than one of wood.

A comparison is made between two barns, each 36 feet wide and 56 feet long, with side walls 16 feet high, and having a gambrel roof. It is assumed that the frame will be of lumber in both cases, and will cost $500. We are next to assume that the farmer will be in a state of doubt and anxiety as to whether to cover the roof and the sides with metal or with wood. In the comparative estimate, the best showing that can be made is that the metal clad barn will cost $155.75 more than the all wooden barn. The metal covering would be galvanized corrugated iron at $6.00 per square.

Without looking into the details of metal prices or checking the accuracy of the lumber costs, the forced arguments in favor of the metal barn are found to defeat themselves. It is stated that the depreciation on the metal clad building, according to the "Valuators Tables of Insurance Companies," (whatever they are), "is never greater than 1¼ per cent. per annum, while on a wooden building it

is not less than 2½ per cent." (it is not clear whether this depreciation figure comes from the same source). The metal clad barn costs $1,282.75 with a depreciation of 1¼ per cent., or $16.03 per year, and would last 80 years before the complete cost was expended in repairs. Now look at the poor wooden barn. With an original cost of $1,127 and depreciation of 2½ per cent. the building would last only 40 years before the complete cost had been expended in repairs.

A wooden barn which does service 40 years is a pretty fair investment; yet many have greatly exceeded this life. If a metal barn has ever been built which lasted this long no one has every heard of it. It will be a sad day for the stock which is sheltered only by what was left of galvanized corrugated barn siding after 80 years, or even ten or twenty years. Not long ago farmers in northern Michigan were beseiged by metal barn covering salesmen, and some of them were persuaded to buy metal covering for their buildings. If the advocate of the metal barn talked to a few of these farmers now he would get a decidedly different impression of its lasting qualities.

We have seen a roof of old fashioned black iron, which by being kept well painted, had lasted 27 years. We have also seen galvanized iron roofing which rusted through in less than ten years. How anybody can talk about the metal barn lasting eighty years and get away with it, is more than we know. Surely no sane farmer will believe it.

Export Timber Trade of Quebec

At a recent sitting of the Dominions Royal Commission, held in Quebec, P.Q., one of the witnesses was Mr. John Burstall, of the firm of J. Burstall & Company, timber and lumber merchants, Quebec. In the course of his testimony Mr. Burstall said that the amount of timber handled in Quebec for export was a very large one, but late years has seen a material reduction. Practically all the pine, oak, elm and birch logs brought to Quebec are for export to Great Britain, though there is at times a fair local demand. The average of five years export, from 1904 to 1908 are given as:—

Pine: 1,447,229 cubic feet, or 28,940 loads of 50 cubic feet.
Oak: 433,904 cubic feet, or 8,660 loads of 50 cubic feet.
Elm: 355,707 cubic feet, or 7,115 loads of 50 cubic feet.
Birch: 179,551 cubic feet, or 3,550 loads of 50 cubic feet.

In 1915 the export was:—

Pine: 346,440 cubic feet, or 6,930 loads of 50 cu. ft. Value $285,221.
Oak: 187,160 cu. ft., or 3,740 loads of 50 cu. ft. Value $139,332.
Elm: 173,040 cu. ft., or 3,460 loads of 50 cu. ft. Value $162,233.
Birch: 273,920 cu. ft., or 5,480 loads of 50 cu. ft. Value $99,391.

For 1916 the figures are not out yet, but will probably show an increase in oak and a decrease in the other lines.

The method originally employed to take the timber to Quebec was to float it down in rafts. To-day, however, the timber is mostly made at points too far away from navigable waters to allow of it being floated, and it all comes by rail. This has naturally enormously increased the cost, especially as some of the distances are great.

To take the most important woods separately:

White Pine:—This comes chiefly from Ontario, and is the finest known wood for deckplank for steamers or for pattern making. It does not split or shake as does Oregon pine, which is sometimes used for the same purpose. The logs have to be of good average, say 20 inches calliper or so, and there is only a percentage of this sized timber in even the best pine forests of Canada. The British Admiralty, the machine makers in the Manchester district and shipbuilders are the consumers of this kind of pine. The war has very adversely affected the consumption of this line.

White Oak:—This wood is largely produced in the northern States, practically all the export goes to the larger railways of Britain. The timber has to be 18 feet and up and 13 inches and up, and runs 55 to 60 feet average cube. The business is generally rendered difficult, owing to the competition in selling with oak which comes from the southern States, and also Odessa and Dantzic. These latter ports are, of course, closed now, and this has had an effect on the oak shipments here.

Rock Elm:—The best of the different kinds of elm is produced in Ontario, Michigan and Wisconsin, and is used chiefly by the British Admiralty, and the shipbuilders. It is usually 20 feet and up and 12 inches and up, and usually averages 40 to 45 feet cube. The war has not affected this market, as the production is limited, and so long as the price, which is now very high, is not unduly inflated, there is a market for the output.

Grey Elm:—A small quantity of this wood is shipped, chiefly for furniture wood.

Birch:—Is manufactured in the district surrounding Quebec, and is the cheapest wood shipped from Quebec. It is an excellent furniture wood, and is today also being used largely in the manufacture of certain shell boxes. It averages as a rule 15 to 18 inches calliper, and runs about eleven feet average long.

The above mentioned lines comprise about all the wood shipped as timber from here.

The timber is brought down in a fairly well manufactured condition, and is placed in the different coves here to be culled, and if necessary butted, and dressed before shipment.

A serious trouble in the timber trade here at present, is the question of licenses to allow of the wood entering Britain. Special licenses are required for oak, elm and birch deals, birch logs being admitted. As oak and elm are required this year for certain urgent work, a certain amount of special licenses were issued. But great doubt exists as to the future, and trees have to be felled many months before they are in the shape in which they are shipped. As elm is absolutely required for shipbuilding, oak for railway work, and birchplank to a certain extent for munition boxes, it may be doubtful if it is wise to do anything to interfere with the manufacture of these woods. It would be unfair not to mention that the Import Restriction Committee have stated they will do what lies in their power to help Colonial shippers, but they are, of course, bound by the regulations.

Canada's Increasing Foreign Trade

The trade returns of Canada for the four months ended July, 1916, when compared with those for the same period in 1914 and 1915, show an increase in the value of merchandise imported and exported. During the period 1916 the value of the grand total of the imports and Canadian exports—taking no account of the movement of coin and bullion—amounted to $600,213,172, as compared with a total trade in 1914 of $288,296,466 and in 1915 of $293,833,137, representing an increase over that for 1914 of $311,916,706, or 108.2 per cent., and over 1915 of $306,380,035, or 104.3 per cent.

The value of the imports of merchandise for the four months ended July, 1916, was $249,867,867, an increase of $79,137,955, or 46.4 per cent. when compared with the corresponding period in 1914, and, compared with 1915, an increase of $115,202,989, or 85.5 per cent.; whilst the value of the total exports of merchandise amounted to $356,410,103, an increase over the exports in 1914 of $224,177,200, or 165.9 per cent., and an increase over 1915 of $185,747,387, or 108.8 per cent.

The exports of Canadian merchandise were valued at $350,345,305, an increase of $232,778,751, or 198.0 per cent. when compared with the four months ended July, 1914, and an increase of $191,177,046, or 120.1 per cent. when compared with the same period in 1915; whilst the exports of foreign merchandise amounted to $6,064,798, a decrease when compared with 1914 of $8,601,551, or 58.6 per cent., and a decrease of $5,429,659, or 47.2 per cent. when compared with 1915.

The part played by our foreign trade in lumber and timber in this expansion of trade is an important one. During the four months ending July exports of wood and manufactures of wood from Canada were valued at $24,900,000. In 1915 the corresponding total was $19,000,000 and in 1914 $17,743,000. The exports of unmanufactured wood during the same four months were valued as follows: 1916, $19,568,000; 1915, $16,179,000; 1914, $14,850,000. The totals given above were for exports chiefly to the United Kingdom and the United States, and the increases were at about the same rate in regard to both countries.

The exports of lumber during the same four months were valued as follows: 1916, $16,470,000; 1915, $13,503,000; 1914, $11,400,000. The exports of spruce deals and other deals, exclusive of pine, during these four months, were valued as follows: 1916, $3,458,535; 1915, $3,303,126; 1914, $1,980,164. Exports of pine deals were valued as follows: 1916, $811,788; 1915, $388,201; 1914, $429,028.

Bathurst Company May Build Ships

New Brunswick Lumber Manufacturers Planning New Venture if Government Grants a Subsidy.

Mr. Angus McLean, general manager of the Bathurst Lumber Company, Ltd., Bathurst, N.B., advises us that his company is considering the formation of a company for the building of wooden ships. The carrying out of the proposition depends upon whether the Dominion Government will provide a subsidy for the industry. The Bathurst Lumber Company, Ltd., have been figuring on this matter for a year, Mr. McLean says, "but under present conditions it is difficult to put the plan into operation. There is an acute scarcity of labor for industries already established, and an entirely new industry would undoubtedly be handicapped by the same cause. The business would certainly require governmental nursing for a few years, until it became established. In fact, we would not care to start a proposition of this kind unless the government offered a subsidy. Any subsidy, of course, would be general. Bathurst has no claim to preferential treatment. The government is being urged strongly to grant subsidies for this object, and I fully believe it will do so during the next session of parliament. If Bathurst gets its share, we will organize a company with local capital, and start building two ships, to be ready for launching in the spring of 1918. Our plans are necessarily in abeyance until we know definitely what the government intends to do. Wooden ships can be built here as well and as cheaply as anywhere. We have an abundance of the main raw material right at hand.

"The demand for new shipping, which is almost bound to grow greater as the war is prolonged, will still further augment the rise in the prices of vessels, and the inevitable result will be that the more ships built the more expensive will shipbuilding become. The world simply must have more ships to make good the shortage, and it is almost true to say that practically anything that floats will be pressed into service. Any less there may be in the comparatively slowness of voyage of the smaller wooden ship will be more than offset by the less amount of interest such a ship will have to earn to cover charges on her working capital. Bunker coal for steamers is certain to maintain a high figure for some time to come, and here, again, the sailing vessel wins out.

"We propose to build sailors of from 500 to 1,000 tons. Nowadays when we speak of 'sailors' we do not necessarily mean ships dependent for their motive power upon wind exclusively. Various types of international combustion engines can be adapted for quite large vessels, as they have been for automobiles, aeroplanes, and launches. We shall probably fit either gasoline or crude oil engines into our ships, and the making of these in themselves may in time become an important industry in Bathurst."

Great Britain Reducing Paper Imports

According to the latest issue of the Weekly Bulletin of the Department of Trade and Commerce, there was a substantial decline in paper imports into Great Britain during the month of September, the quantity being less than in any previous month of the current year and only a little over one-half the total during September, 1915; also 32.8 per cent. less than the total for September, 1914. The receipts during September in the last three years were as follows:

	Cwts.	Approximative.
September, 1916	640,740	$3,262,270
September, 1915	1,118,220	3,231,530
September, 1914	954.559	2,541,105

In spite of the decrease in quantity during September, 1916, the total value records an increase of 28.3 per cent., which illustrates the marked advance in the price of paper. The total quantity of paper on reels imported shows a decrease of 61.3 per cent. The main bulk of the total imports came from Newfoundland, 56.88 per cent. Imports of print paper and writings not reeled fell 35.4 per cent., compared with September, 1914, and there was a decrease of 15.0 per cent. in packings and wrappings. Shipments of strawboard showed a decrease of 17.1 per cent., and those of mill and wood-pulp boards a decrease of 21.66 per cent. compared with September, 1914.

Lumber Price Fluctuations, 1913-1915

According to the report upon wholesale prices in Canada for the year 1915, published by the Department of Labor, Ottawa, there was an almost continuous decline in the price of lumber from 1913 to the end of 1915. In preparing a chart of lumber prices the average prices from 1890 to 1899 are taken as the standard, and the advances or decreases since that time are quoted in percentages, the standard being considered as 100. In the year 1910 the prices of lumber, including all the chief lines of lumber produced in Canada, stood at an average of 160, indicating an advance of 60 per cent. over the prices during the standard period. During 1911 the prices advanced rapidly during the first three months, reaching 167, where they continued during the next three months, then falling to 163 during July, August, and September, and closing the year at 164. During 1912 a gradual advance occurred, with slight fluctuations, until at the close of the year it stood at 170. The year 1913 opened with rapidly advancing prices, which continued throughout the first nine months, reaching 185 at the end of September, and easing off to 184 at the end of December. This decrease, which commenced about October, 1913, was continued practically throughout 1914 and 1915. At the end of 1914 the price was 179 and at the end of 1915 it was 175.

French Market for Canadian Pulp

A recent report from Mr. Philippe Roy, Commissioner General for Canada in Paris, includes a memorandum prepared by the French Epinal Chamber of Commerce regarding conditions under which chemical and mechanical wood pulp are imported from Scandinavian countries, particularly Sweden, into France. It is hoped, the Commissioner says; that Canadian manufacturers may get in touch with the Epinal Chamber of Commerce and learn how to meet the necessary exporting conditions, so as to enlarge the French market for Canadian pulp. The report says:—

According to sellers, conditional terms of delivery vary greatly. Some deliver with a freight guarantee, others without guarantee as to freight rates, unless freight is charged at the rate ruling at the time of shipment. Some adopt the date of departure for the rate of exchange, others the day of arrival. All the demurrage charges are borne by the buyers. In the case of pulp in a dry state, that is to say, absolute dryness with an addition of 10 per cent., prices c.i.f. Rouen current up to the present, demurrage not included, are as follows

Chemical pulp: 72 francs per 100 kilos dry.

Mechanical: 45 francs per 100 kilos dry.

These prices are meant to be c.i.f. Rouen, transit, handling and demurrage charge being at the expense of the buyer. Exchange is in crowns at the normal rate of 72. Average quality is similar to that supplied by Canada. Delivery takes place until the closing of the Baltic ports by ice. Even in average grade, Scandinavian pulp is preferred. The small business transacted with Canada does not increase because Canadian offers were made by brokers without experience (some even taking hundredweights for tons), who gave no details as to accessory conditions which may increase prices from 30 per cent. to 40 per cent. The time would now be appropriate to prepare business for delivery between December and May, when the closing of the Baltic does not allow transportation, unless the Swedish railroads are used to Gottenburg.

The Scandinavian production offers wet pulp at prices from 3 to 3.50 francs lower than the prices previously indicated.

Cumulative Demurrage Introduced by U. S. Railroads

United States railroads have filed cumulative demurrage tariffs with the Interstate Commerce Commission, to become effective December 1, 1916. These tariffs increase the demurrage charges, after the expiration of the free time, to the following rates: $2 for the first day, $3 for the second day, $4 for the third day, $5 for the fourth and each succeeding day. At points where track storage is provided for it is proposed to assess $2 per day in addition to the track storage, but the $3, $4, and $5 charges will apply only when the addition of $2 to the storage rates makes a sum less than the advanced demurrage charge. On behalf of the members of the National Wholesale Lumber Dealers' Association, a protest has been filed with the Interstate Commerce Commission for the suspension of these tariffs pending hearing and investigation.

Flume Builders May Expropriate Where They Please

An interesting and important judgment was given in the Supreme Court at Vancouver recently regarding the power of a timber company to expropriate a right of way through another's property for the purpose of constructing a timber flume. The case was one in which R. A. Olds and G. F. Crocket had applied for authority to expropriate for a right of way for flume through the lands of Mary Jane and Anna Collins. Counsel for the owners of the land in question stated that his clients wished the flume to follow the creek, but the loggers wanted to run it through the middle of their land. "Surely," he said, "his clients had some rights on their own lands." "Not in this case," said Chief Justice Hunter. A man who wanted a right of way to bring timber from Timbuctoo could get it under the act. Like a railway company, they could run their right of way through the other party's front parlor, if they desired to do so, and the only remedy was a claim for compensation.

A handy little booklet about British Columbia red cedar shingles has been issued by the Forest Branch of the Department of Lands of British Columbia. This is a reprint of Bulletin 18, put up in pocket-book size. It contains in brief form a description of the quantities, sizes, etc., of red cedar shingles and information in regard to the best manner for laying, staining, etc.

Work of Canadian Forestry Battalion

Converting English Forests into Trench Timber, Railway Ties, Etc. Splendid Service of Great Value to the Empire.

The operations of the Canadian Forestry Battalion in Great Britain have been the subject of many short articles and news despatches in the press of Great Britain and Canada, but no really extensive descriptions of their work have appeared until quite recently. We are pleased to be able to publish in this issue a couple of interesting illustrations of the work of this battalion and some detailed description of their work, secured from various sources.

Lumbermen in Canada will recall that the first Canadian forestry battalion to go overseas was known as the 224th, and that other battalions of a similar type have followed subsequently, while still another is being recruited and is now nearly up to strength. The latest reports received regarding the work of the 224th Forestry Battalion state that part of it has been working in the forests of the north of Scotland, cutting Scottish pine. One company of the battalion has also been at work in the Royal Park at Windsor Castle and another company in the New Forest in Hampshire. For these operations eight sawmills were sent over from Canada, six being for the 224th Forestry Battalion and two for the Forestry Committee in England, which has supervision over all lumbering operations for the Government during the war. These mills are typical of the Canadian lumbering industry, and resemble what we know in Canada as "portable" mills. They are, however, quite a novelty to the people of the British Isles, and their remarkable efficiency has attracted favorable comment wherever they have appeared. The capacity of these mills is from 15,000 to 20,000 feet per day each, and they include edger, slash saw, saws for making railway ties, etc., in addition to the 56-inch circular saw. Power is furnished by 40 h.p. locomotive boilers.

The Method of Operation.

A London correspondent, describing these operations, says:

"Not even in the days of the Armada and the wooden walls of England was there such a tree felling as is now going on in Great Britain. In every wood the sound of the axe and the saw can be heard, and lumber camps as picturesque as any on the Missouri are to be found as far apart as the Scotch fir woods and the Windsor and New forests, where the Canadian lumbermen are working. Behind the statement of Mr. Acland in the House of Commons, that the Home Grown Timber Committee had been successful in securing supplies, there lies a story of one of the best efforts that has been made by any government department to meet the present war emergency.

"The emergency work of the committee has included not only the importation of Canadian lumbermen, but the importation of Irishmen, and even of Portuguese, who are now employed in cutting pit props to supply the Welsh coal fields.

"By an order-in-council, under the Defence of the Realm Act, the committee has been empowered to commandeer all the timber resources of the country, but so far their action has been limited to negotiation with the land-owners, who, Mr. Acland says, 'have met them most fairly.' This step was rendered necessary by the fact that the Government had no large supply under its own control. Britain was not alone in failing to anticipate the consumption of timber which war would entail. In none of the belligerent countries, not even in Germany, had a proper estimate been made of the demand that would arise for ash wood for wagons, for fir for trench work, for woods for hutments, and for the thousand other needs of the army.

"There remains, however, this difference, that Germany and the other countries had their supplies at hand in the best possible condition of storage—in their forests—while the British even now, when tonnage has become so important a factor in the war, are importing some six or seven million cubic feet of timber each week. If in these circumstances the German submarine warfare had been more successful, there would have been necessary a wholesale destruction of British forests which would have laid England bare for a generation.

"Now much is being done to use Britain's own natural resources, and much more will probably be done during next winter, if the war lasts as long. Some definite plan must at once be laid down for afforestation after the war, and the three essential things the Government at that time must be certain about are where to plant, what to plant, and whether they have got the plants to carry out the scheme. Of these three the last comes first.

"The plants must be ready when the labor released after the war is available, and here a little war time discovery on the part of the committee is worth mention. They have discovered that Scotch fir makes better railway sleepers than imported pitch pine."

Regarding the work of the 224th Forestry Battalion from Canada in converting the standing timber of Great Britain into war material the London Times, in a recent issue, says:

"The lumber camp is all Canadian—men, machinery, and methods. The men, who are drawn from all parts of the Dominion, have the bronzed, healthy look and the easy, confident swing which we have learned to look for in Canadians. The khaki under their blue overalls proclaims them soldiers; they draw military pay and they know the rudiments of military drill; but first and last they are woodsmen, with

224th Canadian Forestry Battalion Operations in England—Scene at one of the Sawmills

their craft at their finger-tips. Every man knows his task and does it with an enviable independence of orders or instructions; yet from the first stage to the last the work proceeds smoothly and harmoniously. Let us follow the process, under the guidance of the officer in charge and the sergeant who is 'foreman of the bush.'"

Then follows a description of the actual felling of the trees and their conversion, in the portable mill, into such widths, thicknesses, and lengths as are required. To all intents and purposes these operations are similar to the operations on Canadian timber limits, the details of which are well known to Canadian lumbermen.

Canadian Portable Mills.

Describing the mill, the London Times says:

"The mill itself is a stoutly-built structure, made of timber cut and prepared on the spot, the saws and engines coming from Canada. It is practically a raised platform, covered by an iron roof, but open at the sides. A log to be sawn is rolled into position on a 'carriage,' which moves backwards and forwards to carry it through a circular saw. Two men, standing on the carriage, control its movements and the position of the log by a number of levers. Opposite them stands the most important man of all—the 'sawyer'—whose trained eye sees at a glance what can be made of this or that log. The hum of the engine and the screech of the saw would drown his voice, so he gives his decision by signs. As the carriage brings a log back through the saw with the bark removed, he will hold up one finger or two, and the 'setter' on the carriage, by movement of a lever, adjusts the log so that the next cut shall be one inch or two inches thick.

"It is all done without a pause. For hours the saw screeches and throws off a spray of sawdust as it slices up the logs that a short while before were splendid living trees, and all the while other saws, trimming the edges of the boards and cutting off the ends, join in the chorus. Is it surprising that the daughter of the keeper of the wood was reduced to tears when she stood by the mill?"

An interesting reference to the uses of timber at the front and behind the lines is contained in a recent issue of "Country Life in England," which says:

"War has turned out to be a great consumer of lumber. Passing by for the moment the wooden huts and wooden carts for lodging and transport, the miscellaneous crowd of wooden boxes, cases and implements fashioned for equipment, how dependent on wood is the soldier when he takes the field! It did not take him long to learn that in a country like Flanders, with modern guns pointing at them, trenches must be deep to be of the slightest use, and that if they were deep would not stand wet weather unless propped with wood. Conjure up a vision of the wood being employed in the trenches, not of one army only, but of many, and it will be understood that the timber-swallowing power of the coalpit as compared with that of the trench is as the swallow of the minnow compared to the swallow of the salmon. And yet the trench represents only a feature of the total, especially in these days when military science orders that front line trenches should only be lightly held. Behind are the much more elaborate dug-outs. In the original trench the danger experienced was that of rain bringing on a landslip. The occupant in more than one instance was buried up to the shoulders in earth, and shot by the enemy before he could be extricated. In the early dug-out many lives were lost by shrapnel and splinters. From these they are now fortified by a roof built of heavy beams laid side by side. Let it be realized what a consumption of timber this means. Yet, practically speaking, there is no choice as to material. Steel is possible, but is in too much demand for actual fighting stuff. Cement has been tried, but will not do.

"On the road behind the lines there is an immense employment of heavy timber, without which the present advance, for example, would not have been possible. When the great guns used by the Germans at Verdun and by us to demolish their trenches between the Ancre and the Aisne have to be got forward, the only way to do it is by temporary railway lines. Hence the demand for sleepers. And every sleeper signalizes that a large tree has been felled. Any intelligent student of the daily war news will be able to imagine without difficulty what a prodigious quantity of timber is being used up for this purpose alone. Nor can there be much need to enlarge on the other military demands for wood. It has been used freely, not only in bridge building across rivers, but to make a bridge or passage over roads that in the fearfully wet weather would otherwise have been impassable to heavy military traffic. The army is like a monster which has to be fed continuously on great shiploads of timber. The Home Grown Timber Committee is in this sense a great destructive agency, since it exists for the purpose of feeding this tremendous appetite as far as this can be done from home. Portugal, Spain, and France have contributed a vast share. The demand is almost exclusively for softwood, which is so much easier carried, manipulated, sawn, nailed, and so on, than hardwood."

The illustrations accompanying this article give a good idea of one of the sawmills used by the 224th Forestry Battalion. This mill was built by the Canadians on the spot. The men shown in the illustration are rolling logs to a point from which they will be hauled up by mechanical power to a platform where they are loaded on to the circular saw carriage; on the other end of the mill the timber comes out squared and ready for use. The other illustration shows timber which has passed through the mill being piled, ready for shipment when required.

Alexander MacKay MacLean, who is known to practically every lumber manufacturer and logging camp operator in the Ottawa Valley as the capable and genial representative of Hunter and Company, Limited, wholesale grocers, Pembroke, Ont., was married on November 1st to Laura Pearl McDowell, daughter of Thos. McDowell, at Shawfille, P.Q. The Canada Lumberman joins with "Sandy's" host of friends in wishing him every happiness.

224th Canadian Forestry Battalion Operations in England—Piling the Timbers Preparatory to Shipment

One Hundred and Twenty-four Years

Old Eckardt House, Unionville, Ont., Built of White Pine —Home of Early Ontario Lumbermen

One of the most interesting and historic houses existing in Canada to-day is shown in the illustration of a log house, published herewith. This is the old Eckardt home at Unionville, Ont. The building is constructed of white pine timbers and was erected in 1792. It is still occupied by a family (numbering no less than thirteen), and is visited by large numbers of people from Toronto and elsewhere who are interested in such a remarkable relic of the early days of Ontario. To lumbermen the building is doubly interesting on account of the fact that it is associated with the early lumbering industry of the province.

The original Eckardt to come to America was one Philip Eckardt, who settled in Philadelphia and came originally from Bruges, in Belgium. He followed his trade as a millwright and carpenter, and built several saw and grist mills on the Schuylkil River. Philip Eckardt had three sons—Philip, Abraham, and Gottlieb. The son Philip followed his father's trade as a millwright and carpenter, and moved to the northwestern part of New York State, up the Genesee Valley, and built a number of mills, some being near Lockport, New York. When at Lockport this Philip Eckardt was approached by a representative of the British Government with a proposition that he should form a colony in Canada. The result was the settlement at Unionville of some sixty families. Each of these settlers had to have a trade and be thoroughly conversant with pioneering. The government made them certain grants of money annually for ten years and gave them a considerable grant of land. These settlers arrived in the fall of 1792, and selected the Township of Markham for their land grant. They had a difficult time at first, as the land had not been surveyed, although the government had promised them that this would be done in advance. As a result they put in a trying winter, during which they had to put up with great hardships in the way of scarcity of food.

Philip Eckardt immediately commenced the construction of saw and grist mills at Unionville. The sawmill was placed on one side of the river and the grist mill on the other side. These were known as the German mills, and the place goes by that name to-day. The mills were located about 2¾ miles east of Thornhill and three miles west of Unionville. Some of the oak timbers of the old mill are still on the ground at this place and are in a remarkable state of preservation.

The settlers came across Lake Ontario on their way to Canada, bringing their stock of animals, household belongings, mill machinery, all in one load, and landed a little way up the Don River, about where Queen Street now crosses it. The river was a much larger stream in those days than at present, and the surrounding country was all forest. Flat-bottom boats were built, and the mill machinery, women, children, and furniture were sent up the north branch of the Don to the site of the mill. The horses and cattle went up old Yonge Street, blazing a service road as they went. The British Government formed a number of colonies of this sort at various points in the present Province of Ontario, such as Kingston, Unionville, Dundas, Newark (Fort Niagara), etc.

A great deal of valuable information regarding the life of these early pioneers is available, which we regret that we have not space enough to reproduce. A few more points of interest, however, may be mentioned. For instance, the debt that the Province of Ontario owes to such people is in a measure indicated by the fact that they were the first people to settle and cultivate the land, to establish various lines of trade and industry, and to lay the foundations of future growth and prosperity. In connection with the sawmilling industry at Unionville

Standing on an oak timber from Ontario's earliest sawmill at Unionville, Ont.

it is interesting to note that this mill turned out all the timbers and lumber then used for the erection of houses for the new population. In the building of houses and public buildings at Little York (now Toronto), considerable quantities of the product of these mills was consumed. Of course, the output of a mill in those days was very small compared with the output of modern mills. It is even said—partly, we suspect, by way of a joke—that the owner of the mill would start sawing a log and then go home to dinner. Upon his return he would find the log pretty nearly finished.

It is of further interest to learn that the Eckardt house shown in the accompanying illustration was the birthplace of a family of no less than sixteen children, and that all the sons stood six feet and over, some of them being six feet five inches. The house originally had a lower and an upper veranda. The holes above the first floor windows show where the upper veranda beams projected. The interior layout of the building is also interesting, and indicates the methods of life of our Ontario forefathers. Nearly all houses built in those days were similarly planned. On the ground floor there is a large dining-room and two bedrooms—one for the parents and one for the minister, who presumably lived with his flock, changing homes from time to time. The kitchen was generally in an adjoining room, frequently under a separate roof. The first floor was one large room, and was occupied by all the girls of the family. The top flat was also a single large room, and was occupied by all the boys. The lower part of the outside wall of the Eckardt home has been boarded in, but the old timber construction still exists behind the boards.

Our other illustrations show, one a picture of Mr. A. J. H. Eckardt, to whom we are indebted for the information published above; Mr. Alexander Fraser, Ontario Archivist, and his secretary, all standing upon one of the oak timbers of which the sawmill was constructed. The other picture is of another interesting old building in the same neighborhood, that of Webber's Hotel, at Hagerman's Hill, about a mile and a quarter south of Unionville. This also is of white pine, and was built about the same time as the Eckardt homestead.

Mr. A. E. Eckardt of the R. Laidlaw Lumber Company, Toronto, is a direct descendant of the original Philip Eckardt who is referred to in the above story.

Historic Ontario home built of white pine 124 years ago and still occupied.

Webber's Hotel, Hagermans Hill, Ont., over a century old and still well preserved.

From the Canada Lumberman of Thirty-five Years Ago

Sale of Timber Limits: Ottawa, September 20, 1881; The announcement of extensive sales of timber limits on private account brought together a large assembly of lumbermen at the Grand Union Hotel this afternoon. The following limits were disposed of:—The R. C. Campbell limit on the Front Lake branch of the Petawawa River, 39 square miles, sold to Wm. Moore, of Tarbolton, en bloc, for $29,500; Fraser & McDougall limit, berths 164 and 169 on Big Lake, River Des Moines, Quebec, 100 square miles, sold to W. G. Perley, Ottawa, for $90,000; Fraser and McDougall limit, berths 165 and 168, 100 square miles, to Alex. Fraser, Westmeath, $59,000; Fraser & McDougall limit, berth 167, 50 square miles, to E. B. Eddy, $15,500; berth 4, Deep River, 14½ square miles, to E. Moore, $4,200. The following were offered, but not sold:—Sir Francis Hinck's limit, 50 square miles, between the Coulonge and the Des Moines River, $110 per mile bid, limit withdrawn; Brannen limit, so called, offered on account of Mr. McMaster, Toronto, being berth No. 4, Kippewa, 50 square miles, $485 per square mile bid, withdrawn; berths 23, 53, and 51, Nipissing, 26 square miles each, were withdrawn, notwithstanding bids of $75,000 for the three and 50,000 for one berth. The Nipissing limit, berth 168, was offered and withdrawn. Several limits were offered for sale by Mr. Brewer, auctioneer, alternately with Mr. Tackaberry, but after spirited bidding they were withdrawn. The prices realized and offered were good.

The following limits were disposed of by Mr. Tackaberry in addition to those above mentioned: Fraser & McDougall limits, berths 164 and 169, to Perley & Pattee, for $90,000; berths 165 and 168, 100 square miles, and berth 166, 50 square miles, to A. Fraser, for $59,000 and $36,000 respectively; berth 167, 50 square miles, to E. B. Eddy, for $14,000. Deep River limit, berth 4, 14½ square miles, to E. Moher, for $4,200. Buck and Stewart limits, 13½ square miles, to Perley and Pattee, for $3,700. The following limits were offered for sale, but were withdrawn owing to the bidding not being sufficiently high; Brannen limit, on the Kippewa, fifty square miles, $495 per mile offered and refused. Lake Nipissing limits, berths 23, 43 and 51, 108 square miles, $75,000 offered for lot, and $50,000 for berth 23 and refused. Mattawa limit, license 168, sixty square miles. Kippewa limit, berth 63, 50 square miles. Mr. Brewer also offered for sale several limits, but as they did not bring the reserve price, they were withdrawn.

Resources of the Upper Ottawa

Great as are the better known resources in timber and water powers of the Lower Ottawa region, comprised within the area drained below Lake Temiskaming, they do not excel the 10,000 square miles of undeveloped country in the Upper Ottawa region, extending from Lake Temiskaming to the Grand Lake Victorian Basin.

Whilst the Lower Ottawa has for generations been pouring out its wealth of pine timber to the world's markets the Upper Ottawa has remained untouched because spruce and not white pine has always been the predominant forest there. To-day there remains very little white pine in the Lower Ottawa, or indeed anywhere in Canada. Spruce there remains in abundance, but in localities where pine has been so plentiful, as in the Lower Ottawa, the spruce is naturally not growing in such pure luxurious stands as in the regions where pine has never predominated.

Thus we find to-day the Upper Ottawa Valley, which was never much of a pine country, a rich virgin spruce forest abounding in water powers, great and small, and ready to offer up its resources at a time when the pulp and paper industry is preparing to take a world lead in Canada.

To anyone who has not cruised inland from the rivers of the Upper Ottawa the wealth of spruce is unbelievable. Casual observers of the morbid pessimist class have been known here as elsewhere to cry calamatiously, like the car window observer, because the whole timber wealth of the region did not roll out to the river banks for inspection. If the natural resources experts want to see timber, and especially spruce, it is necessary to leave the car window or canoe and get inland, usually a quarter of a mile at least, for the spring floods which overflow the banks of rivers and lakes prevent the maturing of large spruce in any quantity along shore. Besides, winds contribute towards restraining a heavy growth to the water's edge. And along railroads the laxity of control in burning right-of-way cuttings has often been responsible for long strips of burn both sides of the track. Once inland beyond the influence of these agencies the density of growth in the north country becomes evident.

In the Upper Ottawa I have found black spruce in thick growth in areas of over a hundred square miles, which, when followed in their more or less irregular outlines, will average 10 to 15 cords per acre. Some sections of 10 to 25 square miles will yield 20 cords per acre, and many localities of 100 to 600 acres contain 30 cords per acre on small sections, the number of black spruce trees of 7 inches upwards on such sections being as high as 520 to the acre.

The operating facilities of this whole region are particularly attractive owing to the possibilities of steamboat natvigation in stretches of 50 to 75 miles on lakes and rivers. The whole region of some ten thousand square miles can be reached with comparative ease, and that active operations may soon be looked for in this section is quite probable considering that some thirty million cords of spruce, exclusive of several million cords of poplar, stand ready for the axe.

All this wood may be cut, floated down and delivered, for a cost of $3.50 to $5.00 a cord, at the great water power sites of the Quinze River, situated near the Temiskaming and Northern Ontario Railway, and one hundred miles nearer markets than pulp and paper mills now operating with eminent success.

In a distance of fifteen miles from Quinze Lake to Lake Temiskaming the Ottawa (or Quinze) River can develop powers aggregating 250,000 h.p. up. Besides this, several other water powers farther up the main Ottawa can develop 5,000 to 20,000 horse-power each.—R. O. Sweezey, in the Canadian Forestry Journal.

Southern Pine Manufacturers Expect a Prosperous Year

One of the Southern pine manufacturing firms, in a recent letter to its salesmen advising them of an advance of $1 per thousand feet, to go into effect at once, expresses the conviction that 1917 will be an ceedingly active and successful year for the Southern pine industry. In order to account for these assertions the company gives the following reasons:

"First—Decreased lumber outputs:

"(a) Owing to the scarcity of labor in the North, many manufacturers have stopped the operations of their plants, and we are reliably informed that, on account of the scarcity of labor, the logging operations of many Northern manufacturers will be so crippled during the winter that there will be enforced curtailment during the entire year of 1917.

"(b) The present car shortage is also forcing a curtailment in lumber production throughout the South and Northwest. Many manufacturers have, from necessity, been forced to shut down, while most of the larger ones are pursuing a policy of curtailment necessitated by their inability to secure equipment necessary to take care of their output.

"Second—High prices of competitive materials:

"The high price levels reached during the past year by steel, cement, and other substitute materials have forced the use of Southern pine for structural purposes so that the interior demand for lumber is unprecedented. This will, without doubt, result to our benefit for years to come, as an opportunity has been afforded to put the proper grade of select structural material to test which will prove convincingly that heavy wood construction is economical, practical, and lasting.

"Third—Present prosperity of country at large:

"The present prosperity of the country guarantees civic business and individual improvement and expansion. Railroad earnings are such that carriers are now in a financial condition which will permit of immediate necessary improvements, increased terminal facilities, and increased equipment. Within the last week the Michigan Central Railroad has placed orders for 6,750 cars, approximating an expenditure of $9,000,000. The Great Northern Railway has also come into the market for 2,000 all-wood box cars. These are only two of the signs indicating that the railroads, the largest consumers of lumber, are again becoming active purchasers and consumers. Ship yards which have lain dormant for years are now running to full capacity, and have firm business in hand to take care of their output for the next year and a half to two years."

The determination of the Quebec Government to prevent the careless setting of fires in the forest was illustrated at Mont Laurier recently, when Judge C. B. Major inflicted fines and imprisonment on four settlers who had defied the permit law requiring them to obtain a written permit before burning their slash. Fines of $30 and costs, $25 and costs, and $25 and costs, or terms of 24 days and 15 days' imprisonment, were imposed upon three settlers, who chose to pay their fines. In the fourth case a fine of $25, or 15 days in jail, was imposed, and the settler chose the term in jail. These prosecutions were all commenced by the Lower Ottawa Forest Protective Association.

The 230th Forestry Battalion, which is now comfortably located in winter quarters at Brockville, Ont., is receiving new recruits daily from all parts of the country. This battalion will be sent to France to cut lumber, and will relieve soldiers now engaged in similar work, thus permitting them to go to the front. The 230th will not be sent to the firing line.

Preservation of Fir Stringers and Ties

Coal Tar Creosote Penetration of Douglas Fir Secured by Special Methods Without Injuring Strength of Timber

By O. P. M. Goss*

The creosoting of Douglas fir on the Pacific Coast has been practised for more than twenty-four years, and has proven an unquestioned success. Douglas fir is a difficult wood to creosote, and for this reason it has been necessary to give it special study in order to get the results which are possible to-day. It has been necessary in treating this wood to modify methods of treatment which have been successfully used throughout the eastern portion of the United States.

Both the boiling and steaming processes have been used in creosoting the various forms of Douglas fir. These methods have given excellent results in the treatment of piling and other forms, in which a loss in strength of the wood of from 30 to 40 per cent., due to the treatment, is not objectionable. The greatest objection to these treatments has been the loss in strength which they have caused when treating such forms as bridge stringers, ties, or other similar forms in which it was necessary to retain practically the full strength of the wood after treatment.

The United States Government began a series of tests about nine years ago to determine the effect on the strength of creosoting Douglas fir bridge stringers by the boiling and steaming process. Results of these tests are published in United States Department of Agriculture Bulletin No. 286, and show that the loss in strength in these forms, due to these treatments, ranged from 33 to 35 per cent., based on the modulus of rupture.

It is well known among those familiar with Douglas fir that it is a structural timber of the very highest merit. It has been used for construction work for practically every conceivable class of construction, and, because of its wide application, it is particularly desirable to develop processes of creosoting which are thoroughly effective and which do not cause any material loss in the strength of the wood.

The tests above referred to, which were made by the United States Government, showed the necessity for concentrated study on the subject of creosoting Douglas fir. This matter was taken up by the Association of Creosoting Companies of the Pacific Coast and by the West Coast Lumbermen's Association, and a large amount of experimental work has been conducted in an effort to develop the most satisfactory treatment for this timber. Acknowledgement is made of the co-operation given in this work by the Forests Products Laboratory, Madison, Wisconsin, and the Seattle Timber Testing Laboratory, both of the United States Forest Service and the University of Washington, Seattle, Washington.

High Temperatures Injurious to Strength.

Results of past experiments have indicated that the application of high temperatures was unquestionably one of the causes for the loss in strength in creosoting Douglas fir. In the application of the old boiling process the temperatures commonly ranged from 230 degrees F. to as high as 260 degrees F., and the seasoning period lasted approximately 24 to 36 hours. The application of these high temperatures for such long periods of time was unquestionably injurious to the strength of the timber. Briefly, the old boiling process was applied about as follows:

"The timbers were placed in the retort in a green condition and boiled in creosote oil under atmospheric pressure for 22 or more hours, at a temperature ranging from 230 to 260 degrees F. This boiling period was used to season the timber and properly prepare it for receiving the oil. When the boiling period was completed, pressure was applied, rising from zero to as high as 145 to 185 pounds per square inch. The pressure was continued over a period of four to six hours, at a temperature of approximately 200 to 230 degrees F. By this method 10 to 14 pounds of oil per cubic foot was injected into the wood."

The steaming process of creosoting requires higher temperatures than the boiling process, but they are applied for a shorter length of time. The following description gives some idea regarding the various operations involved in creosoting Douglas fir by the steaming process:

"The timbers were placed in the retort in a thoroughly green condition and steamed at a pressure of approximately 90 pounds per square inch for a period of four to seven hours, at a temperature ranging from 325 degrees to 335 degrees Fahrenheit. A vacuum of approximately 20 inches was then applied for 18 to 20 hours while the temperature ranged above 220 degrees Fahrenheit. At the end of the vacuum period creosote oil was introduced and pressure applied, ranging from zero to 160 pounds per square inch. This pressing period continued for two to four hours, at a temperature of approximately 208 degrees Fahrenheit. By this method 10 to 14 pounds of oil per cubic foot was injected into the timber."

* Consulting engineer for the West Coast Lumbermen's Association.

In both the boiling and steaming processes the temperatures applied are high enough to injure to some extent the fibre of the wood. These processes when applied to piling or other forms in which some loss in strength is permissible have given good results where the treatments have been applied in accordance with the best practice. In such forms, however, as ties and bridge stringers, in which it is necessary, in order to get the best service from the timber, that it retain practically its full strength, these processes have not proven entirely satisfactory. Because of this fact special efforts have been made in order to develop a treatment which would be effective and which would not prove detrimental to the strength of the timber.

Boiling Under a Vacuum.

Experiments were made on material creosoted by the Barry process, which involves heating the timber in a partial vacuum for the purpose of seasoning before the oil is introduced into the cylinder. This treatment did not involve the use of high temperatures, and consequently resulted in but a very slight loss in strength of the timber. It did not seem, however, to prove effective in uniformly seasoning a large charge of material. Apparently the transmission of heat through the partial vacuum was not effective, and the results in general seemed to indicate an ununiform seasoning of material. The material which was placed adjacent to the heating surface was unusually well seasoned and received a good oil penetration, but that taken from the centre of the charge would not seem to receive anything like the same degree of seasoning. These experiments indicated that the medium used for transmitting the heat as would naturally be expected was not effective. The next logical step seemed to be to season the timber under the same low temperatures used in the Barry process and to introduce some medium which would transmit the heat directly to all surfaces of the material being treated. In an effort to accomplish this result the boiling under a vacuum treatment was applied. This treatment is a slight modification of the old "Boulton Process," and has given excellent results in the treatment of bridge stringers or other heavy timbers subjected to cross-bending tests. This method has for some time been practised by the Colman Creosoting Company, of Seattle, the only difference being that the boiling was done under a low vacuum of 10 to 12 inches, which is less effective than the higher vacuum. This treatment is now applied at the various plants on the Pacific Coast about as described below:

Boiling Under a Vacuum Process.—The timbers are placed in the retort and creosote oil introduced at a temperature of 160 to 180 degrees F. Heat is applied and the temperature of the oil gradually raised to 190 degrees and held at this temperature for from five to six hours, a sufficient length of time to warm the timbers through. When the timbers are thoroughly warmed a vacuum of 24 to 27 inches is drawn on the oil, still maintaining a temperature of 190 degrees F. This vacuum is drawn through an overhead pipe extending from the top of the retort 36 feet vertically into the air and returning to the condenser. The purpose of this pipe is to prevent the creosote oil from boiling over into the condenser during the vacuum period. This vacuum is started at approximately 18 inches and, as the timber seasons, is gradually raised to 24 to 27 ins. The full period of vacuum is 12 to 16 hours. It is continued until the rate of seasoning of the timber is 1/10 of a pound of water per cubic foot of wood per hour.. After this finished rate of seasoning is reached the vacuum is broken and pressure

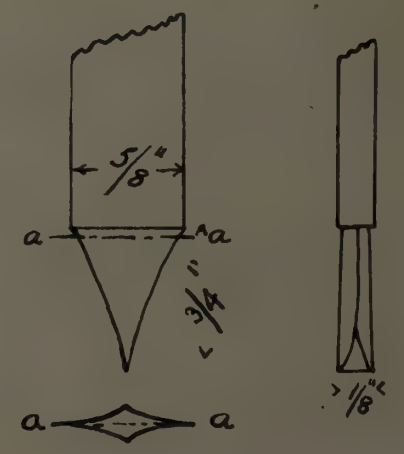

Fig. 1—Tool for perforating ties before treatment.

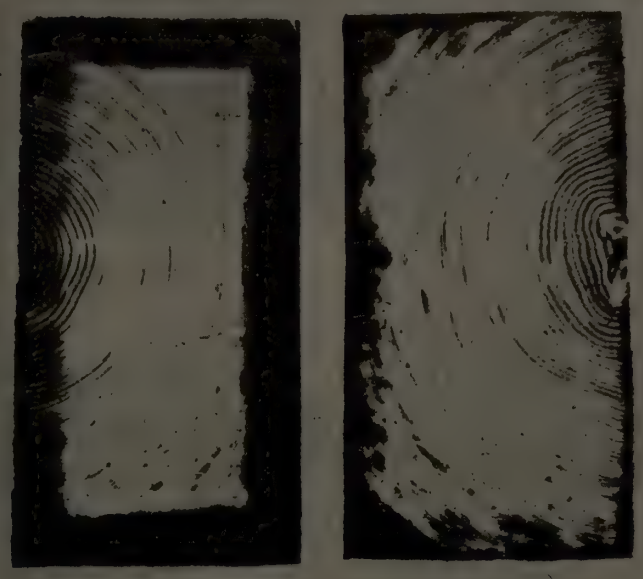

Fig. 2—Creosote oil penetration in perforated (left) section and unperforated (right) section of Douglas fir ties.

on the oil started, which rises as high as 120 to 135 pounds per square inch and continues over a period of four to six hours. The temperature of the oil during this pressure period drops from 190 to 180 degrees F. By this process 10 to 14 pounds of oil per cubic foot may be pressed into the wood."

Bridge Stringers.—In order to test out the efficiency of creosoting by the boiling under a vacuum method two shipments of green bridge stringers were selected and creosoted in four different charges. These stringers were shipped to the Bureau of Standards, City of Portland, for test. The stringers were selected in long lengths and were cut in the centre, one half being creosoted and the other half tested in its natural condition. The two halves of the stringers were as nearly equal in quality as it was possible to obtain. The results showed practically no loss in strength in the creosoted material.

Railway Ties.—The large volume of lumber used for railroad ties has seemed to warrant a very careful study of this subject. Accordingly, the lumber and creosoting associations have devoted considerable study to this subject, and have made a large number of experiments, both independent and in co-operation with some of the railroads, in an effort to develop the most satisfactory method of preparing and creosoting Douglas fir ties.

An untreated tie in the track is serviceable only up to the time when it develops weaknesses due to decay. From this time on it becomes worthless very quickly. This is largely due to the fact that a tie in the track is subjected to very heavy stress under normal traffic in compression perpendicular to the grain. The mechanical life of a Douglas fire tie untreated is probably at least fifteen years under normal railroad traffic. Such ties, however, in service last only six or seven years, due to decay, which eventually entirely destroys the tie. Douglas fir has the required strength to give long life in the roadbed when used as a tie, provided it is possible to prevent the development of decay. The experiments which have been made to date have aimed at two principle objects:

Machine designed to perforate Douglas fir railway ties before creosote treatment.

1. To prolong the natural life of Douglas fir ties by preservative treatment.

2. To apply the preservative treatment effectively without material injury to the wood fibre.

If the above points are accomplished it is certain that a greatly increased length of life will result from the use of Douglas fir ties.

Perforation of Railway Ties.

In investigating this subject an effort has been made to take advantage of the fact that creosote oil enters wood along the fibre with very much greater ease than in any other direction. The idea was, therefore, conceived by the writer to perforate the timber to provide a means of controlling the distribution of the creosote oil. This same thought had come to others, and Mr. B. Kuckuck made some tentative experiments in co-operation with the St. Helens Creosoting Company, of Portland, Oregon, about 1913. The perforations used were made by means of a drill, which bored a small hole about 1/16 inch in diameter.

It has been found that more satisfactory perforations may be made by punching the holes rather than boring, and by making perforations at short intervals it is possible to get a thorough penetration of oil in the timber equal to the depth of the holes without subjecting it to a severe treatment. A tool which seems to give good results is shaped as shown in Fig. 1. It seems necessary to cut the fibre of the wood in order to get complete distribution of oil with a mild treatment.

A machine was designed and built by the Columbia Creosoting Company, of Portland, Oregon, for perforating ties. This machine runs at a speed of about 70 per minute, and will perforate ties as rapidly as it is possible for laborers to handle them. The vertical rolls perforate the sides and the horizontal rolls the top and bottom faces. (See illustration.) The ties should, of course, be bored for spikes before treatment.

A good spacing for the perforations arranges them so that it is only necessary for the creosote to pass along the grain a distance of 3½ inches and across the grain about 1/16 of an inch from each perforation in order to give complete penetration on all faces of the tie to a depth equal to that of the perforations. The size of the perforations is approximately ⅛ inch across the grain.

The question as to the effect of perforating upon the strength of the wood came up immediately for consideration. For the purpose of securing reliable data on this subject strength tests were made on ties in both the natural and treated condition.

Thirty-one air-seasoned ties were selected for carrying out these experiments. The ties were of the ordinary grade, and were selected so that all tests were made on clear material and in such manner as to eliminate entirely the influence of defects. These ties were all tested in compression perpendicular to the grain. A steel plate 6 in. x 10 in., 1 in. thick, was placed across the face of the tie, covering an area equal to 60 square inches.

A section three feet long was cut off one end of each tie and tested in a natural condition. One half of the remaining section was perforated to a depth of three-fourths of an inch on all faces, in accordance with the spacing referred to above. This six-foot section was then placed in the retort and the following creosote treatment was applied:

The ties were heated in creosote oil under atmospheric pressure at 170 degrees F. for four hours. Approximately 100 pounds pressure per square inch was applied on the oil for three hours, at a temperature of 170 degrees F., after which the oil was drained off and a final vacuum of approximately 24 inches was drawn for one-half hour.

After treatment the ties were tested by the writer. These tests showed that there was no loss in strength, due to the creosote treatment, as shown by the average results, and also that the perforations made in the ties before treatment had no detrimental effect upon the strength. Fig. 2 shows the effectiveness of the perforations in securing uniform distribution of oil in three of the ties. Perforated sections show a uniform penetration to a depth slightly deeper than the depth of perforations, while the unperforated sections show very slight and ununiform penetration in comparison. These results indicate the possibility of gaining marked increased efficiency in the use of railway ties when creosoted by the method above indicated. The principal reason for the fact that no loss in strength occurred is that by means of the perforations it is possible to secure an effective penetration and distribution of the oil without the use of a severe heat or pressure treatment.

A good method for preparing railroad ties of Douglas fir is as follows:

Cut ties in winter and early spring. Perforate and openpile for air-seasoning, taking advantage of the summer months. The ties may then be creosoted in the early fall and winter or at any later date. Handling ties in this way will insure an absolute protection against decay, and will enable the wood to be creosoted without loss in mechanical strength. These two points will insure the greatest value possible in the way of service from this form of material.

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch. each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Wanted to Buy

Maple Squares 18 inches to 48 inches long; 1 in., 1¼ in., 1½ in., 1¾ in., 2 in. and 2¼ in. squares.—Apply to A. K. Hansen & Company, Quebec. Que. 20-t.f.

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

Wanted

Wanted 600 piles, 50 ft. long, 6 in. tops; 200,000 feet log run basswood; 150,000 3-inch spruce to be shipped during the winter. Will pay cash as soon as cut or will advance money to make the cut. H. V. BERRY, Fort Plain, N. Y., U.S.A. 22-23

SPRUCE MILLS

Inquiries for next season are coming in. I have market for your sawing of 1917. All or any part. If interested write me fully.

EDWIN D. HOWE,
P.O. Box 384 Valatie, N. Y.
23-2

WANTED

Large quantity of maple, black birch or hickory plank cuttings, 6 in. x 6 in., also 7 in. x 7 in., all 1¾ in. thick, must be dry and sound.

Also several carloads maple, beech or birch squares, 1 in. to 1¼ in. x 3½ ft. to 4½ ft. in length.

J. FINLAY & SONS CO.,
23-4 Norwood, Ont.

For Sale–Lumber

For Sale

Pine, Birch, Spruce, for Sale, suitable for shell box manufacturing. Apply The Office Specialty Mfg. Company, Limited, Newmarket, Ont. 22-24

For Sale

Two cars 1½ in. and two cars 2 in. White Pine, good sidings, extra widths and lengths.

KNIGHT, WHALEY CO.,
23-23 Guelph, Ont.

For Sale

CEDAR POSTS—Ready for immediate shipment. 2,000 sound Cedar Posts, 3 in. to 6 in. diameter tops, 9 ft. long, unpeeled. Inquiries solicited.

BARTRAM BROS., LIMITED,
22-23 Ottawa, Ont.

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
875 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que.

For Sale–Machinery

Logging Tractor

For sale one Gasoline Lombard Log Tractor, four cylinder engine. Low price. Randolph & Baker, Limited, Randolph, St. John Co., N. B. 23-24

For Sale

Goldie & McCulloch Corliss Engine, 16 x 38, 150 horse power; Berlin Matcher, No. 90, good as new; Grand Rapids Engine and Generator for 150 lights.

R. LAIDLAW & CO.,
22-2 Toronto, Ont.

For Sale

Fifty H.P. Waterous Boiler (Locomotive type) with 11 in. x 12 in. engine mounted on same. In first class shape and ready for immediate shipment. Apply to Peterborough Canoe Company, Limited, Peterborough, Ont. 23-2

Machinery Wanted

If you have any machinery for sale right here in this column is the place to advertise it. Every man who reads here is looking for a machine—if you have that machine you can do business. Let us quote you on an ad. 20-23

MACHINERY FOR SALE—One pair carriage sett works, with shafts and spring, Wm. Hamilton make. One Lath Mill. One Bolter. All in good condition and cheap.

Papineauville Lumber Co., Ltd.,
2[illegible]-1 Papineauville, P.Q.

FOR SALE

1—Wicks Gang.
1—Ideal Engine, 13 in. x 12 in.
1—Plain Engine, 16 in. x 24 in.
1—Plain Engine, 5 in. x 7 in.
1—Boiler, 72 in. x 16 in.
1—Boiler, 54 in. x 12 in.
2—Upright boilers.
1—Cookston water heater.
Several steam pumps.

CHAS. PEDWELL,
16-t.f. McVicar, Ont.

FOR SALE

We have the following second hand machines to offer, ask us about others not listed, if you are interested.

1 Egan 30 in. 2 drum sander.
1 McGregor Gourlay 30 in. 2 drum boss sander
1 Jackson Cochrane 36 in. 3 drum sander
1 Egan 42 in. 3 drum sander
1 Cowan 42 in. 3 drum sander
1 Cowan 48 in. 3 drum sander
1 C. M. C. 8 in. 4 side sticker
2 Ballantyne 12 in. 4 side stickers
1 Egan 36 in. single surfacer
1 Harper 26 in. single surfacer
1 Cowan No. 220 24 x 10 single surfacer
1 McGregor Gourlay QY 15 in. planer and matcher
1 McGregor Gourlay QY 9 in. planer and matcher
1 Jackson Cochrane 54 in. band resaw, 5 in. blade
1 Jackson Cochrane No. 165 rip saw

P. B. Yates Machine Co., Limited
Hamilton, Ont.
19-t.f.

Wanted–Machinery

Lumber Trucks

Wanted twenty-five, more or less. Must be in good condition. Iron wheels, 40 inches in diameter; 5-inch tires preferred.

Apply, E. D. McCallum, Drummondville, Que. 23-2

Machinery Wanted

1 Tongue and Grooving Machine.
1 Butting Swing Saw Machine.
1 Swing Shingle Machine.

All for heading mill.

C. B. Janes & Company, Limited,
23-t.f. Orillia, Ont.

Dutch Ovens Wanted

Wanted two Dutch Ovens, suitable for boilers 60 in. x 16 ft., or two boilers of about 75 to 100 H.P., equipped with Dutch Ovens. State price f.o.b. cars.

Trenton Cooperage Mills, Limited,
23-2 Trenton, Ontario.

Burner Wanted

Wanted, Secondhand Standard Steel Burner, 20 to 25 ft. in diameter. Must be in good condition. Give full description with price, and state where same could be delivered in case of purchase.

FRASER LIMITED,
21-24 Fredericton, N. B.

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

A YOUNG MAN wishes to make a change. Buying or Sales force preferred. Fifteen years in inspection work. Both rail and water shipments. Box 476, Canada Lumberman, Toronto, Ont. 22-24

MARRIED MAN, THIRTY YEARS OLD, ten years' experience in office work as Accountant, speaking both languages, desires to change, best of references. For particulars write to P. O. Box No. 69, Three Rivers, Que. 16-24

Practical woodsman and millman wants position. College education, both languages; seven years' experience, last three managing mill, seventy-five men. Best of references. Will go anywhere; salary dependent on results. Box 481, Canada Lumberman, Toronto, Ont. 23-24

ONTARIO LUMBERMEN owning Timber and Mills in British Columbia. Now is the time to operate. B. C. Mills cannot supply the demand. Prices highest and going higher. Manager large company in Interior B. C. will be available February 1st; twenty-five years' experience; will get results. Not operating on account of death of owner. Address 479, Canada Lumberman, Toronto, Ont. 22-23

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

WANTED — TROROUGHLY COMPETENT MANAGER to take charge of mills and limits in province of Quebec. Must be able to speak French and English and be thoroughly capable, from stump to mill. State fully experience, present position and salary required. Address Box 475, Canada Lumberman, Toronto. 22-t.f.

SALESMAN WANTED by large British Columbia shingle mill, to sell shingles on a commission basis. Must be able to handle large output. Apply Box 477, Canada Lumberman, Toronto, Ont. 22-23

Business Chances

For Sale

Twenty acres Elm and Basswood, also 40 acres of Virgin Cedar near station. S. A. Price, 71 Lakeview Avenue, Toronto, Ont. 20-23

For Sale

Planing Mill and Lumber Yard in Town of Sudbury, Ont. Electric power, 40 h.p. motor, planer and matcher, surfacer, rip-saw and dado saws, sticker, circular resaw, cross-cut saw, turning lathe, mortiser, tenoner, borer, sander, sash and door clamp, shaving baler, automatic knife grinder, fan and blowing system, knives, etc. Mill now running, dressed lumber buildings, barn. No better location in town. Splendid rail facilities, and no doubt the best thriving town in Ontario.

Address, Box 457, Canada Lumberman, Toronto, Ont. 18-t.f.

WANTED

Large manufacturers of wooden ware and other wood products selling to hardware stores, want to buy out the business and good will of some manufacturer having a line closely related to the above. Send particulars to Box 482, Canada Lumberman & Woodworker, Toronto, Ont. 23-2

Valuable Box Factory For Sale

The undersigned will receive offers for the purchase of that valuable property known as the

Czerwinski Box Factory

situated on Logan Ave. and Tecumseh Street, Winnipeg, Canada. This property comprises what is believed to be the finest box factory in Western Canada, fully equipped with the latest and best machinery for box manufacturing and ready for immediate operation. It also includes the factory site, consisting of about 2½ acres of land close in to the business centre of the city, and possesses unexcelled trackage facilities. Street cars pass the factory door. This is a magnificent opportunity for any person wishing to engage in box manufacturing. The whole may be purchased at a very great bargain.

Further information may be obtained upon application to

H. E. DENEEN,
Assignee of the Czerwinski Box Co., Ltd.,
300 Electric Railway Chambers,
22-t.f. Winnipeg, Man.

FOR SALE TIMBER AND MILLS

The undersigned offer for sale in one or separate blocks their timber and mills situated on the Crow's Nest Pass Railway, B. C., viz:—

About 12 square miles near Cranbrook, B. C., well wooded with larch, fir, etc., and a mill in good working order, capacity forty thousand feet.

On Lamb Creek, near Moyie, B. C., 12 square miles, heavily wooded with white pine and large spruce.

At Yahk Station, 4,551 acres Crown granted timber land, also about 7 miles white pine, larch and spruce, and a mill with a capacity of sixty thousand feet.

At Cranbrook the company own an up-to-date plant equipped with good machinery, where, under a favorable arrangement with the C. P. R., the output from different points named can be assembled and dressed ready for shipment.

The above timber all being in close proximity to the C. P. R. and the distance to the Alberta boundary being about 100 miles, gives the producer an advantage over the Coast mills, saving from $2.00 to $5.00 per thousand feet in freight alone.

The King Lumber Mills, Limited,
23-1 Cranbrook, B.C.

For Sale—Controlling interest in a Saw and Planing Mill, capacity 25,000 feet. Could be increased considerably. Mill on rail and tide water. Unlimited timber supply. For particulars apply to R. H. Young, Squamish, B.C. 21-24

Miscellaneous

Sleighs For Sale

Twenty-five sets logging sleighs, in good condition. The Peterborough Lumber Company, Limited, Peterborough, Ont. 20-1

For Sale

One hundred square miles of Pine and Spruce limits well situated on the St. Maurice River, on which at least 400,000,000 feet of lumber will be found. Price $350,000, payable $150,000 cash and the balance in four annual payments, with interest at 6 per cent. For full particulars apply to La Cie des Bois du Nord, 71a St. James Street, Montreal. 21-24

Tenders for Pulpwood and Pine Limit

Tenders will be received by the undersigned up to and including the 1st day of February, 1917, for the right to cut pulpwood and pine timber on a certain area situated on the Black Sturgeon River and other territory adjacent thereto, in the District of Thunder Bay.

Tenderers shall state the amount per cord on pulpwood, and per thousand feet board measure, on pine, that they are prepared to pay as a bonus in addition to dues of 40 cents per cord for spruce, and 20 cents per cord for other pulpwoods, and $2.00 per thousand feet, board measure, for pine, or such other rates as may from time to time be fixed by the Lieutenant-Governor-in-Council, for the right to operate a pulp mill and a paper mill on or near the area referred to.

Such tenderers shall be required to erect a mill or mills on or near the territory and to manufacture the wood into pulp and paper in the Province of Ontario.

Parties making tender will be required to deposit with their tender a marked cheque, payable to the Honourable the Treasurer of the Province of Ontario, for ten thousand dollars ($10,000), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said $10,000 will be applied on account of bonus dues as they accrue, but the regulation dues, as mentioned above, will require to be paid in the usual manner as returns of cutting of wood and timber are received.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.

Toronto, 1916.

N.B.—No unauthorized publication of this notice will be paid for. 21-22

TIMBER ESTIMATES
Appraisal of timber lands, timber maps, logging efficiency reports, planting. Maximum of accuracy in minimum time and at minimum expense.
D. E. LAUDERBURN, Forest Engineer
Rm. 1233, 156 Fifth Ave., New York, N. Y.

HARDINGE
Watchman's Clocks
Write for details
SIGNAL SYSTEMS CO.
205 Stevenson Bldg., TORONTO

FRASER LIMITED'S
LIST OF
Second-hand Lumbering Machinery

1 Auto Shingle Saw Sharpener,
Hanchett Swage Works,
Cat. No. 748.

1 Circular Clapboard Resaw.
Dunbar,

1 Circular Saw Grinder,
Covel,
Cat. No. 35

1 Dougle Clapboard Planer,
Woods,
Cat. No. 46.

1 Double Clapboard Planer,
Dunbar.

1 Dynamo, direct current,
Akron Manufacturing Company,
Cat. No. 1396.

1 Edger, iron frame,
St. John Iron Works,
6 ft. 4 in. x 2¾ in. arbor.

1 Engine, centre crank,
16 in. x 16 in.

1 Engine, side crank,
14 in. x 16 in.

1 Engine Flywheel,
25½ in. face, 14 ft. diameter, 7½ in. shaft.

1 Fan, 16 in. suction, 16 in. discharge.
Sturtevant,
Cat. No. R.H. 3669.

1 Friction Clutch Pulley,
28 in. diameter.
11½ in. face.

1 Gang and 2 sets of saws,
Wicks, 54 in. gate.
Cat. No. 1.

1 Gunshot Feed,
8 in. diameter, 37 ft. long.

1 Knife Grinder
S. A. Wood,

1 Planer and Matcher,
S. A. Wood,
Type No. 27.

1 Pump,
6 in. x 3½ in. x 9 in.

1 Pump,
Snow Steam Pump Works,
3 x 2 x 3, No. 55985.

1 Rotary Carriage, wood, right hand arbor,
5 ft. 9 in. x 3⅜ in.

5 Saws, inserted tooth, edger, 18 in. diameter,
11 gauge, 3 in. pitch, 4½ in. bore.

1 Saw, inserted tooth, rotary, 46 in. diameter,
9 gauge, 3½ in. pitch, 2 in. bore.

1 Saw, inserted tooth, rotary, 48 in. diameter,
9 gauge, 3½ in. pitch, 2 in. bore.

2 Saws, inserted tooth, rotary, Simonds, 52 in.
diameter, 8 gauge, 4 in. pitch, 2¼ in. bore

2 Saw Gummers, wooden frame.

1 Set Works, hand,
Waterous Engine Works,
No. 4 double acting.

14 Shingle Machines,
McF. T. & A.,
Dunbar Type.

1 Small Band Saw Grinder.
Baldwin, Tuthill & Bolton,
Cat. No. 2.

1 Steam Boiler, 16 ft. long, 6 ft. in diameter,
140 3 in. tubes.

1 Steam Cylinder,
Waterous Engine Works,
7 in. diameter, 30 in. stroke.

1 Steam Cylinder,
Waterous Engine Works,
10 in. diameter, 30 in. stroke.

1 Steam Nigger, Oscillating,
Waterous Engine Works,
Size 3-0, No. 109.

1 Twin Engine,
Whitter Machine Co., Boston, Mass.,
12 in. stroke, 7 in. diameter.

1 Upright Engine (Mark F15),
W. E. Hill Company,
4½ in. diameter, 6 in. stroke.

Also a large assortment of Belts, Pulleys and Shafting.

Prices, Descriptions and Complete List, with all particulars, sent on application to—

FRASER LIMITED
FREDERICTON - N. B.

Union Lumber Co.
Limited

Complete Stock

White Pine
Red Pine
Spruce

5 Cars Dry 32 in. Mill Run White Pine Lath

Union Lumber Co., Limited
701 Dominion Bank Building
TORONTO, CANADA

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

Review of Current Trade Conditions

Ontario.

The lumber trade in Ontario continues to show encouraging improvement. Reports to this effect are received from all quarters—manufacturers, wholesalers, and retailers—and the only drawback at present is the difficulty in obtaining stocks, resulting from two principal causes—first, the shortage of labor at the mills, and, second, the difficulty in making shipment as a result of labor scarcity for loading and unloading cars. For a time this situation led to an embargo upon C.P.R. shipments to Toronto, and no car lot shipments were made during the first two weeks in November. This embrgo, however, was subsequently raised, and shipments are again being made. Shipments of stock from Uinted States points into Ontario are very light, on account of the great scarcity of cars existing across the border.

In Ontario the improvement covers practically all lines. Hemlock manufacturers are asking $19 to $20 for No. 1 hemlock, good size, and $21 is being suggested. Delivered at Toronto, the prices would be about $21.50 to $22. This brings the price of hemlock to a level where it may find considerable competition from Southern yellow pine, which is offered, delivered at Toronto, at $21.75 to $23.

Further reports which we have received from manufacturing points corroborate the opinion already expressed that from now on we may look forward to a continually increasing shortage of stocks at mill points, which is certain to result in higher prices between now and next spring if the demand continues at all active. The improvement during the past month has been the result of retailers becoming convinced that the market is definitely on the upward trend and that they will be saving money by buying at present. This has brought about an extensive buying movement, which is likely to continue until the end of the year, when a falling off in the demand may be expected. The trade will then probably continue on a more or less quiet basis until the spring demand makes itself felt. The situation, then, is one which it is impossible to foretell at present, but it is quite safe to count upon a shortage of stocks and firm or high prices throughout the first half of next year, until new stock is ready for the market. These conditions apply to everything that is produced in the lumber line in Ontario.

There is practically no change to report in the hardwood situation. Canadian stocks are firmly held and are light. American hardwoods are in much the same condition, and the prospects for obtaining further supplies with any regularity are poor, on account of the car shortage. Ontario exporters to Great Britain report that the freight market is again advancing. Very little space is offering, and shipping companies are now asking 325 shillings per standard.

Ottawa manufacturers report that trade is more active than it has been for some time past. The building situation in Ottawa has also shown improvement, several large buildings having been started recently. The export trade is very quiet. Logging operators are having continued trouble in regard to securing men for the woods, although they are offering higher wages than ever before.

Eastern Canada.

The steamer shipping season from St. John, N.B., is now commencing, several steamers being due for cargoes for the allied governments. It is expected that large quantities will be sent forward this winter, extensive sales having taken place. Prices continue firm. St. John stocks are not very heavy, as some of the mills were idle nearly all summer and others only ran for part of the summer. About 20,000,000 feet of deals are on the wharves at St. John and much of this is long stock for the American market. Practically all the St. John mills will be closed down within the next few days. Stocks of logs carried over will be light, only about 15,000,000 feet. Men are very scarce for logging operations in the bush. Many operators are putting in portable plants and sawing their logs in the woods. Stocks of spruce boards, planks, and narrow widths are practically off the market. There is a good enquiry from United States and Ontario points, the latter being mostly for shell box material. Lath are very strong, and are selling at New York to-day at $4.50, and $5 is expected before long. Nearly all shingles at St. John have been cleaned up.

New contracts for shell boxes have been received by a number of Montreal firms, most of the contracts being in the neighborhood of 40,000 boxes each. The building trade has been improving considerably, a number of important contracts having been let, both in Montreal and outside points. Many lines of lumber are very scarce, and the shortage of cars is making it difficult to obtain sufficient stocks. The improved demand has stiffened nearly all prices, and further advance is expected. Improvement is also reported in the United States trade, and it is expected that this will continue.

The Eastern spruce market at Boston continues strong. Quotations for spruce frames are on a $29 base, and are firmly held at that. It is generally thought that spruce quotations will go still higher during the present year. Random is also stronger and quotations are firm at the following range: 2x3, $23; 2x4, $24; 2x5, 2x6, and 2x7, $23; 2x8, $27; 2x10, $28 to $29; 2x12, $29 to $30. An embargo against Southern lumber by the railroad companies has improved the demand for Eastern boards. Spruce covering boards 5 in. and up wide, 8 ft. and up long, are bringing $21.50 for good lines. Matched boards, stock lengths, are selling at $24 to $25. A firmer market is reported at Boston for hemlock. Clipped hemlock boards are bringing $21.50 and $22, while some manufacturers are talking of $22.50 and $23. There is also a good market for hemlock plank. There is a steady enquiry for shingles at Boston, but the actual volume of trade is not large. Quotations are rather firm on the basis of $3.50 to $3.60 for clears. Lath are still strong, selling at $4.50 for 1⅝ in. spruce and $4 for 1½ in.

Great Britain.

Improvement is reported in the spot market in Great Britain for Canadian pine, both the demand and prices having stiffened. This is the case prticularly in connection with the lower grades, but there has also been improvement in the demand for first and seconds. Stocks of Canadian pine in Great Britain are low, and anything like a normal demand would cause a serious drain upon them, especially in view of the fact that stocks in Canada are also low and the cut is not expected to be large. The situation, together with the advancing freight rates, makes English holders of pine feel well satisfied. There is also a good demand for birch planks, and prices have advanced. Birch logs, however, are not in much demand at London. Stocks of rock elm in Great Britain are low, and there is a good demand in most parts of the country. Generally speaking, the spot market at London has not shown much alteration, but deliveries are up to the average, and the demand is steady and fairly strong. Values are showing a tendency to advance in all directions.

There is a strong demand for boards, both planed and unplaned, and arrivals have been reported regularly in spite of the large number of vessels that have been sunk. There is a marked shortage of deals, battens, and flooring boards, but stocks of unplaned boards are about two million pieces above normal. At Foy, Morgan & Company's recent auction sale a lot of clear silver spruce from Portland, Oregon, brought £42 per standard for 1x10 and 1x12.

At Liverpool the c.i.f. business recently has been quiet, but the undertone has been good. Improvement is generally expected, as enquiries are being received from numerous quarters regarding liner shipments. Contracts for such goods are at advanced prices on account of increased freight rates and the higher cost of production in Canada. Information regarding the amount of space likely to be available by liners is difficult to obtain. Stocks that have been landed for shippers' account are well held, and are likely to be in good demand. The hardwood market at Liverpool during the past month has been better than was expected. Prices advanced and spot quotations were always below shippers' prices for further supplies. Sales for consumption have increased in comparison with visible supplies. Rock elm has recently been included in the list of prohibited imports. Elm was formerly included, but rock elm is specifically mentioned now in order to remove any misunderstanding. The spruce situation at Manchester has been improving. The low prices of Baltic timber were a drag on Canadian goods for some time, but this condition has now changed. There has been a heavy decrease in the consumption of Quebec waney pine logs, birch logs, and spruce deals at Manchester, but good business is reported in Quebec elm logs. Most lines of stock at the end of the present year will be in excess of those of a year ago.

The general improvement reported recently is still maintained. Higher prices have not reduced the volume of consumption, which is still slightly on the increase. It is not thought that any downward movement can be expected until the end of the war is in sight. The demand for the better grades of pine deals continues quiet.

United States.

An indication of the prosperity and industrial activity of the United States is afforded by the building returns. During the month of October gains in the value of new buildings for which permits were issued were reported from 74 cities out of 111, as compared with October of 1915. There is also an excellent demand from the railroad companies for construction material and car building material. An increase is reported in the demand for wood block paving; also in the demand for mill construction timbers, while the demand for export material is steadily increasing. Unfortunately, although increased

View of Mills in Sarnia.

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demand is reported from practically every quarter, manufacturers are still hampered by the great scarcity of cars. The whole outlook for the lumber trade is promising, so soon as the car shortage situation shows improvement. The Southern pine situation continues very strong, and the recent advance of $1 a thousand in the price has been easily maintained. The chief factors in this situation are a steadily increasing demand and the determination of manufacturers to keep their production well down. Since the first of November some of the larger manufacturers have notified their salesmen of three successive advances in price, all of which have been well maintained. Manufacturers are now confidently expecting that the trade will continue strong at least for the balance of the year.

Reports from the West Coast show continued curtailment of production, the extent being 12.34 per cent. The Pacific Northwest is feeling the car shortage more severely than other parts of the country. The demand continues good, nd increased orders are reported from numerous quarters. Although stocks at mill points have increased on account of the car shortage, most of the unshipped product is well covered by orders. The extensive shipbuilding developments in the Western States and British Columbia give promise of early relief from the shortage of vessels for shipment by water. At present there are 53 wooden vessels under construction at Pacific Coast points, which are consuming approximately 106,000,000 feet of lumber, and contracts have been let for 11 others.

In the hardwood markets improvement is reported in the demand for oak, both plain and quartered, and prices have advanced. There has, in fact, been a general improvement in the hardwood situation. There is a strong demand for mixed stock in all Northern hardwoods, and stocks at mill points are being reduced. Maple and elm have been affected strongly by this situation, and considerable advances in price have been the result. Piano and automobile industries are buying large quantities of maple and elm. The trade in basswood continues quite active, and there is also a satisfactory movement of birch.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Strong Demand for St. John Stocks

St. John, N.B., November 24.—(Special to the Canada Lumberman.)—The movement of lumber at the Port of St. John has not as yet commenced, although the next few days will see the beginning, as some steamers are now due for cargoes for the allied governments. No doubt large quantities will be sent forward during the winter, as large sales have taken place. Prices for present and future deliveries remain very firm, without any weakening influence, so far as can be seen at the present. Stocks are not heavy at St. John, many mills having been idle nearly all summer and others only running a short season. There are probably not over 20,000,000 feet of deals on the wharves at St. John, included in which are many deals sawn for the American market, but which are of sizes that can be diverted into the English market. A goodly quantity of these long American deals have been sold at very high prices, going to the allies for trench and sundry war material.

No sales for next season have taken place within the last two weeks, as a great many of the mills sold some time ago. Within the next two weeks all the mills at St. John will be idle. No large stocks of logs will be wintered. Probably in the vicinity of 15,000,000 feet will be carried over, a good many of which are double-length logs. Logging is now in full swing all over the provinces. Men are extremely scarce, wages being little inducement to get them to go to the woods. Any person who can get a portable mill is planning to saw the logs right in the woods and haul out the sawn timber; but even though many are planning cuts, unless labor can be found, the cut will no doubt be below normal. While the operators are crying out that logs will cost more, it is almost impossible to say at this date what the extra price will be.

No stocks of spruce boards, planks, or narrow widths are available. Enquiries are coming very freely from the American market and also from Ontario points. Large quantities of shell box orders are held by Upper Canadian concerns, who are looking around for supplies, but unable to find them at any price.

The base price on the Boston market is steadily improving, and before many days will have reached $30 per M., and that may not be the high point. Random is being sold at from $26 to $27 per M., f.o.b. Boston points. New York is fully as good as Boston.

Vessels for coastwise business are extremely scarce, and therefore little movement is taking place coastwise.

Laths are improving steadily and, if freights could be had, large quantities would move out. The price to-day is $4.50, New York, and will no doubt reach $5 before long, which will be an unprecedented price. Shingles have all been cleaned up at St. John. Only a few ex. No. 1 remain.

Further Improvement in Montreal Trade

Montreal, November 25.—(Special to the Canada Lumberman.)—The placing of several new contracts for shell boxes has helped to maintain the improvement in the lumber trade. The contracts, as a rule, run to about 40,000 boxes for each firm, at varying prices, and the orders are well distributed. There is also a much better demand by contractors, who have lately secured large contracts for Montreal and more particularly for outside points. A considerable amount of buying for these jobs has been done in the city. Ammunition plants and extensions to industrial plants figure conspicuously in the new work. Building is particularly active in the province, and this has also been a factor in the situation.

There is, however, a continued scarcity of certain lines of lumber, and many enquiries addressed to the mills bring answers to the effect that there are no such sizes available, or that they are sold out of stocks. This condition is aggravated by the small supply of cars at points where lumber is obtainable. Quotations have advanced under the stimulus of the better demand, and it looks as if they will go still higher. Manufacturers are asking more money in the new contracts now being made, and one large firm states that the cost of producing pine lumber will run into about four dollars per 1,000 feet, due to the increased labor cost and expense of maintaining camps.

Trade with the United States is satisfactory, and the immediate outlook is favorable for a continuance of this condition.

The export season is now about finished. As usual at this period of the year, every effort was made to send across as much as possible, but tonnage was so scarce that a large quantity of lumber had to be shipped via Portland. During the last week not an inch of room could be obtained, owing to the enormous number of parcels for the United Kingdom and France. Freights at the winter ports will probably be very stiff, and 325s. have been refused by the steamship companies, with indications that a much higher level will be reached.

Pulp and paper conditions are unchanged. The demand is as brisk as ever, and contracts have been entered into for very large amounts for next year—one company has sold practically all its sulphite output in 1917 at exceptionally good prices. The ground wood position is still good. Next year will witness a substantial addition to the production of sulphite and ground wood, as new mills and extensions to existing plants are now in the course of erection. The Wayagamack Company is adding to its pulp mill. The price of pulpwood has, in consequence of the increased demand, advanced so much that some lumber manufacturers have decided in 1917 to devote their energies to this branch of the industry and to cease sawing logs.

Ottawa Trade Improving

Ottawa, November 25.—(Special to the Canada Lumberman.)—More business has been done this month by the lumber manufacturers of Ottawa than during all summer and fall. Manufacturers all have the same story—all are busy.

Within the last month contracts aggregating about $100,000 have been divided among local manufacturers for shell boxes. These are mostly made of pine and spruce, and the mills have had a great run on these two varieties. This work has caused most of the increased business.

Another factor contributing to better business is that several large buildings have been started in Ottawa, and the demand for material has caused the manufacturers to be fairly busy getting it out. The local demand otherwise, however, is quiet.

There is very little export trade in progress. It is difficult to secure space, and freight rates are also unusually high.

Operations in the camps are well under way. It is becoming very difficult to get men, although the scale of wages was never higher.

Prices of lumber continue to advance, particularly pine and spruce.

New York Lumber Prices

Simpson, Clapp & Company, New York, N.Y., report under recent date as follows:—The timber market here has been holding firm with a tendency to advance on certain sizes. Spruce at $25 or better has been readily obtainable for what few two-inch random cargoes have been offering; six-inch at $24 to $24.50; eight-inch $26 to $27; ten-

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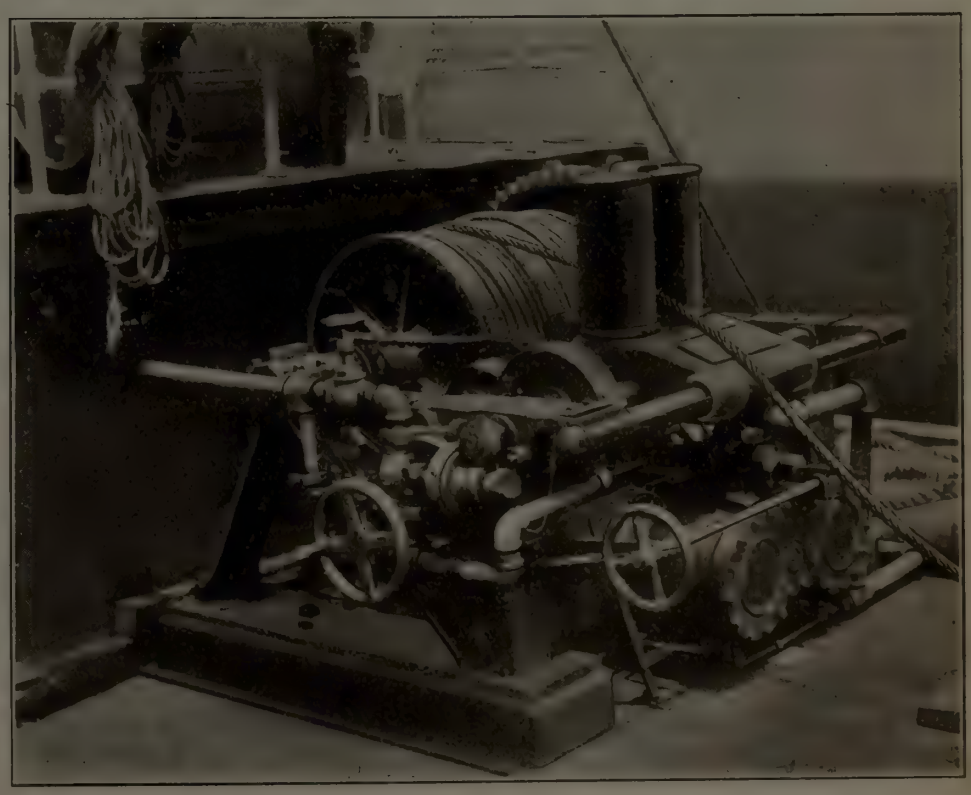

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inch $29 to $30. Spruce furring—1 x 2, D.1.S. and B at $21.50 to $22. Hemlock, for desirable sizes, all even lengths at $22 or better, according to schedule. Spruce boards, four inch at $22; five inch $20 to $21; six inch and up $23 or better; all 10 to 16 ft. White pine box, six inches and up wide, 10 ft. and up long, $23 or better; narrow and shorts $21. Spruce laths; the market has not advanced since November 1st, and while we have heard of sales at slightly under $4, the market is at this figure today.

London Market Report

Churchill & Sim, London, Eng., in their monthly wood circular, under date of November 3rd, report as follows: Deliveries from stock during the month of October did not greatly differ in quantity when compared with those of October last year, but there is a decrease of some 6,000 standards in the overside total. The aggregate stock of softwoods is some 3,000 standards less than that of October, 1915. The market has shown consistent improvement during the month, and this applies to all sizes of wood used in the building and casemaking trades. Swedish and Norwegian shippers sent increased quantities, but the Russian supply was smaller, while the importation from Canada showed a very great falling off as regards London. A very large business has been arranged from the northern ports, especially from Sweden, for late autumn and early winter shipment, and prices have been enhanced by the dearness of tonnage and the dangers to which neutral shipping has been lately exposed.

The importation to date has about kept pace with that of last season, but fewer floorings have come to hand, and the stock of them in London is smaller than usual. A large business has been put through in Swedish productions during the month, especially to London, where prices have again been higher. Values for all sizes, especially scantlings, were upon the up grade, the demand showing itself capable of taking up whatever shippers were able to supply upon a delivered basis of payment. Stock-notes towards the end of the month were getting depleted of the sizes most currently in demand, and for the present there seems to be no check to a continuation of present conditions.

From the St. Lawrence has been imported: Pine deals 276,000 pieces, against 415,000 pieces in 1915; spruce deals 1,089,000 pieces, against 1,785,000 pieces in 1915; birch planks 132,000 pieces, against 284,000 pieces in 1915. And from New Brunswick, etc.: Pine deals, 32,000 pieces, against 65,000 pieces in 1915; spruce deals 572,000 pieces, against 1,790,000 pieces in 1915; birch planks 44,000 pieces, against 314,000 pieces in 1915.

There has been a notable reduction in the supply of both pine and spruce from Canada during the year, and values are consequently tending gradually upwards. The quantities available from the lower ports also show a great falling off, but spruce prices were slow to recover after the fall in July, and only recently have been showing signs of improvement now that it is realized that there is likely to be no surplus quantity in the country for the requirements of the winter.

Liverpool Spruce Market More Active

Smith & Tyrer, Ltd., Liverpool, Eng., in their monthly trade circular, under date of November 1st, report as follows: There is more activity in most directions, and the general situation is more satisfactory and promising. The shortage of labor, owing to the war, is bound to have its influence on the situation. Hardwoods are without change. Spruce deals—Unsold cargoes are now very limited in number, and there is a more active competition for those available. The consumption has been disappointing. Prices are firmer, and are likely to advance during the winter months. Hemlock has been in better demand, but only at low prices. Birch has been difficult, owing to the import restrictions, but an improved demand was experienced. Pine is unchanged. Pacific Coast woods—There is an active demand for clear spruce, and considerable business is reported, but other descriptions have been on the quiet side.

Liverpool Market Report

Alfred Dobell & Co., Liverpool, Eng., in their monthly timber market report, under date of November 1st, say: Spruce deals—There has been no set-back in the improvement, which is well maintained and likely to progress, notwithstanding that stocks have the appearance of being ample.

Douglas fir has arrived in very limited quantities. There has been very little demand for clear planks or squares, but merchantable logs 50 feet long and up are wanted, as these lengths are practically exhausted. Prices are firm, and the difficulty in securing freight room continues.

Barbados Market Report

S. P. Musson, Son & Company, Barbados, B.W.I., report under recent date as follows: Lumberstuffs.—There have been no arrivals of either white pine or spruce during the fortnight. There is some enquiry for the former for future shipment, but sufficient sales of the latter have been made to supply the market for some time. Shingles.—Gaspe are wanted, and could sell to advantage. Cedar laying.—Large sales have been made for prompt shipment, and we do not think there will be any opening for further quantities for the present. Shooks.—We note the arrival of a small parcel for dealer's account. Wood hoods.—No receipts.

Liverpool and Manchester Stocks

The following report upon Liverpool and Manchester stocks for the month ending October 31st, 1916, is furnished by H. W. Lightburne & Company, Liverpool, and their St. John, N.B., representatives, John E. Moore & Company, Limited.

Spruce and Birch
Month Ending October 31st, 1916
Liverpool

	Import			Consumption			Stock		
	1914.	1915.	1916.	1914.	1915.	1916.	1914.	1915.	1916.
N.B. & N.S. Spruce Pine. Stds. ...	2,960	3,260	2,960	4,860	5,100	3,920	7,280	14,570	13,650
Birch Logs, Loads	60	240	0	80	60	120	300	920	1,140
Birch Planks, Stds.	473	485	873	327	164	376	564	1,122	1,200
Manchester									
Spruce, Stds.	7,430	2,700	3,990	5,950	5,470	3,400	14,670	16,780	20,540
Birch Logs, Loads	0	320	340	100	280	80	820	1,220	500
Birch Planks, Stds.	346	127	91	145	133	61	818	940	503

Stocks in Manchester and Liverpool Combined

	1912.	1913.	1914.	1915.	1916.	
Spruce						
Manchester	12,450	26,290	14,670	16,780	20,540	
Liverpool	6,100	9,740	7,280	14,570	13,650	
	18,550	36,030	21,950	31,350	34,190	Stds.
Birch Logs						
Manchester	440	280	820	1,220	500	
Liverpool	1,220	460	300	920	1,140	
	1,660	740	1,120	2,140	1,640	Loads
Birch Planks						
Manchester	727	600	818	940	503	
Liverpool	855	861	564	1,122	1,200	
	1,582	1,461	1,382	2,062	1,703	Stds.

Type A Edgers—Canadian Allis-Chalmers, Limited

Canadian Allis-Chalmers, Limited, have issued a new bulletin, No. 1723, describing their Type A. Edgers. These edgers are the present form of the original Allis heavy timber edgers, having a one-piece solid cast frame containing all the bearings for the arbor and feed rolls. The designation "Type A" has been adopted in order to distinguish them from their other designs.

Before the introduction of these machines all edgers were too light, their frames not having sufficient stiffness to hold the high speed arbors in line and provide a rigid support for the saw shifters. In this design it was their aim: first—to provide a single bed plate or frame to support all arbor and feed roll bearings, stiff enough to keep these parts in line and running cool whether the frame was supported properly on the mill floor or not; and second—to provide shifting mechanism of the most simple, rigid, accurate and convenient type. How well this has been accomplished is indicated by the excellent record of these edgers for quantity and accuracy of lumber produced, and by their acknowledged popularity in the estimation of sawmill operators.

A Large Order for Link-Belt

The wide variety of uses for link-belt chains, as manufactured and sold by the Link-Belt Company, Chicago, Ill., whose products are well known to lumber manufacturers and woodworkers, is interestingly illustrated in a new bulletin (No. 282) recently issued by the company, describing and illustrating the use of link-belt silent chain for transmitting power in the dye-making industry. Probably the largest order for silent chain drives ever placed by any industrial company is that of 1,000 link-belt silent chain drives recently purchased for the plant of the Schoellkopf Aniline and Chemical Works, Inc., Buffalo, N.Y.

It will be interesting to lumber manufacturers in Canada who are closing down their plants on account of the approach of winter to learn that in the gulf coast region of East Texas and the western Port of Louisiana, lumber manufactures have recently been afflicted with the worst scourge of mosquitoes ever known and that several large mills have been compelled to close down on this account, men and animals being tortured to such an extent by the mosquitoes that they could not work.

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SO WRITES Mr. Wm. H. Turner, secretary and treasurer of **The Easton Furniture Company,** of Easton, Md., after giving the "Morehead" system a thorough trial.
Until you are draining the condensation from your kilns and returning it—every drop—to the boilers at the **original temperature**—
—you are wasting heat units that **cost** you DOLLARS to produce.

STOP THAT WASTE!

Rejuvenate your entire steam plant by making the inexpensive "Morehead" system a part of it.
Save **fuel** by bringing the pure condensation directly back to the boilers HOT!
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Write for the proof to-day.

The "Morehead" book shows actual photographs of some interesting installations. Don't you want your copy at once?

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Extra Profit

You can make an extra profit from the waste materials around the saw mill. Install a small Soda Pulp Plant to take care of Slats Tops, Bottoms and waste wood. There is a great demand for Canadian wood pulp in Great Britain. We can dispose of all the pulp you can supply. We have handled ninety per cent. of the Canadian Pulp supplied to Europe since 1899.

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Great Britain Demands More Canadian Wood Pulp

The Cooperage Industry—Details of Operation

Editor Canada Lumberman:—Can you give us any information as to the manufacture of wooden barrels and other packages, the kind of wood used for staves and heads, and other material required, the machines and tools required, labor necessary, and the prices obtained for the finished product? If you can give us any information on these points, or put us in touch with anyone who can, we will appreciate it very much.—Colonial Lumber Company, Antigonish, N.S.

A bulletin on the "Wood-using Industries of the Maritime Provinces," published by the Forestry Branch of the Department of the Interior, shortly before the war, contains the following information: The manufacture of barrel stock is the fourth most important industry in the Maritime Provinces. Reports received from cooperages in 1912 gave the following figures for the Maritime Provinces: Slack staves, 39,939,000; slack heading, 2,746,662 sets; slack hoops, 6,227,900; tight staves, sawn, 1,389,083; tight staves, bucked and split, 12,000; tight heading, sawn, 177,113 sets.

Eleven woods are reported as being used in this industry, and all these but willow were used in making slack staves, although spruce, balsam, fir, birch, pine, and poplar in the order named were used in greatest quantity. Every one of the eleven woods was used for slack heading, with spruce, balsam fir, pine, ash, poplar, and elm leading in the order named. Almost 90 per cent. of the hoops are made of spruce and birch in about equal quantities. Elm, poplar, maple, ash, and beech are also used, and small quantities of alder were reported. Many of these woods are used for "half round" hoops, and the consumption of wood for this purpose is difficult to estimate in board feet. Spruce, birch, balsam fir, white pine, oak, and beech are used for sawn tight staves; balsam fir, spruce, and oak for "bucked and split" tight staves; and spruce, white pine, balsam fir, birch, and oak for sawn tight heading.

Wood for staves should be as tough and stiff as possible, although for slack cooperage great strength is not required so much as in the case of tight cooperage, where the slightest failure of a stave would mean the loss of the contents of the barrel. Heading woods do not require toughness, but only stiffness and the quality of holding their shape. Wood for hoops must be tough. Apart from these qualities, cooperage woods are chosen chiefly on account of cheapness and abundance, although clear stock is imperative for tight cooperage and very desirable for slack staves. Slack heading is often made of knotty material.

The material for this industry is all purchased in the form of logs and sawn into cooperage stock. Firms who purchase manufactured stock and merely assemble barrels are not included. The average price paid for raw material was $18.71, which is only 69c above the general average for all industries. The wood was all purchased in the Maritime Provinces.

The cooperages purchased more elm than all the other industries combined. They paid the highest prices reported for balsam fir, birch, poplar, beech, and hemlock.

Further information regarding this subject is being obtained, and will be published later. Readers of the Canada Lumberman who can send us information regarding machinery and tools required, labor necessary, etc., are requested to communicate with us, so that we may furnish as complete information as possible to the enquirers.

L. B. Beale Back in Toronto

L. B. Beale, British Columbia Lumber Commissioner at Toronto, has returned from a visit of several months to the Pacific Coast. While in British Columbia Mr. Beale visited practically all the large lumber manufacturing plants of that province, and he reports that business conditions are showing remarkable improvement. In fact, all the manufacturers are encouraged in regard to the outlook, and are predicting a prosperous year during 1917.

British Columbia's 1916 Fire Season

The fire season of 1916 in British Columbia has been a rather exceptional one. Until the last week of July the weather was favorable and there were no fires in the Vancouver and Island forest districts. About the end of July a long drought set in which was not broken until October 28th. During this period the fire hazard was greatly intensified. The fire fighting expense in the Vancouver and Island forest district was about $7,500, which is about one-half the amount spent in 1915. The area burned over in these two districts covered 10,000 acres, compared with 140,729 acres in 1915. Included in the area burned this season there were 300 acres of merchantable timber and 8,648 acres of logging slash. The damage done last year amounted to $85,000. This year's damage was only $10,505. The total damage amounted to 1,135,000 feet of merchantable timber during 1916, of which about one-half will be logged without much loss. During 1915 the damage amounted to 73,000,000 feet, of which 43,000,000 feet was reckoned as salvable.

Will Take Out All They Can—Labor Scarce

Editor Canada Lumberman: Buffalo, N.Y.

We are expecting to put out a fair stock of logs in connection with our New Ontario operations during this winter. Labor, however, with us, is scarce, and may be the means of curtailing the amount we had planned to put out. However, it is our intention to put out what logs we are able to. Stock we put out last year was comparatively light. The outlook for the coming year is very favorable—much better than it was a year ago.—W. K. Jackson, Limited.

Operations Handicapped by Labor Scarcity

Editor Canada Lumberman: Burks Falls, Ont.

Conditions affecting the log crop in this locality are such as to render it impossible to give anything more than a guess as to the amount that will be taken out. As for ourselves it is not the amount we will take out that has to be considered, but the amount we can get taken out, in view of the high cost, and particularly in view of the scarcity of labor.

We hope to get about 4,000,000 feet of hardwood and softwood, sufficient for the season's cut, but we are prepared to be disappointed and have to be satisfied with very much less, for the reasons given above.—The Knight Bros. Company, Limited.

Prices Should Advance by Thirty-three and One-third Per Cent.

Editor Canada Lumberman: Huntsville, Ont.

We expect to take out during the coming winter about four million feet of hemlock, 750,000 feet of spruce, 750,000 feet of hardwood, principally birch, basswood and elm, and 250,000 feet of white pine. This will be more than double the stock we took out during 1915-16, but the cost of producing this stock we feel satisfied will be fifty per cent. more than in 1915-16. Wages and provisions are fully fifty per cent. higher than at the same period last year. The men are not better, and in fact, it is more difficult to get the full gang of good bush men than it has ever been in the past.

From present appearances, there will have to be about thirty-three and one-third per cent. advance in the price of lumber if the manufacturer is going to come out with any margin of profit.—The Muskoka Wood Manufacturing Company, Limited.

Lumber Retailers Ought to Boost Their Stock

The state of mind which leads a lumber dealer to depreciate to the public the value of the product from which he makes his living is beyond comprehension. Attention has recently been called to the remarks of a city dealer, in which he is quoted as having said that "Lumber now is often of a lower grade, some of the second growth being used. Practically the same prices exist."

We have always maintained the fact that lumber is as good today as it ever was and in some cases even better if the right lumber is used in the right place. The different lumber associations are spending huge sums of money to promote the use of lumber, and they are entitled to the support of the lumber yards. Every retail lumber dealer should put his shoulder to the wheel to help this good work; they should help to build up and not try to tear down, as above indicated. We all know that lumber is abused enough by others, without adding abuse from our own dealers. They (the dealers) should realize that if the general use of lumber can be increased 25 per cent. in the community it will mean more business for them at fair prices. The trouble with the local conditions today is that there is not enough business to go around, and if business can be increased and give everybody a fair share it will surely have a tendency to improve the lumber yard trade. For this reason alone every retail lumber yard dealer should be a booster of lumber, and not be a knocker by telling the public that lumber is poorer than it was years ago.—E. A. Sterling.

Mr. Hugh A. Rose, Toronto representative for Mason, Gordon & Company, Montreal, left for British Columbia about November 15th on a business trip in the interests of his firm. Mr. Rose will return about the middle of December.

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ALL GRADES
WHITE PINE, SPRUCE and HEMLOCK LATH

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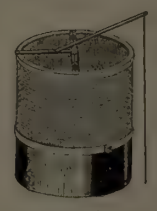

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Prices on application

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"For delivering lumber, the motor truck is the ***only*** means," says E.M. Carleton, Vice-President of this important concern, which has extensive yards at Cleveland, Ohio.

"We are positive, from our cost accounts, that our Packards paid for themselves and made a profit besides, in the first year each was in service."

On a recent test, one of the company's 4-ton Packards backed up Mr. Carleton's words by earning $28 in 8 hours and 18 minutes—more than four times as much as a competing team of horses.

The Packard made four trips that day, totaling 72 miles, and delivered 15,132 board feet of lumber.

The Mills-Carleton Company bought its first Packard truck in 1910—standardized on Packards in 1914—and bought another Packard last March.

Lumbermen who purchase Packard trucks ***usually*** re-order. Seven sizes of silent worm-drive Packards—1 ton to 6½ tons—enable them to standardize and get the exact combination of speed, power and capacity the business needs.

The counsel of our traffic engineers will help you to determine the right size, the proper body, the correct equipment throughout. Write or telephone us today for list of lumbermen and dealers operating Packard trucks.

Ask the man who owns one

The Ontario Motor Car Company, Ltd.
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Packard
CHAINLESS TRUCKS

International Co-operation Necessary

Pacific Coast Manufacturers of Canada and United States Urged to Work Together for Promotion of Export Demand for Lumber

At the "Forest Industry Conference" held recently at Portland, Oregon, an important address was delivered by Mr. H. R. MacMillan, former special lumber trade commissioner for Canada, who is now assistant manager of the Victoria Lumber and Manufacturing Company, Limited, Chemainus, B.C. Mr. MacMillan's subject was "International Co-operation," and he spoke as follows:—

"I have been listening very carefully to the chairman's constant expression of optimism that a great foreign market will develop in some hitherto undiscovered part of the world and take care of all of these problems. Now, it is just that kind of optimism I want to condemn. It is not going to get anybody anywhere (laughter), and I am surprised at the chairman that he should so constantly reiterate one of the basic evils of the business.

"This association is very properly the place to discuss co-operation. They introduced co-operation and, consequently, success, into the fire protection business; and now they are coming around to co-operation in something which is much more important than fire protection. I suppose at the very most our losses from forest fires have not been greater than $2,000,000 or $3,000,000 a year. Just this $2 a thousand, which we can get any minute we really want it, and go after it, on a Douglas fir cut alone, would be $20,000,000 a year. (Applause).

"So co-operation in marketing is just ten times more important than co-operation in stopping forest fires. In fact, so long as the people in this country are content to sell these 400-year old trees on a $9 basis on an export list, I don't see why we should not continue to have forest fires; we would be money ahead. (Laughter and applause).

"I am down here to speak of the necessity for international co-operation. International co-operation is necessary here on three different points; and from the Canadian standpoint, so far as I know it, the Canadians are extremely anxious to expand, and work in international co-operation. The first thing is educating the public to a knowledge of the conditions under which the lumber industry labors.

Progress Demands Co-operation

"Supposing you carried out this work, as you are certainly doing, and in a short time have adjusted your stumpage situation; what good is that going to do you in the foreign market if the Canadians have not kept pace with you? We all know that we have not got nearly so much timber as you have. We probably have about a third that is available for export, a third as much as you have in the Douglas fir region. That little third is just enough to upset all your combinations and calculations for as long as anybody in this room is going to live. Therefore, so far as the coast is concerned, the Canadians and the people of the United States must operate together. You can do nothing unless the Canadian progress is made equal to your progress. And at the present time, in a public understanding of the lumber situation and in the preparation of adequate and expert machinery to take care of the lumber situation, the Canadians are not on a par with you here in the United States. It is a very humiliating confession to make, but we must make the progress that you are making, and the only thing, or one great feature of encouragement, is that we speak a common language and can learn from what you have done.

"The second part of the international co-operation is not so necessary. It is simply a case where we should add our little to what you are going to do; and that is that these foreign countries must be taught to use our lumber more wisely and to use more of it.

"I was very glad to hear the gentleman who just spoke refer to the conditions in South America. I was not in South America, but every place else I was I found the situation ludicrous, if it had not been so pathetic. I found no person selling lumber in any place I visited, which was the whole of the British Empire and some other countries. There is no person selling our timber anywhere. I argued for the best part of two days with the Society of Civil Engineers in South Africa to induce them to believe that Douglas fir was a good timber to use for temporary bridge construction. I saw them pull down old buildings in Cape Town and take out second-hand pitch pine timbers that were cut in every conceivable direction with mortises and tenons and saw them up and use them for railway carriage building at the large cost of 7s 6d per board, when Douglas fir, a fresh cargo from this coast, was offered to them in absolutely sound timbers at a third the price. They don't believe in Douglas fir. I mentioned Douglas fir, as it happened to be the only wood in which Canadians are interested. The same condition applies to every west coast wood.

"It is inconceivable to believe that hundreds of millions of dollars can be invested here in holding timber lands and bringing the manufacture of lumber to the highest point of manufactured production and not a particle of care taken of the cargo after it is loaded on the ship. (Applause). But that is the condition that exists.

American Lumber in China

"The chairman mentioned yesterday morning, I think, what a wonderful opportunity China presented. China will be a market for railway sleepers, but if you went over there at the present moment and attempted to give them creosoted Douglas fir railway sleepers you could not do it. The people who have been creosoting Douglas fir for export here have evidently had their whole ambition staked on selling one cargo; they probably did not care about selling another. At least, that is the only thing an observer in that country can judge. Cargoes have been sold in India that have fallen to pieces in the ship's slings, and others have only lasted from two months to two years in the track; and the result is every potential purchaser of Douglas fir sleepers in either China or India is now an enemy of the Douglas fir business.

"We found people in almost every town selling cement, iron and all manner of substitutes; and for every little thing that develops which is wrong with any commodity on the market, there is an expert there, in a minute, to adjust the situation. A Douglas fir cargo arrives, some little thing goes wrong about it, and there is nobody there to look after it, and they immediately look for something else.

"I can give you an instance which will show you how the foreign purchaser learns about woods. The city engineer of the city of Melbourne, a city of about 700,000 people, depending almost entirely upon imported soft wood, is in a position to condemn any wood going into any public building. Naturally his condemnation of a wood for public buildings leads to similar condemnation by private owners. They are very largely guided by government authority. If the wood is not fit to put into a public building, the retailer hesitates to carry it in stock and it is condemned throughout the trade.

Introduction of Redwood into Melbourne

"The city engineer of Melbourne was looking for a fireproof wood to use in halls, stairways and in all public buildings. He was building a lattice work fence around his garden at home and he had a lot of redwood lath. He built the fence himself and had a lot of short pieces and shavings left, and the boiling of their washing was done over an open kettle outside. He left those shavings and short pieces and thought they would be very fine to light the fire with for the washing. The washwoman came and struggled all day without lighting the fire, and when he came home at night he ran into a domestic tempest. Then he discovered "here was fireproof wood;" and since that day every public building in Melbourne has had to be lined with redwood and all the halls. That is where the man got his information. (Applause).

"Now that is simply typical of what is going on amongst millions of potential users of west coast woods. That same man, it happened, built a house for himself. Somehow or other he discovered dry rot through defective ventilation in the basement joists of his building. These joists were Douglas fir. Something went through the floor, I don't know what it was, a stove or something like that, and since that time in no public building in Melbourne is Douglas fir allowed to be used for basement joists. That is the way they get their information, by blundering blindly from one fact to another, and very often, when they arrive at it, if it is not a fact, it is a prejudice.

Douglas Fir in South Africa

"I remember one incident that occurred in the gold mining district on the Reef in South Africa. The price of the Swedish 3 x 9 deals that they had been using for scaffolding in the mines went so high that one of the mine purchasing agents, a keen chap, who controlled the purchase of about 30,000,000 feet of timber annually and only for one group of mines—thus controlling to a certain extent the purchases made by other mines, because if he brought in a large quantity of timber the others used the same stuff—endeavored to introduce Douglas fir 3 x 9 in the mines.

"The laborers refused to stand on 3 x 9 Douglas fir for fear it would not hold them and insisted on two thicknesses being put wherever the Douglas fir was used, with the result that it was put out of business. This man had no time to fight labor unions. If he had been deeply interested in using Douglas fir, or some one else had been there who would have produced the facts in favor of the Douglas fir, he might have insisted on using it. At the present time there is enough corrugated iron imported to replace 3,000,000,000 feet of timber, and

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the proportion is constantly increasing, so far as I can find out. The per capita use of soft wood timber in Australia is only 24 feet per year —almost an unlimited opportunity for the development of the market.

"I could discuss this for hours, it seems to me, because it is a boiling, burning subject—the utter insanity of the manner in which we have sat here at home and howled about hard times and failed to develop the foreign markets.

Getting More Money for the Product

"The second thing is the question of getting more money for the timber we do export. With every exporter I met, the very first inquiry he made was as to the mental condition of the people who made and produced and sold this lumber. They cannot understand it. (Laughter). In fact, they don't believe yet that it is true. The first thing is entirely price. We sell lumber here at $8 to $10 base. The freight in normal times is $10 to Australia. The duty is from $2 to $7 a thousand. The landed cost c.i.f. and d. is in the neighborhood of $30. In normal times they retail that lumber throughout Australia for $56 a thousand. An extra $2 or $4 to us would make absolutely no difference to the consumers in Australia; they would never hear about it. The only alterations they ever make in their price lists in Australia are alterations of $6 a thousand, 60 cents a hundred; so they probably would not bother with little increases of $2 in the f.a.s. price. (Laughter).

"When the freight rates jump from $10 a thousand to $20 a thousand it does not affect in the least, so far as I can find out, the consumption of lumber in Australia. They used the same proportion of lumber in building when the price was a little lower. The difference between $55 a thousand and $60 a thousand in a country using 20 board feet per capita per year does not amount to anything. They would never hear about it.

"The next thing is, if we spent a small proportion of the increased price that we get, say 25 cents a thousand, which would be $150,000 a year for the Douglas fir region alone, we could probably pretty nearly double our sales.

"There is another mistake we make in the export market, and that is that the spread in 'G' list, on long timbers, large timbers, selects and clears, is a gift to the purchaser. We are bonusing every purchaser who buys a long timber. I have been greatly interested always in exhibits that this association has had here. I was informed a short time ago that a gentleman here on the Columbia River sold a cargo specification for $8.50 a thousand. I think he would be the most interesting exhibit that this association could have had to present to the lumbermen assembled here. (Laughter and applause).

"I have in my pocket, or in my hand, rather, a short statement, which is worth reading, taken from a Sydney retail price list of January, 1915. I am talking about Sydney or Melbourne all the time, because there is no use of talking about one hundred places when the conditions in one are simply multiplied in all the others. This refers to what they do to our 'G' list when they get it down amongst the consumers. On a timber 41 to 50 feet long we charge extra $3 a thousand; the Sydney retailer, when it costs him $30, landed, sells on a base of $56.80; and then where we add $3 he adds an additional $13.20. So on a timber 12 x 12—41 feet and 50 feet long, he gets a profit of nearly $30. For 51 to 60, where we add $6, he adds $15.60; 61 to 70, where we add $9, he adds $20.40; 71 to 80, where we add $13, he adds $25.20.

The Question of Prices

"Now I would like to ask if any person in this room believes that one of these 300 or 400-year-old trees, which we own and protect from fire and stand around here and discuss for a day or two in every year, should be administered wholly for the benefit of the Sydney retailer? And that is just what has happened.

"The same condition exists in the larger dimensions, 31 to 40 feet long. This is an additional charge. For 14 x 14, we charge $1 extra; they sell it at a profit of a little over $16 base and add $2.40 for having it big. They don't grow it; we grew it; but they get the money for growing it. For 16 x 16, we charge $2, and they charge $5. For 18 x 18, we charge $3, and they charge $15. They appreciate that that was an expensive tree to grow, therefore they tack on $15 profit. (Laughter). For 20 x 20 we charge $4, and they charge $20. And they get it, too. There is no cutting on these price lists. (Laughter).

"For clears we charge, on a 1 x 6, $7.50 a thousand; the wise Sydney men get together and they say, 'That stuff is scarce upon the west coast of North America; we will charge them $12 a thousand for it.' They charge them $12 and they get it. And that goes on all the time.

Australian Buyers Have Us on the Run

"There is another thing I was pretty nearly going to forget, and that is that these Australian buyers have us on the run. We may flatter ourselves that we have a grading bureau here and we sell them what we want to sell.

"After we have cut the price down to a basis where we can't look it in the face, we go to work and compete on grade competition, and the result is that cargoes go in there one after another which grade away above merchantable, even when only merchantable is paid for. That is the fault of the shipper.

"I don't mean to intimate for a moment that it is the fault of the grading organization. The shippers are putting in altogether too good timber. The result is, walking down the main street of Sydney about three months and a half ago I saw a temporary fence put up around a bank building—just one of those fences to keep passers-by from stumbling over the brick and mortar. I counted the first 122 boards in that fence and thirty-six of them were 1 x 6-6 foot edge grain perfect flooring boards. If they paid for this lumber what they should pay, according to the quality which is inherent in it (it belongs in this country and not Australia), they would not use it for temporary board fences; they would not think of it.

"The trouble is they are being given by us a champagne taste which we have not got the financial capacity to keep up. We cannot continue to feed them this stuff on the present price. They are getting the idea these Douglas fir trees grow to be four feet square, absolutely square, clear to the heart, and all you have to do is slice them off and cut clear boards. They have to buy our timber (so far as I can see at the present moment, they have no other possible source of supply) and what we should do is to get together and insist when they buy they buy the whole log; that every cargo carries a certain proportion of common. They can use common in building a city in Australia as easily as we can use common in building a city in North America. It only requires that we should have control of the trade and assume control and deal fairly with them; but make them take our lowers as well as our upper grades; and then the cargo business will be of some assistance to the interior lumberman. But so long as we sell only the high grades foreign and keep the low grades home to burn or to ship into the interior, the cargo business can only benefit the cargo mills, and it cannot benefit them at the present level of prices.

"The only suggestion I have to make is that, having carried out this co-operation in fire protection, in which you have co-operated with us Canadians out of the good of your hearts, that you should now enter with us into a co-operation for the good of your pockets in putting the lumber before the foreign purchaser in such a shape as he will pay for it." (Applause).

The Logging Manager's Qualifications

By John Rains*

He must have an existence before the operating company is formed. Many a lumbering proposition would never have been organized for failure had the logging manager first been consulted. Here sometimes "fools rush in where angels fear to tread." Some years ago an observing woman remarked to the writer, after he had examined a tract of timber, that a good many men had looked it over, and that some day one with more money than brains would appear and that they would sell it. The sale soon took place, and with disastrous results. Here is where our hero must shine. He must be a great timber estimator. He is a good judge of the quality of the stand estimated as well as its quantity. He has gained his knowledge and judgment by continuous estimates and study of various forest stands and further by following the logs through the mill and comparing actual outcome with his own prior estimates. He is conservative in all of his estimates. He accepts and uses the scientific methods of the Forest Service. While a practical man, he is yet broad enough to appreciate all that exact science has to teach him. Because he is capable as an estimator and sure of himself as to the skdding feasibility of the same, his judgment must determine the commercial possibilities of any given stand of timber.

He must be able to put a proper value on stumpage in relation to its ultimate market. Other things being equal, the higher the transportation charges the lower the stumpage values. His knowledge of ultimate values and proportion of grades will here serve him a great purpose.

Then our manager makes himself perfectly familiar with skidding conditions. Here is where he must be onto his job or costs will consume him. He makes a careful survey of the topography of the country and determines what system of logging will best suit his conditions. He may have to use every modern known system to operate his whole tract or tracts economically. He has an open mind, and will not deny the old methods simply because they are old. There is a possibility of overreaching the mark with cumbersome machinery, but generally he is safe in getting away as far as possible from brute force. He has the modern outlook, and recognizes that this is an age of steam in logging. And the nearer he can get the mill to the railroad, the railroad to the timber, and the steam skidder to the individual tree, the cheaper logging he can do.

He insists on being his own engineer, and determines grades and curves within the limit of safety. His judgment only in individual situations determines where railroading shall cease and skidding begin. He realizes that the log nearest the steel is the cheapest

* Address delivered before Appalachian Logging Congress.

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skidded, but the amount of available stumpage must determine to what distance he can push his steel and thus cheapen the actual skidding. The nice balance between railroading and skidding must be determined by our manager, and here is just where the most expensive mistakes are sometimes made. Local conditions must determine what shall be done. Each stream, each mountain, and finally each logging proposition as a whole may require different treatment, and the real office of the manager is to determine how each situation is to be handled for economical production. Because A has been successful with one method of logging is no reason why B should use the same method.

Our manager must determine the relative merits of standard and narrow-gauge railroading. Personally we have never been able to persuade ourselves that the narrow gauge was economical for the handling of not only logs, but bark and wood as well. It has been our experience that if we are to handle large stocks of logs with consequent heavy equipment, track and ties must be practically as durable for the narrow as the standard gauge, and there is, consequently, little saving in the cost of construction and no saving in the cost of operation, and an actual loss in the handling of bark and wood. The size of the operation and the possibility of future railroad development will have some bearing in determining gauge.

Looking backward, our manager finds that much progress has been made in recent years in logging methods. However, he is not satisfied, but it still working to improve upon the past. The method that has the most pressing appeal to him is to deliver the timber to the mill in the whole tree, or practically so, where it can be cut for both grades and lengths under the eye of one man, who shall be specially qualified for that work.

Conscious of the value of stumpage, our ideal manager is constantly working on the problem of eliminating waste and conserving all of the economically valuable wood. This means that he insists on securing all the valuable timber and bringing to the mill such, and only such, parts of the whole tree as are commercially profitable. For the residue he is seeking avenues of disposition in other directions, and here he calls to his aid the chemist and the government. There are, no doubt, commercial possibilities in all wood waste, and the government could render no better service than to aid the lumberman in finding uses and a market for all such waste. These latent values some day the magic wand of the chemist, under government aid, will make real.

He believes that the lumberman has an obligation to future generations, and so uses all means to conserve the newly-growing timber. The recent statement of the chief forester of the United States that by reducing waste it is possible to harvest a continuous crop of hardwoods from the present stand, and at the present rate of production quickens his pulse and stirs him to renewed efforts to lessen this waste and help to conserve these valuable hardwoods. To this end he combats the forest's greatest enemy—fire. Especially during dry seasons he insists on carefully hooded and screened locomotives; all trains fully equipped with hose and buckets; the outlook tower being carefully manned, and constant watchfulness to prevent the smallest beginning of fire.

Our ideal manager is a crank on cost accounting, and is able to show from month to mouth not only all the varied items that go to make up his totals, but adds thereto ample depreciation to consume his plant during its operation. Only thus can he keep from deceiving himself as to visible profits up to the close of his operation. However others may figure that low-grade lumber costs less to produce than high-grade, for himself he can prove by detailed accounting that his small and low-grade logs cost more to saw, trim, grab, skid, roll, load, and haul to the pond than the larger, high-grade logs.

He is a strategist, and knows how to handle men. He looks after the physical comforts of his men. His model camp is well lighted and ventilated; has ample storage and kitchen facilities; the dining camp is clean and roomy; sleeping quarters are kept clean and orderly; he provides a well-equipped reading and writing-room; pure water is always supplied, and the sanitary conditions are well looked after, for any man below par physically or mentally is the worst asset of any camp.

He has an open mind and, while keeping his own counsel and doing his own will, is eager for suggestions from both superiors and inferiors. He is not like the laws of the Medes and Persians, that change not, but is ready to discard the mistakes of yesterday for the light and wisdom of to-day. Especially does he solicit suggestions from the men immediately about him, for they are rich in practical ideas.

Of necessity he must be the chief counsel of the business. New problems of the greatest concern present themselves daily, and he has constant need of all his faculties. Hence he must keep his mind clear and body fit at all times. In short, he is a personality unhampered by the past, believing all things of the future, living, thinking, planning, and accomplishing day by day the highest results in the game of lumbering.

Quebec Forest Revenue

According to the report of the Quebec Lands and Forests Department just issued, the total revenue for the year was $1,807,259. Receipts from sales and areas amount to the sum of $75,703.59, while the sale of Crown lands, hydraulic powers, etc., produced the sum of $28,353.81, with expenses for the service amounting to $2,-219.50. Revenue from woods and forests amounted to $1,683,682.23, as follows: ground rent, $352,380.26; stumpage dues, $1,221,683.82; penalties and fines, $24,255.17; accrued interest $33,826.85; transfers, $10,720; premiums, $10,816.13. An area of 339,725 acres was subdivided during the year, and 103,658 acres reverted to the Crown. There is at the disposal of the Government at present 7,465,637 acres. The Hon. Jules Allard reports that owing to the system of fire protection the forests in the province did not suffer to any great extent, and he has high hopes for the future.

Douglas Fir Export Company

Manufacturers of Douglas fir in the Pacific Coast states have organized the Douglas Fir Exploitation and Export Company, the object being to promote foreign trade. Attention will be given immediately to standardization of grades, to the special preparation of export lumber, to propaganda in foreign markets, and to other details which will assist in the campaign. A. A. Baxter, manager of the Charles Nelson Company, San Francisco, is acting as general manager, and has opened offices in San Francisco. Charles E. Hill, manager of the Tacoma Mill Company, Tacoma, Wash., is looking after the affairs of the company in the North for the time being. Mills that have subscribed to stock in the company have a combined daily capacity of 6,790,000 feet per ten hours.

Low Prices and Wasteful Methods in the U. S.

Census statistics in the United States show that lumber prices, based on the figure received by the manufacturer, were 10 per cent. less in 1915 than in 1906, an actual loss in the ten years which have marked the greatest advance in commodity prices in the history of the nation in almost every other line. The problem of the lumber industry today, however, is not that of getting more for the lumber, but of utilization of the waste. A larger market, assured by scientific merchandising, will solve this problem, by making it possible to avoid the waste, which is chiefly due to the necessity, under inactive market conditions, of merely cutting the cream of the forest, to raise money quickly.—R. H. Downman.

Exchanging Private Land for Timber Lands in Quebec

The Quebec Legislative Assembly have read, for a third time, a bill affecting the exchange of private lands for timber lands, with a view to facilitating colonization. Part of the bill reads: "And that such lands, as soon as they are acquired by the Crown, shall be classed as public lands; that the Lieutenant-Governor-in-Council may sell public lands, for industrial purposes, upon the conditions and for the prices he may determine, but that in a territory under license to cut timber lands may thus be sold only for the operation of hydraulic power or in connection therewith; that the lands so sold shall be no longer subject to the license to cut timber, from and after the date of the letters patent or other title given by the Crown."

Reports from important lumber consuming points in the prairie provinces all agree that the demand for lumber has reached a stage far in advance to what it was earlier in the year. Retailers state that they are scarcely able to supply the demand and that there is a splendid outlook for a continuation of the present extraordinary volume of business. One retailer reports that during October his business was as great as during six months of last year.

The lumber cut in the Cobequids and along the Parrsboro shore of Nova Scotia will be exceptionally large this winter, if sufficient labor can be obtained. Prices in the European markets are high, and lumbermen are making special efforts to bring out an increased stock of logs. Many of the crews have started operating in the woods.

Interesting Link-Belt Installations

The Link-Belt Company, Chicago, Ill., have issued two new booklets describing their machinery for handling coal and ashes which have been installed for the Victor Talking Machine Company at Camden. N.J., and the W. H. Grundy Company, Bristol, Pa. The booklets are attractively illustrated, and give a splendid idea of the manner in which the link-belt products perform their work. These goods are well known to Canadian manufacturers through the Canadian Link-Belt Company, Ltd., 265 Wellington Street West, Toronto.

The Dominion Wire Rope Company, Limited, whose head office is in Montreal, P.Q., have opened an office in Toronto, at Room 108 Mail Building.

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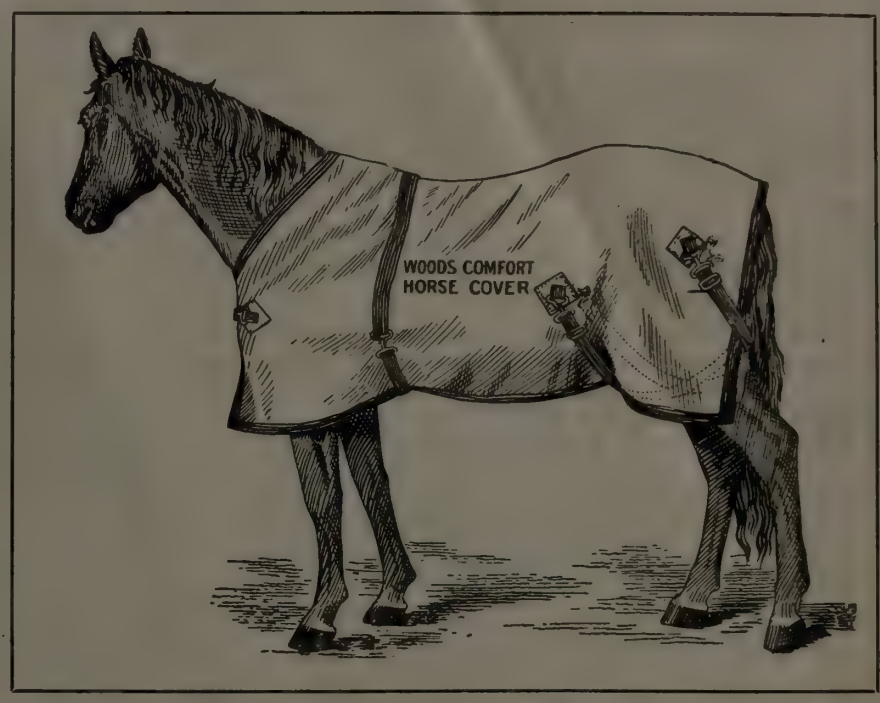
Comfort Horse Covers

Khaki or White Duck Cover, Kersey Lined, Full Size 74x84 inches. Breast and Leg Straps.

Write for prices.



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WHOLESALE LUMBER
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We have remaining for sale a few cars in each of the following items:

5/4 x 6 in. 10/16 ft. Mill Run White Pine
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3 x 6 and wider sound wormy White Pine
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EDGINGS

Ontario

The sawmill belonging to E. Witters, Mildmay, Ont., was recently destroyed by fire, incurring a loss of $3,000. The owner is considering rebuilding in the near future.

The Canadian Woodenware Company, St. Thomas, Ont., report that they will not complete the erection of their new plant before next spring and will continue operating in their present plant until that time.

Mr. A. J. H. Eckhardt, 500 Huron Street, Toronto, represeenting a syndicate is negotiating for the purchase of certain timber limits in the province of Quebec. The intention is to erect saw and pulp mills. The work of constructing the plants will not be commenced before next spring.

As a result of the continued absence of Mr. P. J. Noel, lumber manufacturer, Fort Frances, Ont., the P. J. Noel Lumber Company have made an assignment for the benefit of their creditors. Mr. Noel disappeared mysteriously and no explanation of his absence has been obtained. He was last seen at International Falls on October 7th, and his many friends are extremely anxious regarding his whereabouts.

The town of Port Arthur, Ont., has ratified the agreement between that city and A. G. McIntyre, recently appointed news print manager of the American Newspaper Publishers' Association, who represents interests controlling several other pulp mills in Canada. The company will build a plant of 150 tons output of sulphite pulp per day, in three units of 50 tons each, to which will later be added a paper mill under the agreement upon which the pulp limits are secured from the Ontario Government; the 150 ton plant must be completed in three years at a cost of $1,000,000. Construction will be started immediately and the location will be at Bare Point in the north end of Port Arthur. The city gives 100 acres of land to the new industry with no exemption from taxation or other bonus.

Eastern Canada

The sash and door factory belonging to J. A. Nadeau, Drummondville, P. Q., was recently destroyed by fire, incurring a loss of $15,000. The owners will probably rebuild.

Fire recently destroyed the sulphur shed of the Dominion Pulp Company, located at the Canada dock, Chatham, N. B., the loss also including a considerable quantity of sulphur.

Fraser Limited, Carleton Street, Fredericton, N. B., are contemplating the erection of a pulp mill. They have under consideration the organization of a company with capital of $4,000,000. The site for the new mill has not yet been definitely settled.

G. H. Vernon and T. T. Davis, Truro, N. S., will operate on an extensive scale this winter. They already have five crews in the bush at Riversdale, Malagash, Upper Mount Thom, Kemptown and Debert. Messrs. Vernon and Davis will ship their product overseas.

The Canada Paper Company, Limited, Windsor Mills, P. Q., has commeenced work on the erection of paper mills to cost $30,000. The building will be two storeys, 128 x 57 feet, and will be of reinforced concrete and brick construction. The general contractors are A. F. Byers & Company, Limited, 340 University Street, Montreal.

The mill of the Pejepscot Lumber Company of Great Salmon River, N. B., which was destroyed by fire in the fall of 1915, has been rebuilt. The new mill cost about $45,000, and has a capacity of 50,000 feet of sawed lumber per day. The plant is also equipped with a new barking drum for barking pulpwood, which takes care of 75 cords per day. The plant is lighted with electric light.

The Brompton Pulp and Paper Company, Limited, have been incorporated under Dominion charter to take over the business undertaking and assets of the Brompton Pulp and Paper Company, which was incorporated in 1912 by special act of the Legislature of the province of Quebec. The company's present annual output consists of the following:—groundwood pulp 30,000 tons, newsprint paper 16,500 tons, kraft pulp 12,000 tons, kraft and fibre paper 9,000 tons, box board 10,500 tons, merchantable timber, 15,000,000 feet b.m., shingles 5,000,000 pieces, railroad ties 30,000 pieces, miscellaneous timber, 1,000,000 feet b.m.

Haley & Son, St. Stephen, N. B., have commenced to rebuild their plant and warehouse which were recently destroyed by fire. The warehouse has now been all framed up and boarded in. It will be 100 ft. by 60 ft. Work upon the factory is also progressing, and the concrete foundations are nearly finished. The factory will be 100 ft. by 75 ft., two storeys, with an ell about 60 ft. by 40 ft., also two storeys. The total equipment, including power plant, which was not destroyed by fire, will cost about $50,000. The firm will continue the same line of business as formerly, namely, sawing logs for box shooks.

making box shooks and all kinds of mill work. They expect to be in running shape by March, 1917.

Western Canada

J. P. Pringle's sawmill at Grande Prairie, near Salmon River, B. C., was recently destroyed by fire. The loss included 150,000 feet of lumber.

The Vedder River Shingle Mill, of West Vancouver, B.C., are commencing operations early this month and giving employment to about one hundred men.

The Dominion Cedar and Shingle Company's shingle mill near New Westminster, B. C., has been completed and the machinery is being installed. The plant will probably be in operation about the middle of December.

The Coast Central Mill Company, Limited, has been incorporated with head office at New Westminster, B. C., and capital stock of $200,000, to carry on business as loggers and as manufacturers of timber, lumber, shingles, etc.

The Burrard Saw Mills, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $25,000, to carry on business as loggers, sawmill and shingle mill proprietors, lumber and timber merchants, etc.

W. M. Gilfoy, Calgary, Alta., reports that there is a strong likelihood of another pulp mill being opened up in British Columbia in the near future. Mr. Gilfoy, who is the head of the Coast Timber and Trading Company, states that a syndicate of eastern capitalists is endeavoring to acquire large tracts of timber and that considerable progress has been made. He also states that if the undertaking is carried out it will mean the erection of the largest pulp mill in Canada.

J. S. Emerson, 744 Hastings Street West, Vancouver, B. C., reports that he has plans in progress for the erection of a sawmill, kilns for seasoning, and shingle and planing mills at Prince Rupert, B. C. The capacity of the sawmill will be 75,000 feet per day. The mill will give employment to about 300 men and will turn out everything from house building material to lumber and timber for the construction of ships. A site at the eastern end of Kaien Island is being considered.

The Canadian Robert Dollar Company will commence work almost immediately on the construction of a sawmill and docks at North Vancouver, B. C., at a cost of $200,000. The mill will be electrically operated and will have a capacity of 175,000 feet per day. The dock will be about 800 feet long. The company will also erect about twenty houses for its employees. Most of the equipment of the mill will be secured from the plant at Ruskin, B. C., formerly belonging to E. H. Heaps & Company, which the Canadian Robert Dollar Company have purchased. The chief party interested in the company is Mr. A. M. Dollar. The company expect to have the plant and docks completed within four months.

F. H. Hopkins & Company, whose head office is in Montreal, have opened an office in Toronto, at Room 108 Mail Building.

Imports of wood goods into Bristol, England, during the six months ending June 30, 1916, amounted to 33,870 tons. More than half of these goods were obtained in Canada, the total being 18,363 tons.

Chester Derring, of the Niagara Insurance Company, New York, and J. F. R. Webber, of the Springfield Insurance Company, Springfield, Mass., recently visited a number of British Columbia plants on which they are carrying fire risks, and, according to their report, trade conditions are most encouraging.

A record price was reported for shingle bolts in Vancouver towards the end of October, when they reached $7.25 for choice lots, according to a press report. The same report tells of a decided shortage of bolts, which is accounted for by the difficulty in getting labor and the scarcity of water in the creeks.

Mr. S. C. Yeomans, of Malay, recently visited Vancouver, and in an interview stated that the Federated Malay States are endeavoring to obtain supplies of wood pulp from British Columbia. The source of supply for the Malay States has been interfered with by the war, and British Columbia offers the greatest advantages in connection with securing future stocks.

The Brown Corporation have a first-class modern dressing plant in connection with their mills at La Tuque, Que., and they make a specialty of dressing, re-sawing, and ripping lumber in transit. They have such excellent facilities that shipments can be put through promptly, and the plant is modern in every way. La Tuque is located on both the Canadian Northern and Transcontinental railways.

E. C. Atkins & Co., Indianapolis, Ind., report that Mr. T. A. Carroll has been appointed manager of their advertising department, to succeed Mr. H. T. Benham, who has resigned. Mr. Carroll has been in charge of the company's trade service department and is therefore acquainted with the details of his new work. The former manager, Mr. Benham, resigned in order to enter a new field of business.

Take a Look at the Pile

of heavy timbers in our yard. Note how squarely they pile and match. That's because they are all straight grained and have been seasoned evenly. Just a sample of all the lumber here. The best selected wood in the first place and the best of care in putting it in condition. It pays to use such lumber.

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If you contemplate installation of a new blower system or an extension of your present one, write us, as we have a unique proposition to offer. There is no heating, clogging or shaking with our system.

Prices on application

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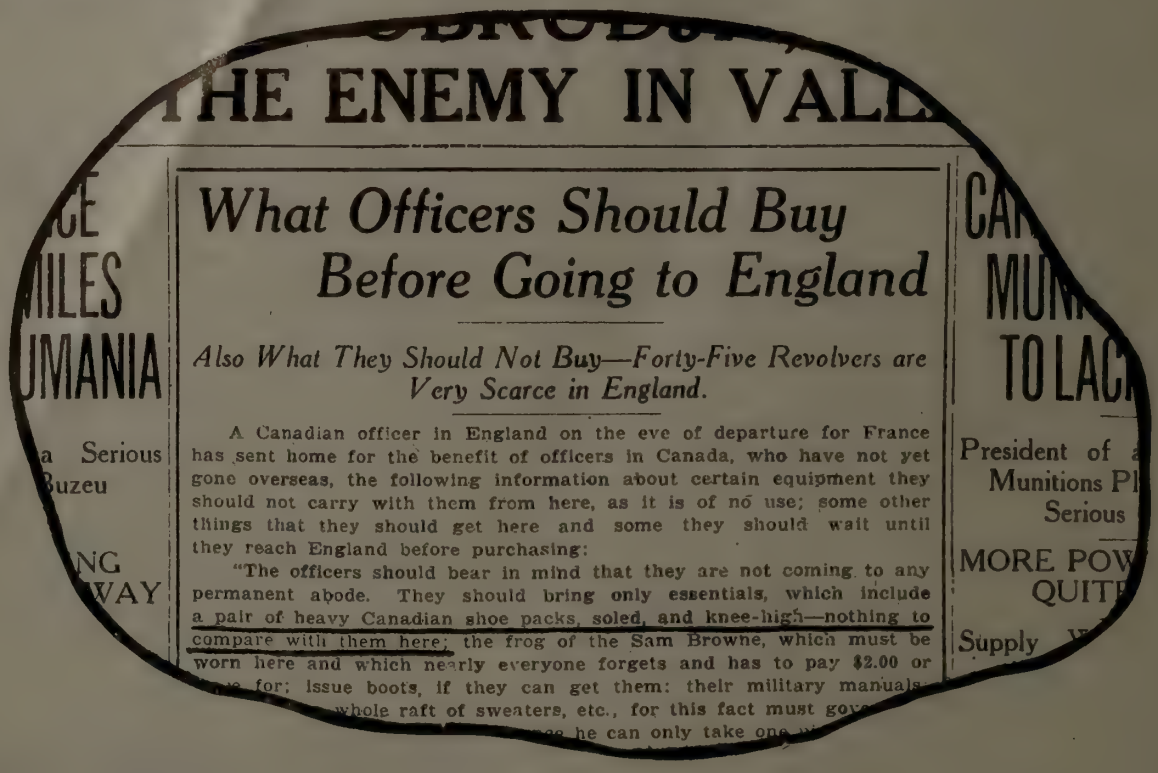
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What Officers Should Buy Before Going to England

Also What They Should Not Buy—Forty-Five Revolvers are Very Scarce in England.

A Canadian officer in England on the eve of departure for France has sent home for the benefit of officers in Canada, who have not yet gone overseas, the following information about certain equipment they should not carry with them from here, as it is of no use; some other things that they should get here and some they should wait until they reach England before purchasing:

"The officers should bear in mind that they are not coming to any permanent abode. They should bring only essentials, which include a pair of heavy Canadian shoe packs, soled, and knee-high—nothing to compare with them here; the frog of the Sam Browne, which must be worn here and which nearly everyone forgets and has to pay $2.00 or ... for; issue boots, if they can get them: their military manuals ... whole raft of sweaters, etc., for this fact must go ... he can only take one ...

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Serious
MORE POW...
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The Gruelling Test of War

The author of the above has based his advice on the suggestions of fellow officers now in the heat of battle.

No more supreme test could be applied to Palmers Moose Head Brand shoe packs than service in the trenches—the verdict they earn is "Nothing to compare with them here."

If our shoe packs can "make good" on the firing line they can "make good" anywhere.

They are carried in stock and sold by the leading jobbers of footwear throughout Canada who will see you soon with 1917 prices. Reserve your orders for them.

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Canada's Oldest and Largest Manufacturers of Oil-Tanned Waterproof Footwear

FREDERICTON, N.B.

THE MOST MODERN MACHINE FOR SKIDDING LOGS OF ALL SIZES

The "LIDGERWOOD" Portable High Spar Skidder

Operating over the longest single span in the world—over 3800 feet

The portable spar is mounted upon a steel platform, and the spar can be readily lowered for moving. The platform can be either mounted on trucks, remaining on same during operation, or built with legs, and provided with hydraulic jacks which lift it off the trucks or car upon which it is moved from one setting to another, and allow it to straddle the track during operation, the empty cars passing underneath the machine to be loaded.

The engine equipment varies according to the requirements, methods of loading, whether by boom or guy line, guy tightening, car spotting, etc. We equip these skidders with engines adapted to meet every requirement. The main skidding engine and its auxiliary engine or engines may either be mounted on the same car with the spar or on separate car.

The LIDGERWOOD skidders are the only skidders provided with interlocking drums, and with a mechanical slackpuller.

The method of interlocking the drums makes it possible to suspend the logs at any height. They can be skidded with the ends dragging along the ground or entirely suspended.

This interlocking of the outhaul drum is done by one set of gearing, but when the outhaul drum returns the carriage a high-speed gear is thrown in and the carriage travels back at high speed.

When the carriage is run out into the woods with the skidding line the operator at the engine, by means of the slack-pulling drum, pays out all the slack that is required in the skidding line to reach logs lying on either side of the main cable. The slow and tedious pulling of the slack by hand is done away with and time and labor saved on each trip.

These two devices giving high speed outhaul, skidding with the load in suspension, a reduction of the strain on engines and cables, and a saving of time picking up each load, give high capacity, low cost for operation and maintenance, and handle the logs without damage to the timber.

We have paid special attention to the construction of Cableway Skidders required by conditions in British Columbia and the most successful machines now in use in that province were installed by us.

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Manufacturers of Air Compressors, Boilers, Cement Making Machinery, Concrete Mixers, Flour Mill Machinery, Gas Engines, Hoisting Engines, Hydraulic Machinery, Lidgerwood Engines and Cableways, Locomotives, Logging Machinery, Mining and Crushing Machinery, Ornamental Metal Work, Rock Crushers, Rock Drills, Saw Mill Machinery, Steam Pumps, Steam Shovels, Steam Specialties, Steam Turbines, Structural Steel, Transmission Machinery, Turbine Pumps, Water Pipe, Water Wheels.

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According to the conditions under which the belt is to run, we recommend "Extra," "Standard" or "Acme Waterproof" belts.

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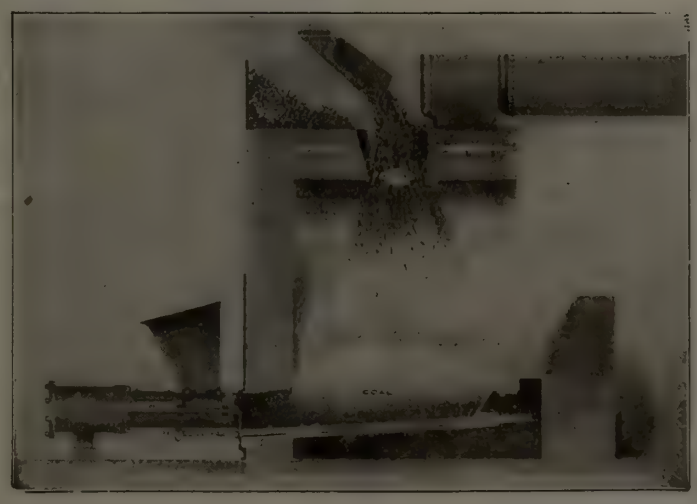
J.L. GOODHUE & CO. Limited.

DANVILLE — QUEBEC.

TURN YOUR REFUSE INTO FUEL

The disposal of waste in a saw, planing or pulp mill used to be an item of expense. By the installation of Jones Underfeed Stokers this waste can be used as fuel. The use of the Stoker equipment consumes as illustrated, the refuse and by the mixture of a small amount of coal a steady steam pressure is maintained. If you should run out of refuse or the mill conveyers break down, the change to coal fuel can be made instantaneously without any fluctuation of the steam gauge. One large pulp and paper mill reduced its coal bill 99 o/o with Jones Underfeed Stokers and the utilization of its mill refuse. Every mill cannot make such a colossal saving as this but substantial economy can always be effected with Jones Stokers.

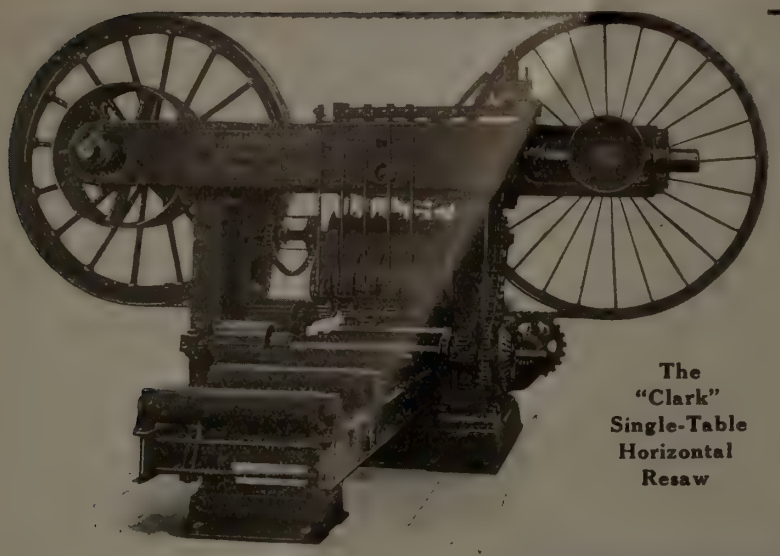


Arrangement of Jones Underfeed Stokers in Dutch Oven for burning paper mill refuse in conjunction with coal.

What are the conditions in your mill? Let us talk to you.

JONES UNDERFEED STOKER CO., LIMITED

National Trust Building, TORONTO



The "Clark" Single-Table Horizontal Resaw

Ever Consider Why These Machines are so Popular?

The possibility for fast and accurate production—is the answer

Some of the special features of the "Clark" Horizontal Resaw are—

The method of returning stock through machine, eliminating expensive return system—The use of the lower part of saw blade, this means the resaw sets on mill floor where every part is accessible. Entire table twenty-four feet long raises and lowers—Elimination of sawdust around wheels as all dust and bark passes through frame to conveyor below. Hand or Steam Set-works—Range of thickness from ½ in. to 14 in., made in two sizes, 66 to 84 inches.

Many other special features are described in our Resaw catalog. Mailed on request.

We will introduce Jan. 1st our New Portable Band Mill complete. If interested write us for Catalogue.

BUILT BY

CLARK BROS. CO., Olean, N.Y., U.S.A.

Special "CC" Steel Loading Chain

For Lumbermen's Use

Light and Exceedingly Strong

The Columbus Chain Company

Lebanon, Pa. Columbus, Ohio

Address Communications to Columbus, Ohio

Canadian Agent—

ALEXANDER GIBB

3 St. Nicholas Street - MONTREAL, QUE.

Strong Points of the "Superior" Lath Machine

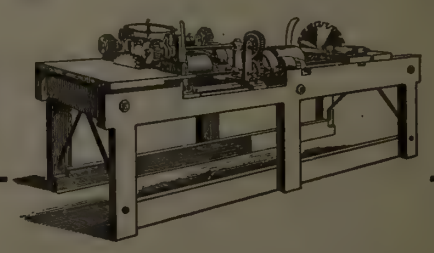
The "Superior" Lath Machine is well constructed of high-grade materials. It stays on the job saving time and money. It gives satisfactory results. 15 to 20 horse-power will run it. Capable of taking four saws. Specifications are: Wooden frame. Belt or Chain Feed. Ring-oiling Boxes. Driving Pulley 10 in. diameter, 9-in. face. Capacity with two saws 40,000 to 50,000 a day.

Some Satisfied Users

Fraser Limited, Fredericton, N.B.; Babbitt Lumber Company, St. Marys, N.B.; Turgeon & Williancourt, Amqui, Que.; Blue River Lumber Company, Cabano, Que.; Freeman & Giffin Company, Isaac's Harbor, N.S.

We also make Sappers, Cedar Cut Offs, Shingle Machines, Car Wheels, and Castings of all kinds.

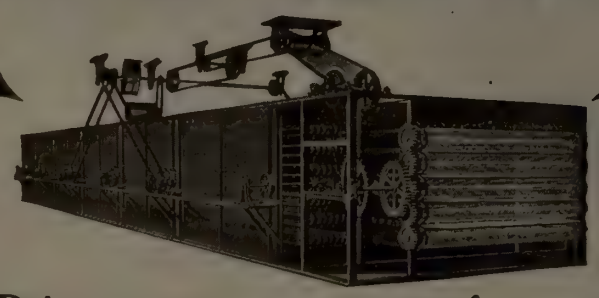
Let us estimate on your requirements.



The Smith Foundry Co., Ltd.

Fredericton, N. B.

PROCTOR VENEER DRYER



Dries enormous amount of veneer perfectly flat and pliable at minimum cost, without checks or splits

Send for catalog and list of users

The Philadelphia Textile Machinery Co., Philadelphia

Books For Sale

SPECIAL PRICES

The Preservation of Structural Timber, by Howard F. Weiss. Published in 1915 by McGraw-Hill Book Company. 312 pages, illustrated. Price $3.00.

Scribner's Lumber & Log Book, 1917 Edition. Price 35c.

Baughman's Buyer & Seller, 75c.

Utilization of Wood-Waste (Second Revised Edition), by Ernst Hubbard. Published in 1915 by Scott, Greenwood & Sons. 192 pages, illustrated. Price $1.50.

Canada Lumberman

347 Adelaide Street West

TORONTO

LINK-BELT

Is the basis of the art of elevating, conveying and power transmission in all industrial fields.

Attachments for all purposes.

This trade mark >——< on every link

General Catalogue No. 110 sent free Write for it.

CANADIAN LINK-BELT CO., LIMITED
265 WEST WELLINGTON ST. - TORONTO
A. R. Williams Machinery Company, Limited, Vancouver, B. C.
Link-Belt & Dodge Products Co., Seattle, Wash.

Garlock Packings

Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

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The Garlock Packing Co.
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Ideal Saws FOR Frozen Timber

Hoe Chisel Tooth Saws

are ideal for Hardwood, Frozen Timber, Soft Wood and for every purpose to which a good saw may be put. They are used by thousands of progressive lumbermen in every part of the world. Evenly tempered. Send for our illustrated book showing how to care for saws and giving prices and descriptions of Hoe Saws.

R. HOE & CO.

504-520 Grand Street
NEW YORK CITY

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better ..	62 00	64 00
1½-in. No. 2 C. & B.	45 00	47 00
2-in. No. 2 cuts and better ...	47 00	49 00
4/4 No. 2 and 3 cuts		31 00
5/4 and 6/4 No. 2 and 3 cuts		37 00
8/4 No. 2 and 3 cuts		38 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing		28 00
1 x 6 common and dressing ...		29 00
1 x8 common and dressing ...		29 00
1 x 10 common and dressing ..	31 00	32 00
1 x 12 common and dressing ..	32 00	34 00
1 x 10 and 12 mill cull stocks.		24 00
1-in. mill cull sidings		21 00
5/4 and 6/4 x 4 m.r., m.c. out		29 00
5/4 and 6/4 x 5 m.r., m.c. out		29 00
5/4 and 6/4 x 6 m.r., m.c. out		29 00
5/4 and 6/4 x 8 m.r., m.c. out		30 00
5/4 and 6/4 x 10 m.r., m.c. out		35 00
5/4 and 6/4 x 12 m.r., m.c. out		35 00
2 x 10 common		30 00
2 and 3 x 12 common		32 00
1 x 8 box and common		25 00
1 x 10 inch box and common	25 00	26 00
1 x 12 inch box and common		27 00
1-in. mill run sidings		27 00
1-in. mill run shorts		22 00
1-in. mill run Norway		23 00
2-in. mill run Norway		24 00
Norway, c. and cf. 1-in.		33 00
Norway, c. and cf. 1½-in.		33 00
Norway, c. and cf. 2-in.		33 00
Spruce mill run 1-in. and 2-in.		24 00
Spruce mill culls		19 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft. ..		18 00
1 x 6-in. x 9 to 16 ft.		22 00
1 x 8 in. x 9 to 16 ft.		23 00
1 x 10 and 12in. x 9 to 16 ft.		25 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		21 00
1-in. No. 2, 6-ft. to 16-ft.		17 00
2 x 4 to 12, 10 and 16 ft.		23 00
2 x 4 to 12 in., 12 and 14 ft. ..		23 00
2 x 4 to 12-in., 18 ft.		25 00
2 x 4 to 12-in., 20 ft.		26 00
2 x 4 to 12-in., 22 ft.		27 00
2 x 4 to 12-in., 24 ft.		28 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		17 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		34 00
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		34 50
6x14, 8x14, 12x18, 18x20, up to 32 ft.		35 00
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		35 50
10x20, 18x20, up to 32 ft.		36 00
6x18, 8x18, up to 32 ft.		36 00
6x20, 8x20, up to 32 ft.		37 00
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain..		35 00
Fir flooring, 1 x 4, edge grain..		38 50
Fir flooring, 1 x 4, flat grain...		30 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath—		5 00
1½-in. No. 2 4-ft. lath		4 75
1½-in. 32-in. pine		2 65
1½-in. No. 1 4-ft. hemlock lath		4 00
1½-in. mill run hemlock lath		3 75
XX B. C. cedar shingles		2 40
XXX 6 butts to 2-in.		3 35
XXXXX		3 80

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00	
Ash, white, No. 1 common	45 00	
Ash, brown, 1sts and 2nds, 4/4	50 00	
Ash, brown, common and better	40 00	
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00	
Birch, 1st and 2nds, 4/4	44 00	
Birch, No. 1 com. and bet., 4/4	35 00	
Birch, 1st and 2nds, 6/4 and 8/4	46 00	
Birch, 1st and 2nds, 10/4 and 12/4..	60 00	
Birch, 1st and 2nds, 16/4	62 00	
Basswood, 1sts and 2nds, 4/4	45 00	
Basswood, No. 1 com. and bet., 4/4..	35 00	
Basswood, No. 2 and 3 common	19 00	
Basswood, 6/4 and 8/4, 1sts and 2nds.	48 00	
Basswood, 6/4 and 8/4, com. and bet.	40 00	
Basswood, 4/4, No. 2 com. and bet...	32 00	
Soft elm, 1sts and 2nds, 4/4	40 00	
Soft Elm, No. 1 com. and bet., 4/4	35 00	
Soft elm, No. 2 and 3 common	19 00	
Soft elm, 6/4 and 8/4, 1 and 2	45 00	
Rock elm, 1sts and 2nds, 6/4 x 8/4..	55 00	
Rock elm, No. 2 com. and bet. 6/4 and 8/4	40 00	
Soft maple, 1sts and 2nds, 4/4	33 00	
Soft maple, com. and bet., 4/4	25 00	
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00	
Hard maple, 1st and 2nds, 4/4	40 00	
Hard Maple, common and better, 4/4	33 00	
Hard maple, 12/4 & 16/4, 1sts and 2nds	50 00	
Red oak, plain, 1st and 2nds, 4/4	62 00	
Red oak, plain, No. 1 co., 4/4	43 00	
Red oak, plain No. 2 com. 4/4.....	32 00	
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00	
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00	
White oak, plain, 1sts and 2nds, 4/4	62 00	
White oak, plain, No. 1 com., 4/4...	42 00	
White oak, plain, No. 2 com., 4/4....	32 00	
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	60 00	
Red and White oak, plain, No. 1 com. 5/4 and 6/4	45 00	
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00	
Red and White oak, plain, 1sts and 2nds, 8/4	70 00	
Red and White oak, plain, No. 1 com. 8/4	50 00	
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00	
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00	
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00	
White oak, ¼ cut No. 1 common	57 00	
Hickory, 1sts and 2nds, 4/4	70 00	
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00	

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up $52 00		54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up ..	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings ..	30 00	33 00
Pine, No. 1 dressing strips ...	29 00	30 00
Pine, No. 1 dressing shorts ...	22 00	24 00
Pine, 1-in. x 4-in. s.c. strips ...		24 00
Pine, 1-in. x 5-in. s.c. strips ...		25 00
Pine, 1-in. x 6-in. s.c. strips ...		27 00
Pine, 1-in. x 7-in., s.c. strips ...	24 00	25 00
Pine, 8 s.c., 12 ft. to 16 ft. ...	27 00	28 00
Pine, 1-in. x 10-in. M.R.	28 00	29 00
Pine, s.c. sidings, 1½ and 2-in.	30 00	32 00
Pine, s.c. strips 1-in.	24 00	25 00
1¼, 1½ and 2-in.	26 00	28 00
Pine, s.c. shorts, 1 x 4 to 6 in.	20 00	22 00
Pine, s.c. and bet., shorts, 1 x 5	20 00	21 00
Pine, s.c. and bet., shorts, 1 x 6	20 00	21 00
Pine, s.c. shorts, 6'-11' 1"x10"	23 00	24 00
Pine, box boards:		
1" x 4" and up, 6'-11'	18 00	19 00
1" x 3", 12'-16'	21 00	22 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	22 00	24 00
Pine, mill culls stock, 1 x 12 ..		22 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16' ...	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal..	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet.....	80	85
According to average and quality, 30 to 35 feet	50	60

Ash

13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40

Birch

14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35

Quebec Spruce Deals

12 ft. and up x 3 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00

Birch Planks

1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00

Cuts and Better

4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00

No. 1 Cuts

1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00

No. 2 Cuts

1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00

No. 3 Cuts

1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide..	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00

Common and Dressing Mill Run

1-in. x 4-in.	27 00
1-in. x 5-in.	27 00
1-in. x 6-in.	28 00
1-in. x 8-in.	28 00
1-in. x 10-in.	30 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00

No. 1 Barn

1 inch	33 00 45 00
1¼, 1½ and 2-in.	36 00 45 00
2½ and 3-in.	45 00
4 inch	50 00

No. 2 Barn

1 inch	28 00 36 00
1¼, 1½ and 2-in.	30 00 36 00
2½ and 3-in.	38 00

No. 3 Barn

1 inch	26 00 30 00
No. 1, 1, 1¼, 1½, 2-in.	26 00 30 00

Box

No. 1, 1, 1¼, 1½, 2-in.	22 00 25 00
No. 2, 1¼, 1½, 2-in.	24 00 25 00

Mill Culls

Mill run culls, 1-in.	19 00
1, 1¼, 1½ and 2-in.	20 00
No. 2	17 00 18 00

Lath

No. 1, 32-in. pine	1 85
No. 2, 48-in. pine	4 50
No. 1, 48-in. pine	5 00
No. 3, 48-in. pine	4 00
Hemlock Lath 48 in.	4 00

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1. E.			
	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8..	15 00	18 00	21 50	22 50
2 x 10	19 00	19 50	22 50	23 50
2 x 12	19 00	20 00	24 50	24 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	22 50
2 x 4, 10, 18, 20	24 50
2 x 6, 8 to 16	22 50
2 x 8, 8 to 16	22 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	30 50
2 x 10 and 2 x 12; 8-16 ft.	27 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	29 50
2 x 10 and 2 x 12; 24, 36, 28, 30, 32 ft.	31 50

No. 1 Common Boards

4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50

Flooring

4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00

Shiplap—Finished

6 inch	23 00
8, 10 and 12 inch	24 00

Siding

6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00

Lath

No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed) ...	4 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	28 10
3 x 8 in.; 8 to 16 ft.	25 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	28 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	30 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	21 50
2 x 4 in.; 12 and 14 ft.	22 50
2 x 4 in.; 10 and 16 ft.	23 50
2 x 4 in.; 18 and 24 ft.	24 50
2 x 4 in.; 22 and 24 ft.	25 50
2 x 4 in.; 26 to 32 ft.	27 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.....	24 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.....	26 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.....	27 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.....	29 00
2 x 14 in.; 10 to 16 ft.	29 00
2 x 14 in.; 18 and 20 ft.	31 00
2 x 14 in.; 22 and 24 ft.	32 00
2 x 14 in.; 26 to 32 ft.	34 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	25 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	26 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	27 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	28 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	30 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	28 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft. ..	28 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft. ..	29 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft. ..	29 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 50
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft. ...	23 50
No. 2 Shiplap, 6 in.	22 50
No. 2 Shiplap, 8, 10 and 12 in.	23 50

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

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XXX B. C. Cedar	2 85

LATH

Fir lath, ¾ x 1½ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ¾ x 1½ in. x 4 ft.	5 00

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Wholesale Selling Price

Uppers 4/4 ....$100 00	
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00

(Continued on page 60)

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No. 1 Moulding 8/4	62 00
No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	44 - 46	28 - 30	14 - 16
5/4 to 8/4	46 - 48	30 - 32	16 - 18

SAP BIRCH

4/4	39 - 41	26 - 28	16 - 18
5/4 and up	39 - 41	26 - 28	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

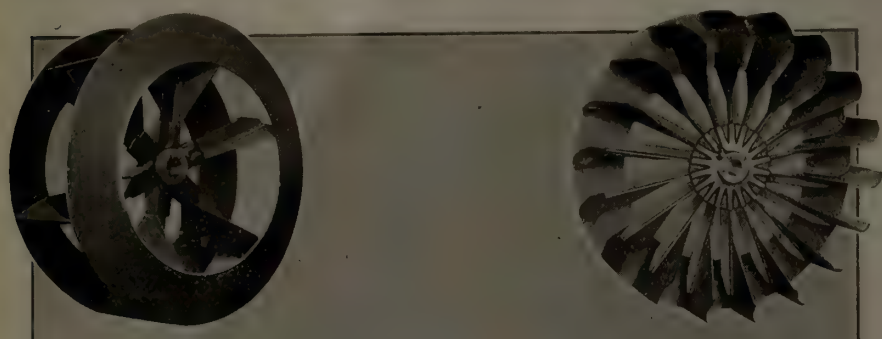
4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in...		98 00
Selects, 1 to 2 in.		88 00
Fine common, 1 in.	68 00	70 00
Fine common, 1¼ to 2 in.	72 00	74 00
No. 1 Cuts 1 in.		55 00
No. 1 Cuts 1¼ to 2 in.	60 00	64 00
No. 2 Cuts, 1 in.		40 00
No. 2 Cuts, 1¼ to 2 in.	48 00	50 00
Barn Boards, No. 1, 1 x 12	48 00	50 00
No. 1, 1 x 10	38 00	40 00
No. 1, 1 x 8	37 00	38 00
No. 2, 1 x 12	38 00	40 00
No. 2, 1 x 10		37 00
No. 2, 1 x 8		35 00
No. 3, 1 x 12	31 00	32 00
No. 3, 1 x 10	30 00	31 50
No. 3, 1 x 8	30 00	31 00
Canadian spruce boards	25 00	27 00
Spruce, 10 in. dimension	28 00	30 00
Spruce, 12 in. dimension	29 00	31 00
Spruce, 9 in.		29 00
Spruce, 8 in. and under dimen.		28 00
10 and 12 in. random lengths, 10 ft. and up		29 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	22 00	24 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00	22 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50	23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled		22 00
1½-in. spruce laths		4 25
1½-in. spruce laths	3 80	4 00

New Brunswick Cedar Shingles

Extras	3 50	3 60
Clears		3 30
Second clears	2 30	2 40
Clear whites	2 00	2 20
Extra 1s (Clear whites in)		1 60
Extra 1s (Clear whites out)		1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.		4 00
Red Cedar Eurekas, 18-inch 5 butts to 2-in.		4 25
Red Clear Perfections, 5 butts to 2¼		4 80
Washington 16-in. 5 butts to 2-in extra red clear		3 65



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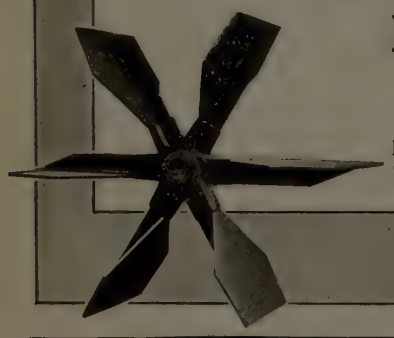

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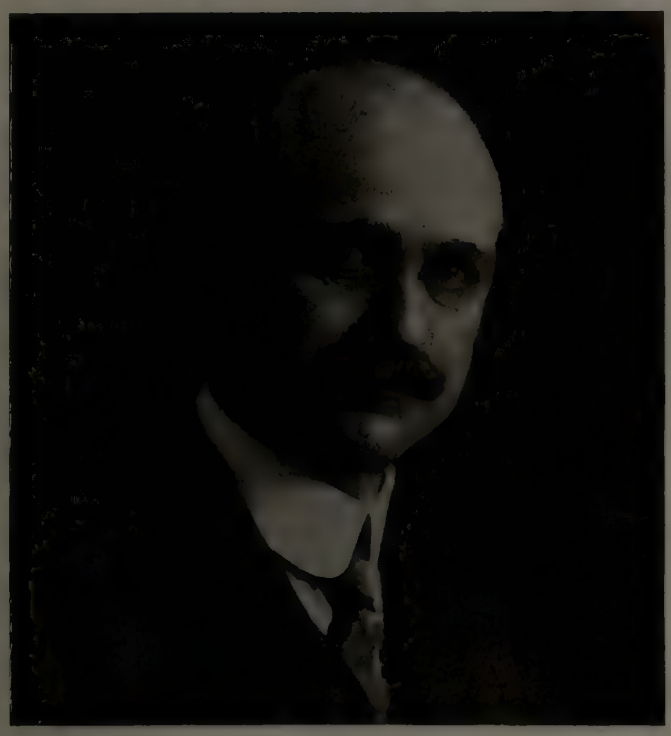

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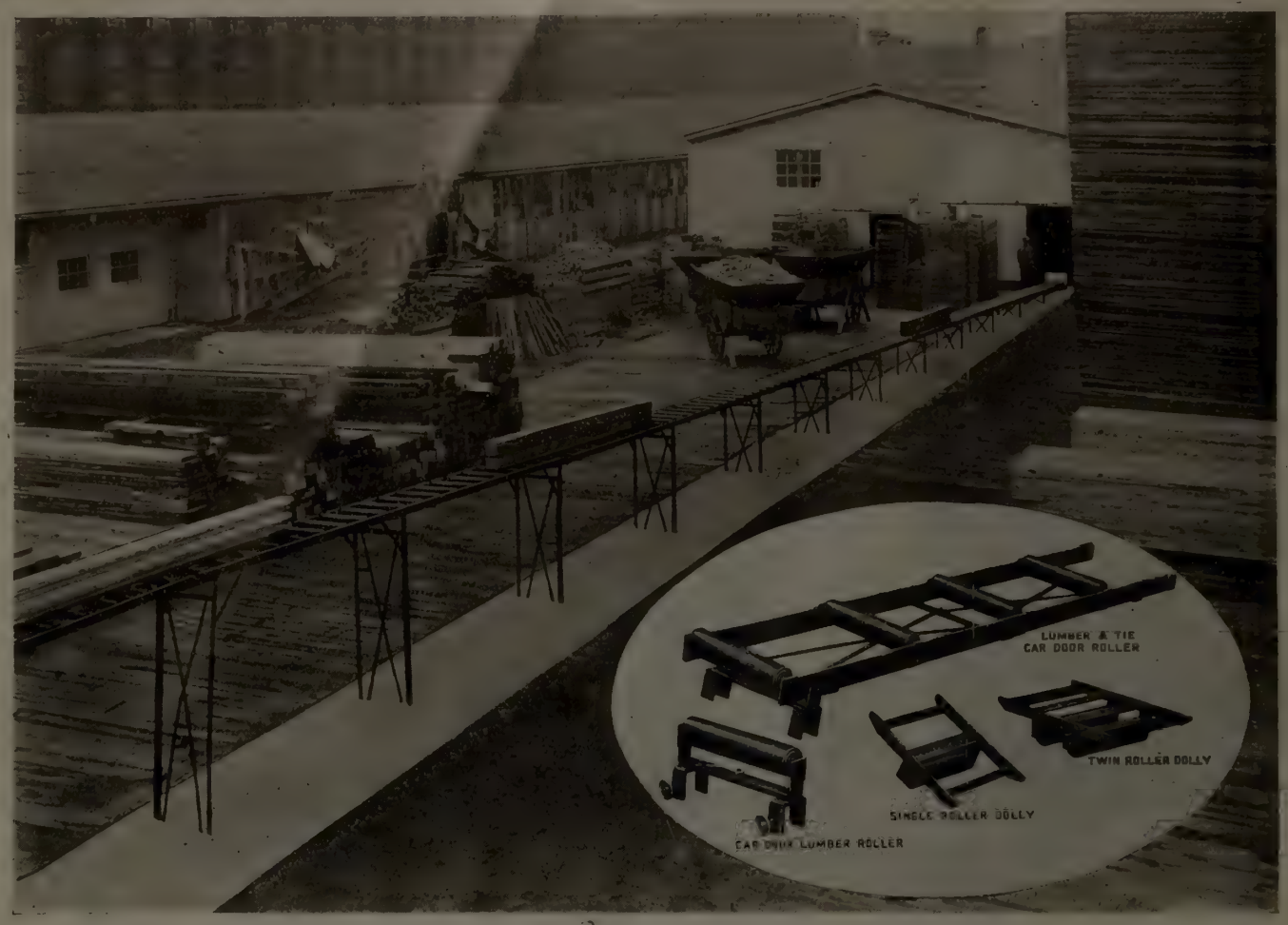

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Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa,
December 20th, 1912.

Deputy Minister.

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(Continued on page 66)

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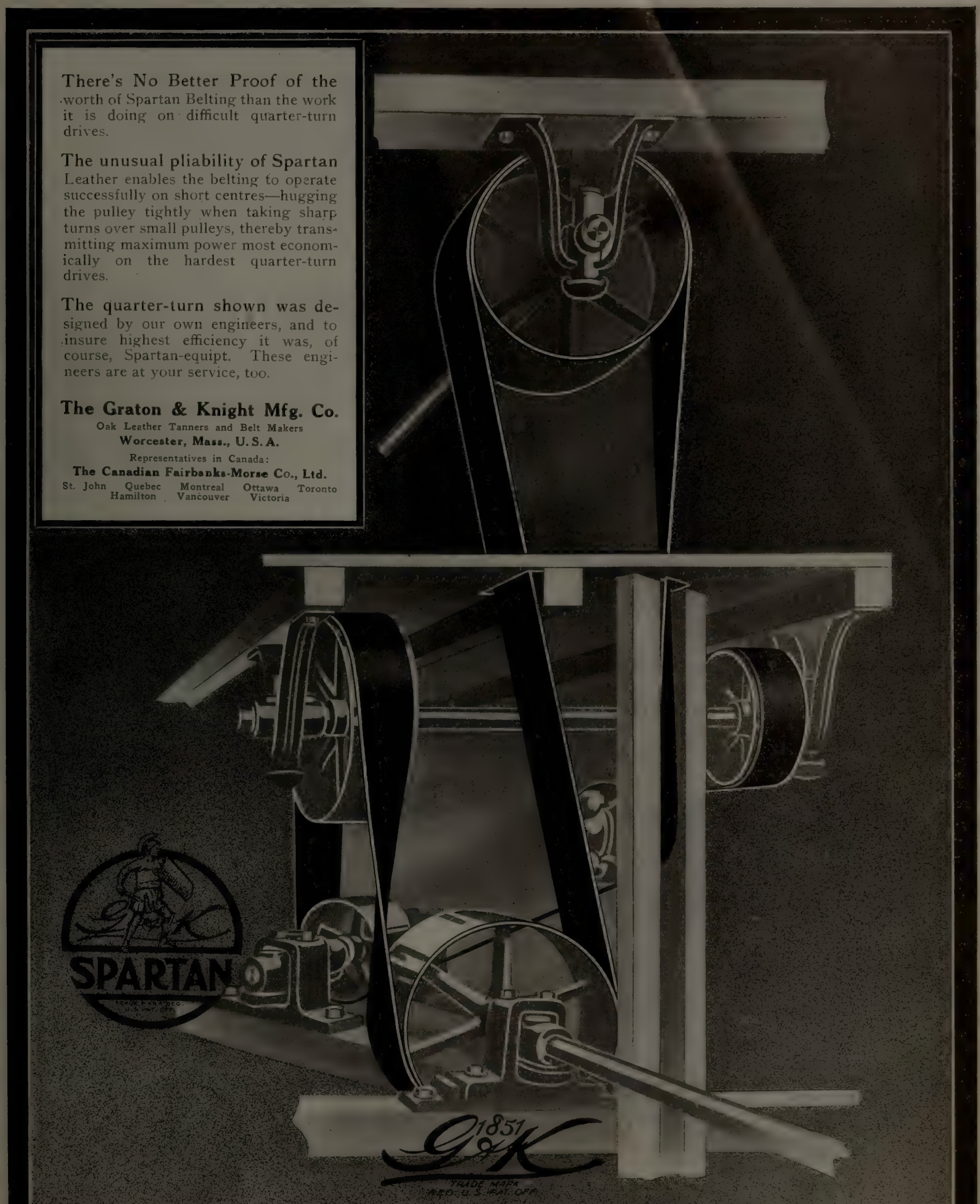

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ROPE

Plymouth Cordage Company
Waterous Engine Works Company

RUBBER GOODS

Gutta Percha & Rubber Company
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SASH

Haeberle Lumber Company

SAWS

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Disston & Sons, Henry
Hoe & Company, R.
Shurly-Dietrich Company
Simonds Canada Saw Company
Smith Company, R. H.

SAW SHARPENERS

Waterous Engine Works Company

SAW MILL MACHINERY

Canadian Link-Belt Company, Ltd.
Clark Bros.
Dunbar Engine & Foundry Co.
Hamilton Company, William
Huther Bros., Saw Mfg. Company
Jeffrey Manufacturing Company.
Long Manufacturing Company, E.
McLennan Foundry & Mach. Works
Mershon & Company, W. B.
Parry Sound Lumber Company
Payette & Company, P.
Waterous Engine Works Company
Yates Machine Co., P. B.

SHINGLES

Bartram Brothers
Campbell-MacLaurin Lumber Co.
Canadian Western Lumber Company
Fesserton Timber Company
Fraser Limited
General Mercantile Company
Gillespie, James
Harris Tie & Timber Company
Heeney, Percy E.
Iowa Lumber & Shingle Company
Long Lumber Company
McGibbon Lumber Company
Muir, Kirkpatrick & Sharpe
Terry & Gordon.
Timms, Phillips & Company
Vancouver Lumber Company

(Continued on page 68)

The Babbitt Metal that's at the Front in Efficiency and Economy

HARRIS HEAVY PRESSURE

"The Babbitt Metal Without a Fault," is guaranteed to give EXCELLENT SERVICE. It will not crack or squeeze out. It will run cool at any speed. It is copper coated and copper hardened. It is best for all general machinery bearings. Order a box from our nearest factory.

It is Made in Canada. What We Make We Guarantee.

We Manufacture All Grades of Babbitt Metals.

WRITE FOR COMPLETE LIST

THE CANADA METAL COMPANY, Limited

Head Office and Factory TORONTO Fraser Avenue

Branch Factories:—HAMILTON, MONTREAL, WINNIPEG, VANCOUVER

Douglas Egyptian Liniment is the one reliable remedy that lumber men can always count on. It is the best liniment in the world

For The Horses

We want you to try the Liniment just to prove to you how invaluable it is in all cases of thrush, cuts, callouses, spavin, etc. It will stop bleeding immediately. Better have some handy. In case of emergency it will be worth many times its small cost.

TRY IT AT OUR EXPENSE

Fill in the attached coupon and we will send you a liberal sample, free of all cost. A trial will demonstrate its worth better than any recommendation.

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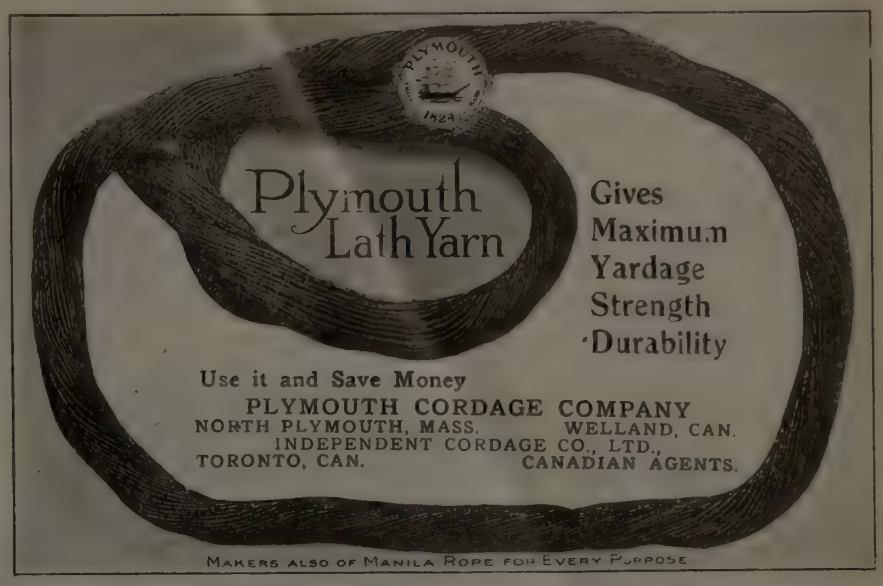
Douglas & Co.,
Napanee, Ont.

Please send me sample of Douglas Egyptian Liniment as advertised.

Name.

Address



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12 to 80 pounds per yard.

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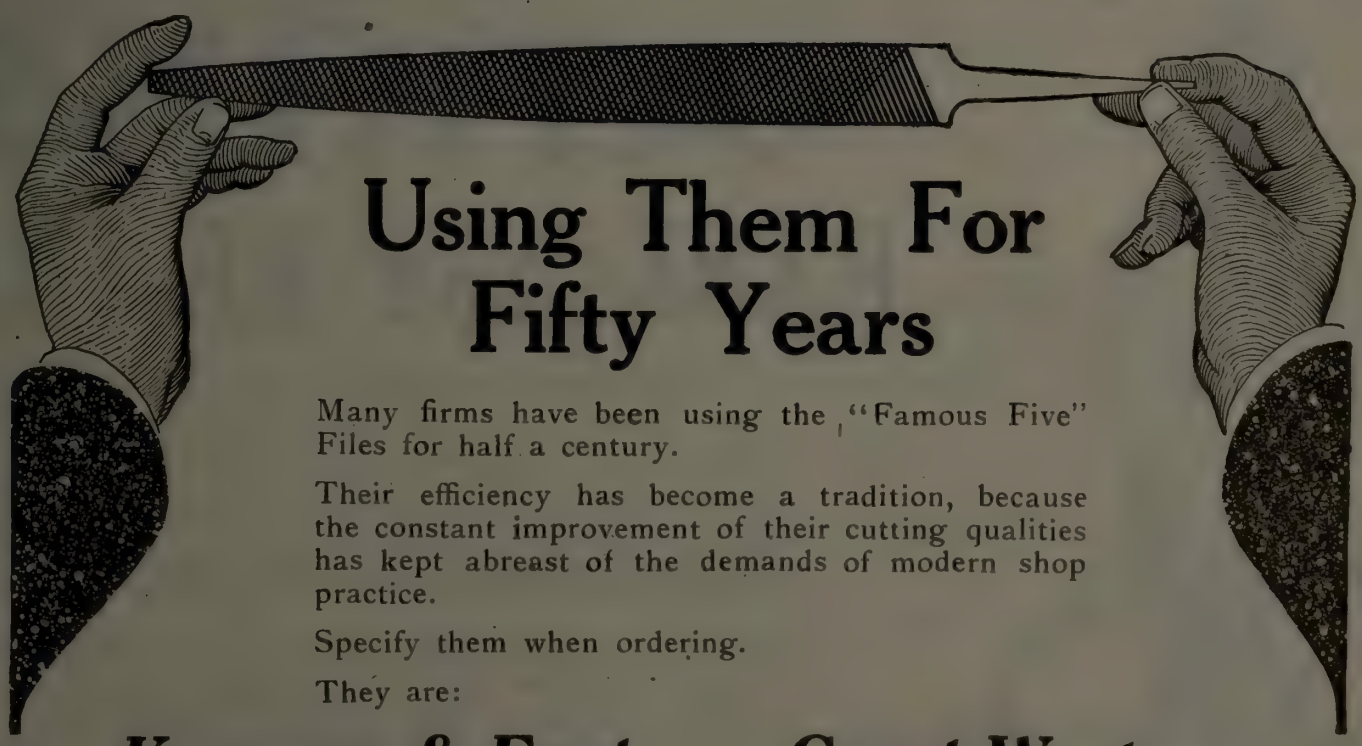

Using Them For Fifty Years

Many firms have been using the "Famous Five" Files for half a century.

Their efficiency has become a tradition, because the constant improvement of their cutting qualities has kept abreast of the demands of modern shop practice.

Specify them when ordering.

They are:

Kearney & Foot Great Western
American Arcade Globe

(Made in Canada)

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Long Manufacturing Company, E.
Payette & Company, P.
Waterous Engine Works Company

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Gendron Shoepack Company, P. T.
Palmer Company, John

SILENT CHAIN DRIVES
Canadian Link-Belt Company, Ltd.

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SNOW PLOWS
Pink Company. Thos.

SODA PULP PLANTS
Becker & Co.

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Arkansas Land & Lumber Company
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Long Lumber Company
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Gillies Bros.
Grant & Campbell
Hart & McDonagh
Laferte, J. A.
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Muir, Kirkpatrick & Sharpe
Murray & Gregory
New Ontario Colonization Company
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Quebec & St. Maurice Industrial Co.
River Ouelle Pulp & Lumber Co.
Spencer, C. A.
Stone, Fred J.
Terry & Gordon.

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Columbus Chain Company
Jeffrey Mfg. Company
McKinnon Chain Company
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Waterous Engine Works Company

STEAM APPLIANCES
Darling Bros.

STEAM TRAPS
Canadian Morehead Mfg. Company

STEEL BARRELS
Smart-Turner Machine Co.

STEEL DRUMS
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Jones Underfeed Stoker Company

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Salada Tea Company

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Fesserton Timber Company
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Long Lumber Company
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International Time Recording Co.

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TIMBER LANDS
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TOWING WINCHES
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Dodge Manufacturing Company
Jeffrey Manufacturing Company
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Smith Company, S. Morgan.

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Hoffman Brothers Company
Webster & Bro., James

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Long Manufacturing Company, E.
Waterous Engine Works Company
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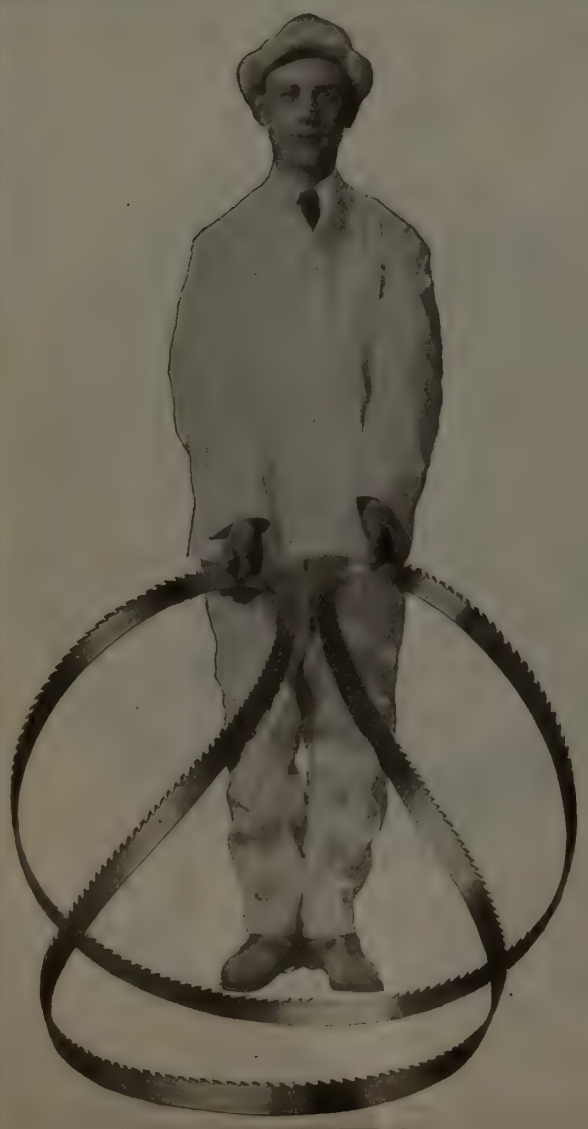
WOOD PULP
Austin & Nicholson
Becker & Co.
New Ontario Colonization Co.
River Ouelle Pulp & Lumber Co.



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BAND and RE-SAWS

We have achieved an enviable reputation for supplying SAWS which stand up to their work longer, with less re-fitting than any other SAWS in the world. If there is any doubt in your mind, we stand ready to prove it to you.

A Perfect Saw for Every Purpose

Send for our 248 page book on Saws. The most valuable and interesting Saw book ever published. Tells you just what you want to know about SAWS, MACHINE KNIVES and SAW FITTING TOOLS.

ASK FOR BOOKLET "C L"

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Makers of Sterling Saws

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Vancouver Branch—109 Powell St.

J. J. TURNER & SONS

PETERBOROUGH, ONT.

Government Contractors and the largest Manufacturers and Dealers in Canada of

Lumbermen's Tents, Bed Ticks, Grey Blankets, Nose Bags, Waterproof Goods, Steel Ranges and General Camp Outfits.

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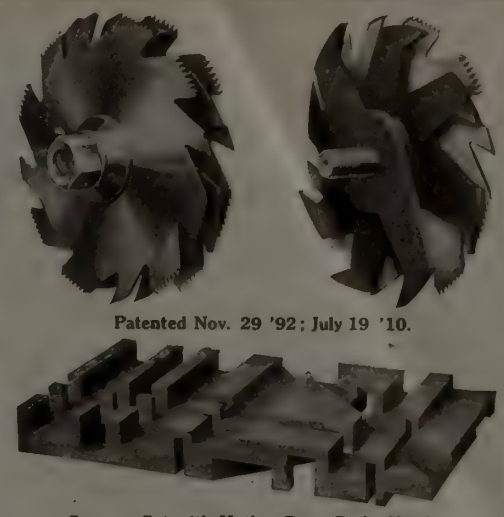

Patented Nov. 29 '92; July 19 '10.

Grooves Cut with Huther Bros. Dado Heads

Fits Any Saw Mandrel

A Huther Bros. Dado Head consists of two outside cutters and enough inside cutters to make the required cut. This Head will cut perfect grooves, with or across grain, any width. It is an easy Head to keep in perfect condition, has a simple quick adjustment, and may be enlarged any time after purchase. Sent on approval and if not satisfactory return at our expense.

Write for New Illustrated Catalog.

HUTHER BROS. SAW MFG. COMPANY, Inc.

1103 University Ave.
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LOGGING LOCOMOTIVES

Locomotives on trunk line railroads have the advantage of the best facilities for inspection and repairs.

Logging locomotives face different conditions. They must work day after day in the hardest service, and often in localities where repairs cannot be made without great inconvenience. That is why we build our logging locomotives from interchangeable stock parts. With this system every part must fit every other locomotive of the same size and design, and long delays waiting for duplicate parts are avoided. Interchangeable parts kept on hand at our Works for prompt shipment

MONTREAL LOCOMOTIVE WORKS, LIMITED,

DOMINION EXPRESS BUILDING, MONTREAL, CANADA.

CLIMAX Improved Geared LOCOMOTIVES FOR WOOD AND IRON RAILS

A 62-ton Climax Locomotive Designed Especially for Heavy Logging Work.

Climax Locomotives are successfully operated on steep grades and sharp curves. Any weight or gauge. Locomotives in stock for immediate shipment. Get Catalog "H."

CLIMAX MANUFACTURING CO., 313 W. Main Street, CORRY, PA.
VANCOUVER MACHINERY DEPOT, LTD., VANCOUVER, B.C.

The Peter Hay Knife Co., Limited

GALT, ONTARIO

MANUFACTURING WOODWORKING

Machine Knives, Circular Cutters and Mortise Chisel

THE E. LONG MANUFACTURING Co. LIMITED
SAW MILL MACHINERY
ORILLIA, CANADA

No. 2 Lath Machine

WE have brought out our No. 2 Lath Machine with the view of meeting that ever increasing demand of mill men in Canada for a light, medium capacity Lath Machine, that will turn out a first quality product.

Made with a one piece frame just as our larger No. 3 Machine. All the parts are strongly constructed and have that easy accessibility that we have made a feature of all E. Long Company Machines. We believe this very feature has done a great deal to make the machines so popular with the trade.

Just as with our larger Machine, the saws are adjustable for ordinary lath or for pickets, staves, etc. In fact this machine will turn out work an exact counterpart of the No 3 Lath Machine, except in quantity. We shall be glad to give you further details and prices.

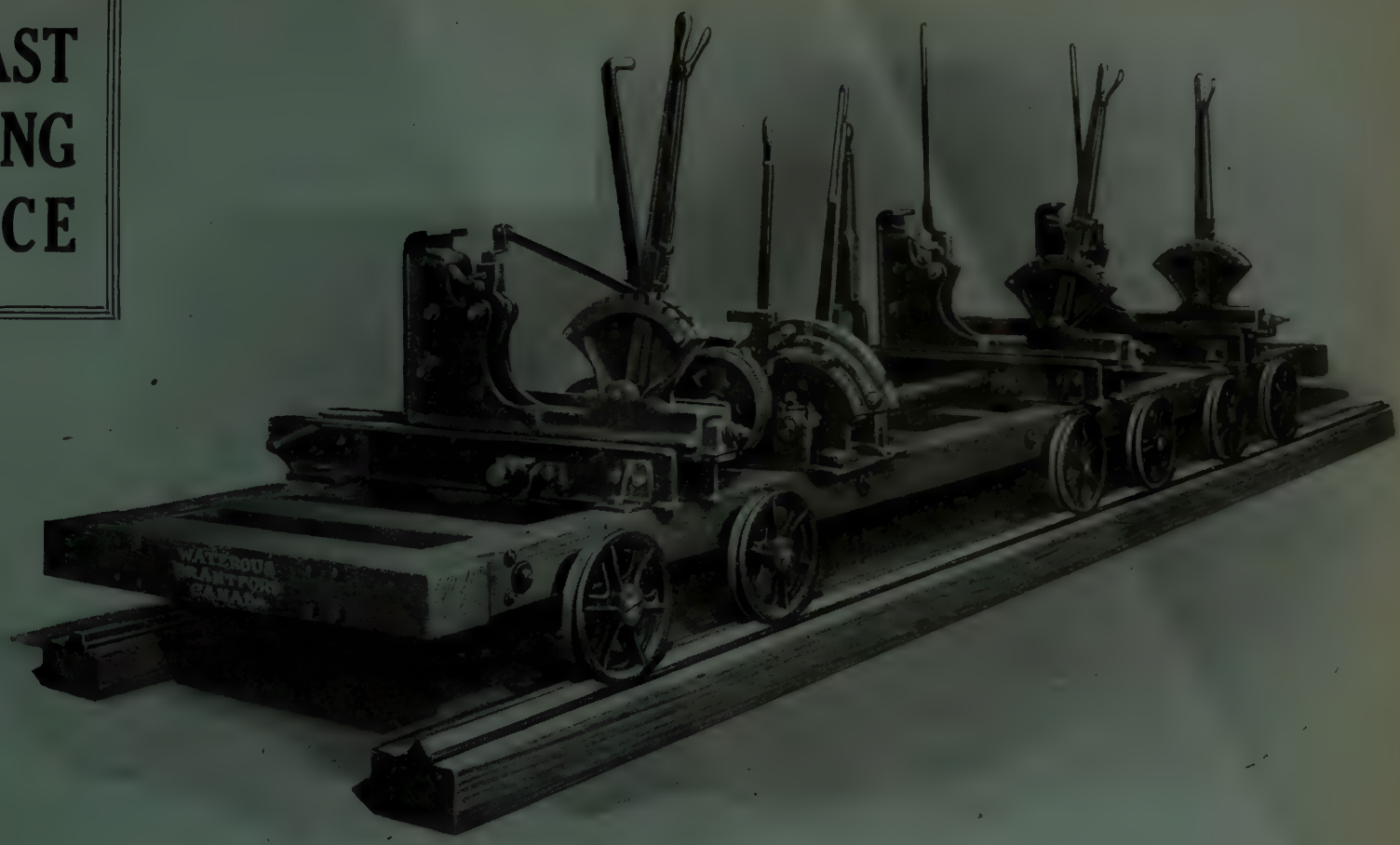
SEND FOR CATALOGUE No. 102.

The E. Long Manufacturing Co.

LIMITED

Orillia, - - Ontario

FOR FAST CUTTING SERVICE



Waterous Carriages

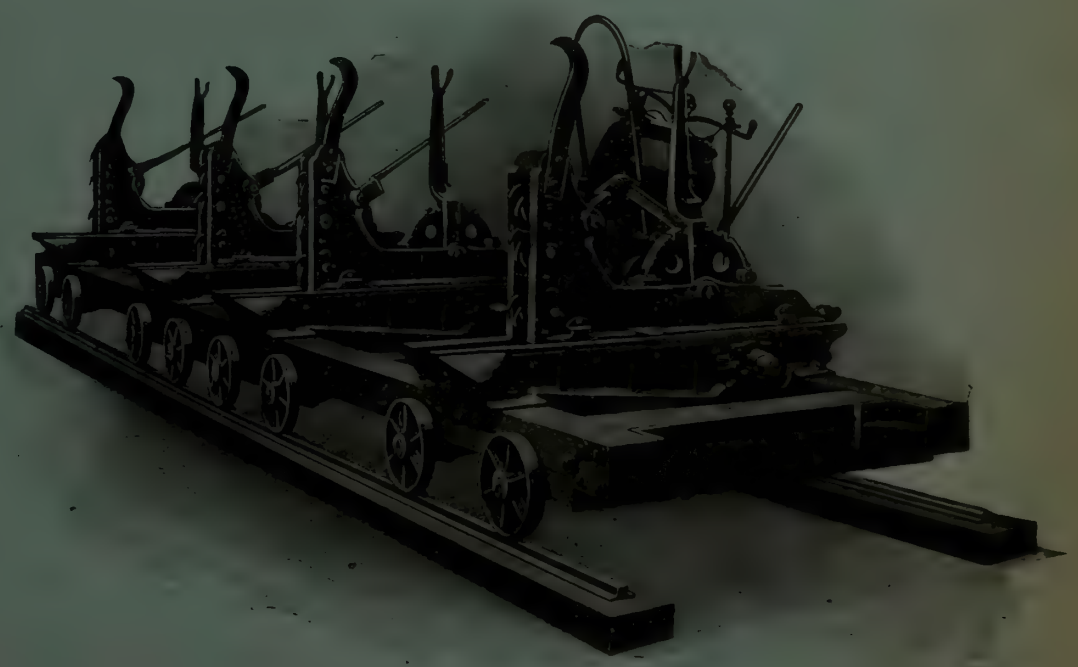
Steel Girder and All-Steel—For Every Size Mill

We build Saw Carriages.

Double Girder Carriages
With log openings of 24 in. to 50 in.

All-Steel Rack Carriages
With opening 36 in. to 72 in.

All Steel-Screw Carriages
With openings 60 in., 72 in., and 84 in.



No matter what size your mill or what kind of logs you are handling we have the right carriage for your use.

Our carriage equipment is of the very best. Waterous Dogs will hold the logs in place to stay; Waterous Setworks are accurate and durable; Waterous strength of construction will hold the carriage up to its work under the rack and wear of severe usage longer than most makes.

Write us for catalogues and prices

The Waterous Engine Works Co., Limited, Brantford, Canada

H. B. Gilmour
Vancouver, B. C.
Winnipeg, Man.

"FROST KING" METAL

$5,000,000.00
worth of mixed metal sold annually.

Our thirty-five years experience in metal mixing enables us to place on the market a babbitt that we believe to be absolutely perfect. For high speed machinery and engine work it is without an equal. It is specially designed for saw-mills, planing mills, threshing engines, traction engines, pumps, rolling mills, pulp machinery, and all classes of stationary engines. It is a high grade metal made of the very best selected stock, and carefully compounded.

If your dealer does not stock FROST KING send us a money order for your requirements. Price **30c per lb.**, Fort William and East; West of Fort William **35c per lb.**, delivered nearest railway station; packed in 30 lb. and 60 lb. boxes.

For extra duty, such as over-hanging saws, our FAULTLESS BABBITT will stand where all other metals will fail. Price, Fort William and East, **40c per lb.**; West of Fort William, **45c**, delivered to your nearest railway station; packed in 30 lb. and 60 lb. boxes.

HOYT METAL CO., Toronto, Canada

Have factory and office at Eastern Avenue and Lewis Street, Toronto, Canada

Factories also at:— New York, N. Y. London, Eng. St. Louis, Mo.

The Low Head Plant
with
SMITH HYDRAULIC TURBINES

has established a reputation for real service that is second to none in the field of water power utilization. It is the result of all-round efficiency, hydraulic as well as mechanical, and has been attained by the careful consideration of every feature entering into the design of turbine equipment.

Our thorough investigation of the conditions peculiar to any proposition assures a practical and economical solution of the problem.

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405 Power Bldg. - - - - Montreal, Can.

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The J. C. McLaren Belting Co.
Limited
General Mill Supplies MONTREAL

Pink's Lumbering Tools

The Standard Tools in every province of the Dominion, New Zealand, Australia, etc.
We manufacture all kinds of lumber tools. Light and Durable.

Long Distance Phone, No. 87
Send for Catalogue and Price List.

Sold throughout the Dominion by all Wholesale and Retail Hardware Merchants.

The Thomas Pink Company, Limited
Manufacturers of Lumber Tools

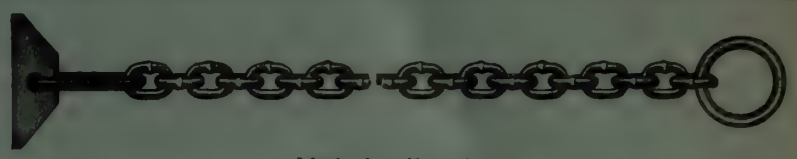
PEMBROKE - - - - - ONTARIO

Canada Lumberman
Worker

Dart Union Pipe Couplings

LESSEN MAINTENANCE COSTS

Your Jobber Sells Them.



Made in all styles

Electric-Welded Boom Chain

We also specialize

Log Chains and "Dreadnaught" Loading Chain

Made in Canada Write to Fully Guaranteed

McKinnon Chain Co., St. Catharines, Ont.

BUY GOOD HARNESS

Here's a big problem solved.
Forget your harness troubles. Alligator Brand is used year in and year out by wise lumbermen without the least trouble or delay of any kind.
Made to wear through sleet and snow and under most trying conditions.
The leather, tanning workmanship and hardware are good. Our 50 years experience is a guarantee of quality.
We have a big interesting catalogue giving complete descriptions of several harness models that will fill your needs. Write for it to-day.

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We manufacture practically every article that can be made of Asbestos—including

Asbestos { Packings, Boiler Gaskets, Pipe and Boiler Coverings

Turner Bros. Canada Limited
Montreal

WHEN IS A PUMP NOT A PUMP?

When its efficient service is not to be relied on.
It will pay you to get acquainted with **REAL PUMPS**
as built by

The Smart-Turner Machine Co., Limited
HAMILTON - CANADA

MORRISON Jet Pump or Water Lifter operates by water pressure.

J. M. T. Steam Specialties

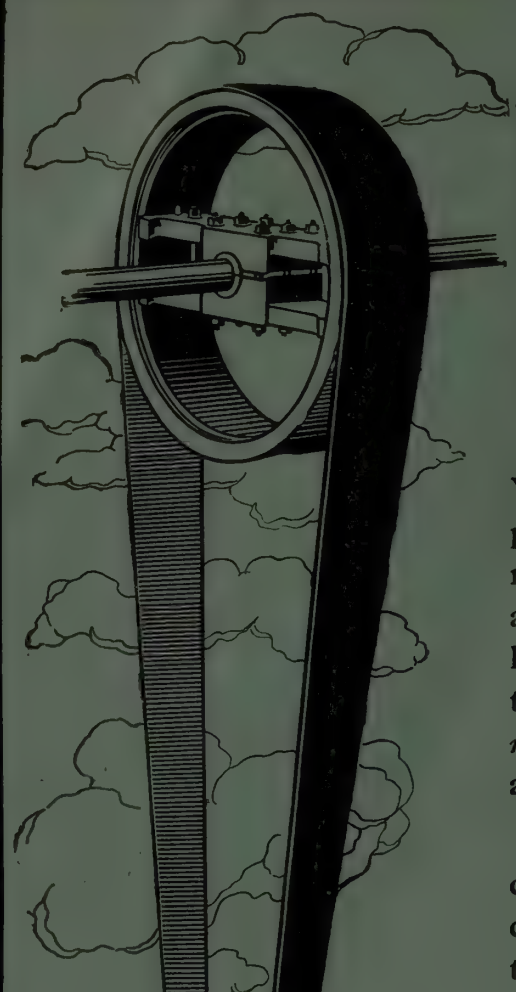
J. M. T. Steam goods have been designed to meet present-day needs. They are made of high-grade materials only, and the workmanship is high class and thoroughly dependable.

Whether you need stop valves, safety valves, ejectors, injectors, or any other steam goods, you can select your requirements from the J. M. T. line with the full assurance that they will give highest efficiency.

Prices, etc., sent on request.

The James Morrison Brass Mfg. Co., Ltd., 93-97 Adelaide Street West TORONTO

Alphabetical Index of Advertisers, Page 58 Classified Directory to Advertisements, Page 60



Power!

Who Pays the Power Bill? Who Pays for Pulleys?

YOU—the Management—pay for the power that drives your factory. And, remember—you pay for the power you *waste* as well as for the power you use. Exhaustive scientific tests prove conclusively that the actual cost per year for running *metal pulleys* as against *wood* pulleys averages *$5.00 per pulley.*

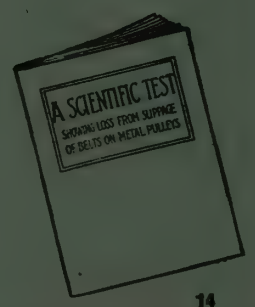
Dodge Wood Split Pulleys cost 40 per cent. less than metal pulleys and are 50 per cent. more efficient. They help you cut the cost of your power bills. Next time you require pulleys see that the "requisition" calls for ***Dodge Wood Split Pulleys*** and not for steel pulleys.

DODGE

WOOD SPLIT PULLEYS

DODGE MANUFACTURING CO., Limited, TORONTO

Every buyer should send for this book mailed Free on request



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Bartram Bros., Limited

Wholesale Lumber

Ottawa, Ont.

extend the

Compliments of the Season

to

their many patrons.

To those who have dealt with us this year

WE THANK YOU

and

Wish You a Very Merry Christmas

To those who have not

We Wish You a Merry Christmas, Too

Terry & Gordon

Wholesale Lumber Merchants

HEAD OFFICE — 704 Confederation Life Bldg., Toronto, Ont.

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852 Cambie St.
F. W. Gordon, Mgr.

Montreal Branch
23 La Patrie Bldg.
L. Gagne, Jr., Mgr.

Logging By Rail Enables Us To Run Our Plant the Year Round

This Means Better Service to the Trade

Hemlock, Pine and Hardwoods

ALWAYS IN STOCK READY FOR SHIPMENT

Hemlock, Hardwood and **Spruce Timbers** a specialty—lengths 10/26' long.

We can dress and rip to your orders.

A postal will bring you our monthly stock list with our best prices

Fassett Lumber Company, Limited

Fassett, Que.

HEMLOCK LATH

AT LONGFORD

587,700 pcs. 4 ft. No. 1 Hemlock Lath
47,800 pcs. 32 in. No. 1 Hemlock Lath
80,000 pcs. 4 ft. No. 1 Spruce Lath
7,000 pcs. 32 in. No. 1 Spruce Lath

Get prices on the following:

1 car 2 x 6 18/20 Red Pine
2 cars 2 x 8 18/20 Red Pine
2 cars 2 x 10 18/20 Red Pine
1 car 2 x 8 18 Red Pine
1 car 2 x 8 10/16 Red Pine

The Long Lumber Company

HAMILTON, ONT.

FOR SALE: Standing Timber, in Large or Small Blocks and Sawmill Machinery

The undersigned offer for sale, in large or small blocks all their remaining timber lands, mills and town property situated in the town of Parry Sound, Ont.

We have sold quite a number of timber parcels but still have some good bargains left in Townships of McDougall, Foley, McKellar, Monteith, Carling, Christie, McConkey, Mills, Allen, Secord, Falconbridge and Street.

Special bargains in the townships of Falconbridge and Street for small mills.

We have the following Sawmill Machinery for sale:

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 8-block right hand steam feed carriage fitted with steam set works, made by Wm. Hamilton, Peterboro, with 10-in. steam feed cylinder.

1 Double cylinder steam nigger, right hand.

1 Log Loader for right hand mill.

1 8 ft. Double-cutting Telescope Band Mill, made by Waterous Engine Works.

1 10 in. Double-cylinder steam feed carriage, left hand, for cutting 24-ft. logs.

1 left-hand steam nigger.

1 Log-loader.

1 Endless chain jack ladder with two kickers complete for right and left hand mills.

2 Roger Gang Edgers for 8-in. cants and lumber.

1 Waterous double edger, 6 saws.

2 2-saw trimmers.

1 20-ft. Slash table.

1 16-ft. Revolving Slash Table.

1 Horizontal Slab Resaw with 5-ft. wheels, made by Diamond Iron Works.

1 70-ft. Transfer Chain for sorting lumber, with necessary levers, rolls and transfer chains to complete outfit.

1 Lath Mill with bolter.

2 Lath Trimming Saws.

FILING ROOM

1 Automatic Filing Machine for 12-in. D.C. band saws.

1 Hand Machine for cut-off saws.

POWER PLANT

1 Double Duplex, high pressure Water Pump.

5 60-in. x 16-ft. Return Tubular Boilers, allowed 125 lbs. steam.

2 125 h.p. Water Wheels.

1 Upright Engine for sawdust conveyor.

1 10 h.p. Engine.

1 Wood Machine for 22-in. wood.

1 Edger for ripping dry lumber, installed.

1 80 h.p. Generator, 250 volt.

1 80 light arc generator.

There is also a large quantity of shafting, pulleys, hangers, belting, tram cars and turn-tables, particulars of which may be had on application.

All of the above open for inspection at Parry Sound.

The Parry Sound Lumber Co., Limited, 26 Ernest Ave. Toronto, Can.

HIGH GRADE

MUIR, KIRKPATRICK & SHARPE

1325-8 Traders Bank Building

TORONTO - - - CANADA

Everything in Lumber

WHITE PINE, RED PINE, JACK PINE,
SPRUCE and HEMLOCK
LATH, SHINGLES, POSTS and TIES

LUMBER

Murray & Gregory, Limited

Head Office:
ST. JOHN, N. B.

Established 1868

Quebec Office
ST. CAMILLE, Bellechase Co. P.Q.

SAW MILLS

St. John, N.B., St. Camille and Lake Frontier, Que., cutting SPRUCE and PINE Lumber for British, United States and Canadian Markets.

Also

LATH, SHINGLES, PULPWOOD and RAILWAY TIES

Manufacturing and Grading Right

Trade *Mark*

Address all enquiries to our Head Office, ST. JOHN, N. B.

Geo. Gordon & Co., Limited

Cache Bay - Ont.

Manufacturers of

RED and WHITE PINE

White Pine Timber in Stock:

6 x 8	—	10/16'	— 80,000	8 x 10	—	10/16'	— 60,000
8 x 8	—	"	— 75,000	10 x 10	—	"	— 140,000
6 x 10	—	"	— 10,000	12 x 12	—	12/24'	— 100,000
				4 x 10	—	10/16'	— 75,000
				4 x 12	—	"	— 85,000

PLANING MILL DRY KILN

Vancouver Lumber Co.

LIMITED

Manufacturers

B. C. FIR and CEDAR LUMBER

Fir Timbers
Fir Flooring, Ceiling, Mouldings, Etc.

Cedar Shingles XXX, XXXXX and Rite-grade Cedar Bevel Siding, Barn Boards, Boat Lumber, Etc.

View of our fir mill from log pond, Vancouver, B. C.

Send enquiries to our Eastern Sales Office—

701 Excelsior Life Building,
TORONTO, ONT.

Representative, CHAS. PLANT

Watson & Todd Limited
OTTAWA

RED PINE WHITE PINE
SPRUCE

SEND US YOUR ENQUIRIES

The
Harris Tie & Timber Co.
Ottawa - Canada

Lumber - Lath - Shingles
Cedar Poles and Posts
Railway Ties - - Piles

WE SELL YOU

Lumber, Lath, Shingles

We make a specialty of Hemlock Billstuff, and have the best assortment on the Georgian Bay. Our yards are unequalled for drying lumber.

All stock matched or sized, if required.

Our long experience is the best recommendation of our knowledge of what to ship you on that next order.

Phone us your requirements

McGIBBON
LUMBER COMPANY
Established 1855
Penetanguishene, Ont.

Fraser Bryson Lumber Co., Ltd.

Office, Castle Building 53 Queen St. Ottawa, Can.

Wholesale Lumber Dealers and Selling Agents for

Fraser & Co.

Mills at

DESCHENES - - - QUEBEC

White Pine
Red Pine
Spruce
Lumber and Lath

River Ouelle Pulp & Lumber Co.

Manufacturers of

SPRUCE

Lumber Lath Pulpwood

Head Office and Mills at:

St. Pacome, Que., Canada
On I. C. Ry. 75 Miles East of Quebec City

Also Mills at:

Crown Lake, Powerville Riv. Manie
On Nat. Transcontinental Ry.

Mill Yard.

Spruce, Tamarac, Whitewood and Poplar Lumber

SPRUCE AND WHITEWOOD LATH

Planing Mill in connection with Saw Mill

ROSSED SPRUCE PULPWOOD

Full supply of Seasoned Lumber always on hand.

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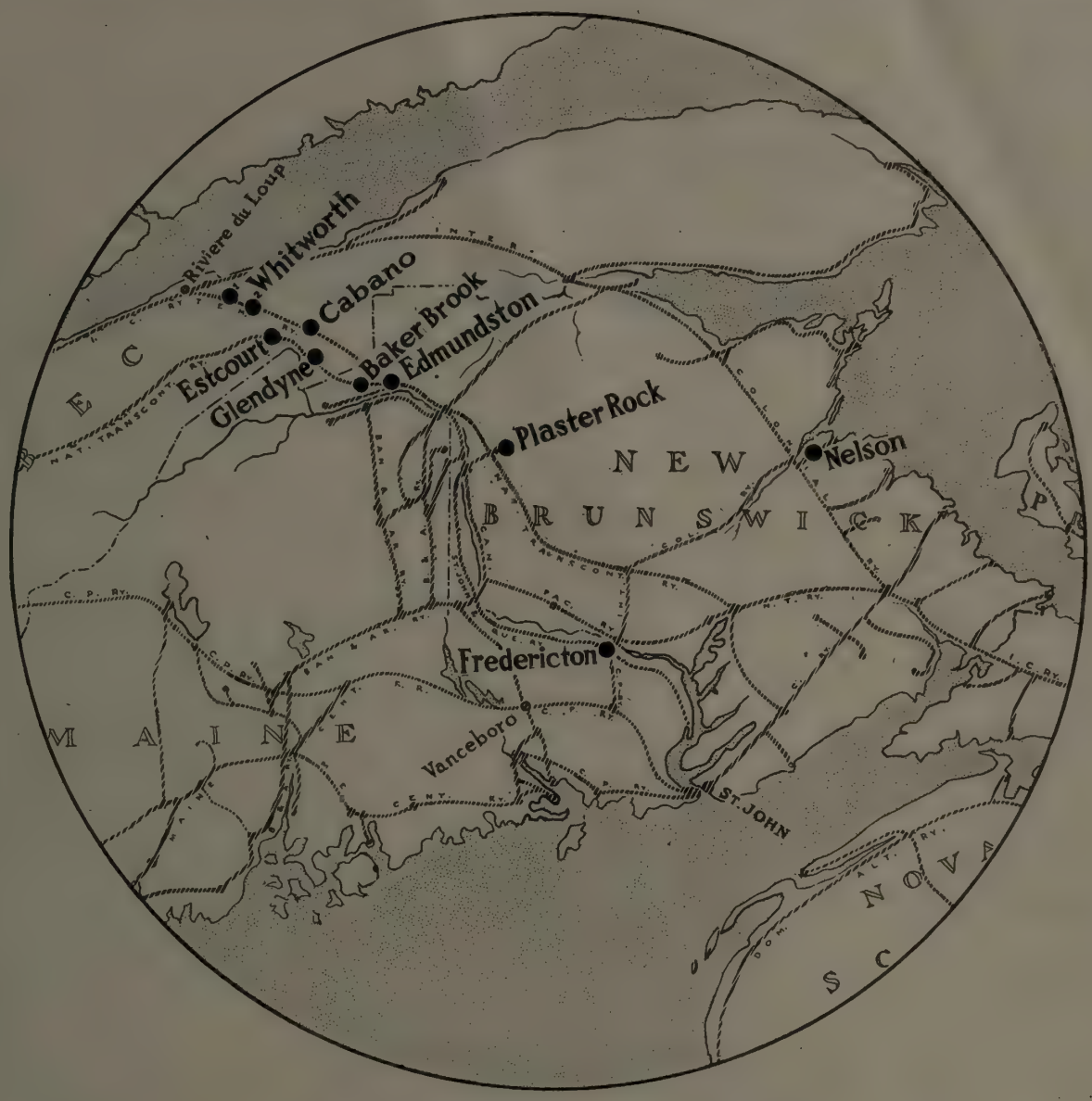

Mills and Railway Connections

Fredericton, N.B.	Railway connection	"	C. P. R.
Plaster Rock, N.B.	"	"	C. P. R.
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9666	"	2 x 4	14	"
43000	"	2 x 6	10	"
46804	"	2 x 6	12	"
14952	"	2 x 6	14	"
23070	"	2 x 6	16/18	"
52264	"	2 x 8	10	"
72688	"	2 x 8	12	"
58563	"	2 x 8	14	"
48850	"	2 x 8	16/18	"
44312	"	2 x 10	10	"
62160	"	2 x 10	12	"
58845	"	2 x 10	14	"
59235	"	2 x 10	16/18	"
10230	"	2 x 12	10/12	"
29600	"	2 x 12	14/18	"
231280	"	4/4		"

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Tea that is all genuine leaf and produces the greatest quantity of flavoury satisfying infusion

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2 cars 8 4 " " " " "
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2 cars 4/4 No. 2 Com. and Btr. Black Ash
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Hardwood
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Gentlemen,

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We got fifteen enquiries for the one car.

Yours truly,

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(signed) C. B. Janes

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All Grades in White Pine
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IS reliable in lumber mill service. H-110 has broad bearing surfaces on the bottom of the trough, to stand the wear of dragging. The end bar has a straight front to act as a pusher, and to prevent the tendency to ride up on the material.

T-head rivets are used, held securely between lugs cast in the side bar. Rivets are of .40 per cent. carbon steel, rolled true and smooth after forging. This process compresses the original hard scale surface, and materially increases the durability of the joint.

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The illustration shows our big planer and handling gear for dressing large timbers.

Get our prices.

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TRADE MARK.

SATIN-LIKE INTERIOR TRIM

SOFT WORKABLE COMMON LUMBER

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You—"Is that so. What's a Septum?"

Specialist—"The partition between your nostrils."

You—"Now I get you. You're speaking my language."

Assume a prospective layman home builder in your office:

P. H. B.—"What do you recommend for interior trim?"

You—"Shortleaf."

P. H. B.—"What's Shortleaf?"

You—"Well, Shortleaf — —" then for fifteen minutes you try to explain.

P. H. B.—"Oh yes; well, I'll let you know." (Exits.)

Now assume you watch your step. Enter the P. H. B.

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Arkansas Soft Pine

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Are you still calling it Shortleaf?
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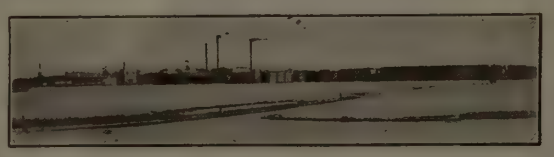

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Hardwood, Hemlock, White Pine

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40 Million Feet Dry Stock in pile containing a complete assortment for rush shipment.

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to
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QUARTERED OAK **PLAIN OAK**
POPLAR **ASH**

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Prompt shipment of Fir timbers in all sizes and up to 80 feet in length

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Fir Flooring, Ceiling and Siding.
Clear Fir Finish, rough and dressed.
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Red Cedar Shingles
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OUR SPECIALTY IS
Long Timbers and Prompt Shipment

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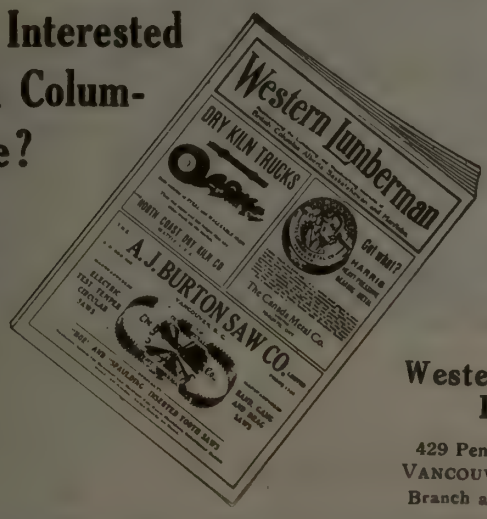

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Wide Cedar Boards.
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Full particulars from our Eastern Agents.

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That's why the **"GENDRON" Draw String Shoepack** is economical, because of its 100 per cent. **QUALITY,** and **HAND MADE** for **Foot Comfort.**

All our Shoepacks carry this guarantee. We will cheerfully replace any that may prove defective.

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(In the U.S.—Simonds Mfg. Co.)

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WRITE, OR WIRE US AT OUR EXPENSE—TODAY.

LONG CLEAR BACON
BARRELED PORK
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DAVIES PURE LARD
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THE WILLIAM DAVIES COMPANY LIMITED

MONTREAL TORONTO WINNIPEG

Canada Lumberman & Wood Worker

Issued on the 1st and 15th of every month by

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HUGH C. MacLEAN, Winnipeg, President.
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Single copies 15 cents.

"The Canada Lumberman and Woodworker" is published in the interest of, and reaches regularly, persons engaged in the lumber, woodworking and allied industries in every part of Canada. It aims at giving full and timely information on all subjects touching these interests, and invites free discussion by its readers.

Advertisers will receive careful attention and liberal treatment. For manufacturing and supply firms wishing to bring their goods to the attention of owners and operators of saw and planing mills, woodworking factories, pulp mills, etc., "The Canada Lumberman and Woodworker" is undoubtedly the most direct and profitable advertising medium. Special attention is directed to the "Wanted" and "For Sale" advertisements.

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A Merry Christmas to the Trade

The arrival of Christmas this year finds the lumber trade of Canada in quite a different condition from that which prevailed a year ago. Last year we were looking back upon a year and a half of war, and the lumber trade was not prosperous. The volume of business transacted during 1915 had been extremely light; prices had not been satisfactory and the outlook was uncertain. During 1916, although the war has continued with us, the pendulum of trade has swung back, and lumbermen have a good reason for celebrating Christmas this year in a merry manner. Leaving out of consideration for the time being the depressing conditions arising out of the war, the lumbermen of Canada to-day are well justified in taking full enjoyment out of the Christmas season, for the trade situation has changed for the better in a remarkable way since Christmas, 1915. The volume of lumber consumption has increased, the demand has strengthened and broadened, and, last but not least, prices of practically all lines have advanced, so that everyone, from the manufacturer to the retailer, is making a modest profit upon the stock he produces or handles. The probability is that these favorable conditions will be increased to some extent during 1917 by the increased scarcity of stocks arising out of the high cost of labor and supplies and the consequent reduction in woods operations. It is reasonable to feel, in fact, that the lumber trade has settled down into what may be considered as a normal war time condition, characterized by increasing operating costs, higher prices, and increasing inability of production to keep up with demand, all of which, though they involve a reduced volume of trade as compared with normal times, result in a sound trade situation. Unquestionably the outlook for the lumber trade at the end of 1916 is more encouraging than it has been at any previous time during the war.

We wish our readers a Merry Christmas for 1916 and a Happy New Year, with the hope that when Christmas comes again in 1917 trade conditions will be as favorable as they are to-day, and that they will have been supplemented by the blessings of a victorious peace.

Real Forest Fire Protection for Ontario

The announcement made by the Minister of Lands, Forests, and Mines for the Province of Ontario that his department is coming into line with those of several other Canadian provinces and adopting modern methods of fire prevention, so as to put an end to the enormous annual losses of standing timber, is a welcome piece of news. It means, we feel safe in predicting, that if the methods used in the other provinces are properly adopted and rigidly put into operation in Ontario, we have now experienced the last of our great conflagrations in the forest districts of Northern Ontario such as that which during the past summer wiped out of existence hundreds of settlers, together with their homes and effects, and caused incalculable damage to our standing timber. It means, too, that the families going into Northern Ontario to settle can depend in future upon practical protection against such calamities, and so feel encouraged to undertake the task of settling in the new country. Undoubtedly the prevention of forest fires will have the double effect of saving timber and giving a stimulus to settlement.

A great source of difficulty in the past has been the conflict of interests between timber owners, settlers, and prospectors, together with the inability of the individual settler to protect himself against the carelessness of others. This can now be entirely done away with. The time of year at which the Minister has made his announcement is a fortunate one, because between now and the next danger season in the summer of 1917 there will be time enough to arrange details and appoint the necessary staff to put the system into effect sufficiently to reduce greatly and probably almost eliminate the fire losses that we could otherwise predict with certainty for next year.

Elsewhere in this issue a report of the Minister's announcement is published, giving in detail the changes that are proposed. The announcement was made to a deputation arranged by the Canadian Forestry Association, which represented many important individuals and associations directly interested in the preservation of the standing timber of the province or in the prevention of forest fires. Some of the associations represented, such as the St. Maurice Forest Protective Association, Limited, and the Lower Ottawa Forest Protective Association, Limited, have already proved the adequacy, simplicity, and reasonable cost of modern forest fire fighting methods, and have given the Ontario department the benefit of their experience and co-operation. The trail has already been blazed by these associations, and it simply remains for the Ontario department to organize the necessary staff in order to place the protection of the province on an equal footing with the best system in North America.

The plan as outlined by the Minister is to create a branch of the Department of Lands, Forests, and Mines and to give it entire control of the fire prevention problem. The head of this department will be Mr. E. J. Zavitz, who has had long experience in connection with forestry problems in Ontario and is an excellent man for the position. Under Mr. Zavitz there will be a staff of inspectors and rangers. If the methods in use elsewhere are adopted, this staff will be organized in such a way as to provide an ample number of rangers, under a corps of inspectors, who will each be assigned a definite number of rangers to inspect. The percentage of inspectors to rangers will be greatly increased as compared with the present practice in Ontario. The rangers will be entrusted with the duty of patrolling for fires and enforcing the permit law which it is the intention of the Government to enact for the regulation of settlers' fires. A close season for setting out settlers' fires will be established, during which no fires will be allowed except with the permit of a ranger and in a ranger's presence. This provision has been the means of practically wiping out the danger from settlers' fires wherever it has been adopted, and in the course of a year or two the settlers have realized that the plan is greatly in their own interests. In some districts the settlers, appreciating the value of the protection they receive, have, of their own accord, assisted financially and otherwise in rendering the system more effective. Breaches of the permit law will lead to punishment by fine or imprisonment. Wherever this practice has been adopted

there have been a fairly large number of fines during the first year, a great reduction during the second year, and practically no fines during the third and subsequent years.

Supplementing the reorganization of the fire protection staff, the department will increase its equipment for fire prevention and fire fighting. It will build trails, telephone lines, and lookout towers in the woods, making it possible to locate, report, and reach a fire in the shortest possible time. All these improvements can be carried out at a surprisingly small cost. In fact, it is not unreasonable to expect that in the course of a year or two after the work of reorganization has been completed and the trails, lookout stations, and telephones increased in number, the cost of fire prevention will be easily within the amount expended at present for the same purpose.

The announcement of this change of policy on the part of the Ontario Government is the most important event in connection with the history of forest protection that has taken place in the province. The lumber industry and all those who depend upon it for their raw material will watch closely the carrying out of the scheme, and undoubtedly will give their fullest co-operation wherever it can be of service.

Western Retailers Great on Co-operation

In the prairie provinces of Canada retail lumbermen seem to be made of some different kind of material from those in Ontario and other parts of Eastern Canada. Recently the Canada Lumberman has taken upon itself to point out to the retailers of Ontario the self-evident truth that they have within themselves the power to improve greatly the conditions under which their trade is conducted, by forming an association and co-operating to bring about a number of reforms that are urgently needed and, at the same time, adopting progressive policies that will enable them to conduct their affairs more successfully and smoothly. One would think, if he had not had some experience to the contrary, that a proposition of this nature would meet with general approval and that it would not be a difficult task to put it into effect. However, this is not the case. We took considerable trouble in selecting a list of 100 of the best known retail lumbermen in Ontario. To them we sent a letter clearly outlining the proposition and asking for an expression of opinion, not for publication, but simply to guide us in deciding whether it would be advisable to call a meeting for the purpose of discussing the formation of an association of Ontario retail lumbermen. Of these 100 retailers some half-dozen replied in favor of forming an association, one or two were in doubt, and one opposed it directly. We followed this with a second letter to the same effect, and received a few more replies. We have secured in all, as a result of writing 200 letters, just ten replies favorable to an association, two or three expressing doubt, and one directly opposed. We presume that the balance of the retailers have thrown our letters into the basket. One would think we were trying to sell them something they did not want, or to rope them in for something not in their own interests.

So much for the retailers in Ontario. We do not try to explain their lack of interest in such a proposition; we simply give it up for the time being, but at the same time we will tell them a little about what is being done in the prairie provinces.

Elsewhere in this issue the retailers of Ontario will find a report of an address given to the Lumbermen's Section of the Toronto Board of Trade by Mr. A. B. Estlin, of Winnipeg, Man. In this report they will get an idea of what has been done in the West by men whose trade circumstances are in many cases similar to their own. The Western Retail Lumbermen's Association has given to its members service which is of direct money value to them far beyond the cost of membership, and it has been able, for this reason, to enroll in its ranks 80 per cent. of the retailers of Manitoba, Saskatchewan, and Alberta. The service given is of a varied nature. Plan books have been prepared containing plans, specifications, etc., of the chief lines of buildings required on the prairie, such as barns, silos, granaries, farm houses, etc., a number of examples of each kind being included. An architectural department furnishes individual plans and specifications that may be required. Estimating sheets, contract forms, etc., are provided. In fact, everything is done to simplify the task of the retailer in converting a prospect into a customer and satisfying him that he is getting good value for his money. An insurance department has also been established, which has reduced greatly the cost of carrying insurance upon retail yards. All this has been done with the least possible amount of trouble to the members themselves. In fact, the members find that co-operation of this kind simply involves the payment of a comparatively small membership fee, sufficient to provide for the employment of a competent staff, and that such a staff can handle everything satisfactorily. So far as meetings are concerned, practically only one meeting a year is found necessary. Everything works automatically.

What is the difference between the retailers of the prairie provinces and those of Ontario that the latter cannot work together also? Of course, the prairie yards are mostly yards only; very few of them conduct planing mills in addition. But, generally speaking, the business problems are on a similar plane, and we cannot see any reason why Ontario retailers should not prove themselves just as live and progressive as those of the West. The simple state of affairs is, that, up to date, they have not done so, although we have sought frequently to point out to them the value of such co-operation and have shown them how it has worked out successfully elsewhere. If anyone knows how to explain this puzzle we would like to hear from him.

Reciprocity Results Without Any Formal Agreement

About six years ago President Taft and Sir Wilfrid Laurier were engaged in the exchange of negotiations looking toward the passage of a reciprocity treatment between Canada and the United States, which was quite agreeable to the people of the United States at that time, but did not meet with the approval of the people of Canada. Of the merits of that proposal from a Canadian point of view there is little to be said to-day, as the whole question is dead and buried, but of the simple fact that two such nations as Canada and the United States can confidently leave it to their industrial and commercial leaders to develop their mutual interests whenever feasible, in a manner which puts into effect many of the advantages the reciprocity arrangement might be supposed to promote, we have lately had an exceptionally interesting illustration. During the past few weeks developments have taken place in the pulp and paper industries of Canada and the United States that clearly indicate the readiness with which industrial changes will take place along the line of least resistance, so long as they are reasonably free to do so. Two events in particular illustrate this point. One is the acquisition by the Riordon Pulp and Paper Company, Ltd., Montreal, of the Ticonderoga Pulp and Paper Company, Ticonderoga, N.Y. The other is the purchase of the mill and timber lands of the Partington Pulp and Paper Company, St. John, N.B., by the Export Paper Company, Rumford, Me., and the Bryant Paper Company, Kalamazoo, Mich. The latter two companies have joined hands in the purchase of the Partington properties, and have incorporated their newly acquired plant and business under the name of the Nashwaak Pulp and Paper Company.

One does not need to seek far for reasons for these developments. The Nashwaak Pulp and Paper Company will produce pulp at St. John, N.B., and will furnish the Export Paper Company and the Bryant Paper Company with raw material for their large outputs of paper. A similar motive unquestionably prompted the other deal, that by which the Riordon Company acquired the Ticonderoga plant. On the one hand we have a company that has enormous quantities of pulp and is anxious to secure a paper mill and on the other hand a

company that is manufacturing large quantities of paper but lacks a pulp mill. The parties to these deals are undoubtedly preparing to turn out their finished product in its most complete form with as full control as possible over all the manufacturing processes from the raw material to the article ready for the consumer. The fact that an international boundary happens to exist between the sites of the different plants does not affect the necessity or the wisdom of the deal, and it has not required any reciprocity encouragement to bring about either transaction. The irresistable logic of events has resulted in concrete examples of a proposition which it was not possible for the governments of the two countries to persuade the people of Canada to foster artificially. The wisdom of letting well enough alone seems to have been amply demonstrated, as we in Canada are now securing, without the giving of any quid pro quo, the advantages that we would have secured by the enactment of a reciprocity agreement.

And when one comes to analyze the situation, does it not come down to a very simple one, namely, a statement that industry can be depended upon to seek its own best interests without artificial regulations providing for the giving and taking of just those considerations which will be exchanged as a result of the laws of supply and demand? Moreover, we have in both these deals a very definite proof of the fact that Canada does not need to seek favors of anyone in connection with the marketing of its raw materials for the production of paper. We are logically the great source of supply for such raw materials for the whole of North America and for other markets as well, and yearly our strategic advantages in this connection are becoming greater as the supply in other countries is depleted. So far as we in Canada are concerned our problems in connection with pulpwood, pulp, and paper will be to increase the amount of manufacturing carried on in Canada until we turn a much larger percentage of our pulpwood and pulp into paper, instead of exporting them to mills in other lands. Under present conditions we are obliged to send out large quantities of pulpwood and pulp to the paper mills of the United States, but these mills are daily being obliged to get in closer touch with the sources of raw material in Canada, even to the extent of buying up large quantities of Canadian timber and purchasing Canadian mills. The two instances reported above are straws showing the direction of the wind and foretell a continually increasing tendency on the part of the pulp and paper industries of Canada and the United States to get together in order to make the most out of the timber resources of Canada. This way of bringing about reciprocal trade developments is infinitely better than an artificial method.

Editorial Short Lengths for Busy Readers

Ever since it first appeared as an article of luxury, there have been frequent statements that the automobile has been a damage to the lumber business because of the expensive habits it induced and the supposed dissipation of savings that might otherwise have been invested in home building.

Sometimes it is worth while to look at the other side of the question. There is an active organization of the lumber purchasing agents for the automobile factories, and these gentlemen insist that on the basis of the present production, they are buying annually 500,000,000 feet of hardwood lumber, chiefly maple, elm, birch and ash, and that in addition large quantities of yellow pine and other softwoods are used for the crating and boxing of machines for export.

One prominent automobile manufacturer alone is now purchasing fifty million feet of lumber per year; one large manufacturer of automobile bodies will need forty million feet of lumber during the coming twelve months, and another body manufacturer is using twenty million feet yearly, chiefly maple and elm, but also some sap gum and sound, wormy oak; another body maker is using ten million feet yearly of elm, gum, ash, maple and poplar. One manufacturer of automobile wheels is using the equivalent of twenty-six million feet of hickory a year, and another very large wheel manufacturer says that the average set of automobile wheels contains about 33 feet of hickory—so figure it out for yourself.

And then there are garages. There are now three million automobiles in the United States. The average one-car garage, if built with wood, takes about two thousand feet of lumber. Nobody knows how many garages have been built or will be built next year, but there will be a tremendous number of them, and a vast amount of lumber required in the aggregate.

If you are a prospective garage builder, write to the National Lumber Manufacturers' Association for the latest publication entitled "Your Garage—How to Build It." It's all meat and easily digested. Whatever you do, don't send away for a ready-made metal garage. It will cost you about twice as much as a wooden one and will be half as satisfactory.

Mr. J. C. Manzer, special representative of the New Brunswick Government in Havana, Cuba, has forwarded the following information on the lumber situation in Cuba: Stocks of lumber are considerably reduced and prices are firm. Consumers are paying from $8 to $10 per M. more for all grades of lumber than they were paying one year ago. Cuban lumber dealers recently received notice from exporters in the United States that they were preparing to ship 1,000,000,000 feet of lumber to Europe the first year after the close of the war. Up to the commencement of the war the United States was shipping to Europe about 100,000,000 feet annually. Dealers here consider this notice as a preliminary to another increase in price. Among the cargoes of lumber arriving recently was a large schooner loaded with spruce from Bathurst, New Brunswick.

The highly valuable white pine forests of Ontario, Quebec, and New Brunswick are in danger of extinction by the outbreak of white pine blister rust, a disease originally brought over from Germany on pine seedlings. Infected areas have been located in Ontario—in the Niagara Peninsula, and in Simcoe, Durham, Wellington, and Victoria Counties. In Quebec several outbreaks have been found near Montreal. An investigation has been under way for some months by provincial government officers, but to prevent another disastrous visitation such as cleared off most of the tamarack and chestnut trees the most vigorous measures will have to be taken by all governments, lumber companies, and individuals. The disease spreads through gooseberry and currant bushes, which are used as a "host" plant. The rust forms yellow patches on the under side of the leaves, then develops late in June into spores on the currants and berries, and is carried by the wind to the white pine. No preventive is known other than destruction of the two kinds of berry bushes and of all five-needled trees found to be infected. The governments of the Eastern States have made appropriations for an immediate campaign to locate diseased sections and to suppress the infection.

The Canadian Pacific Railway and Mr. H. H. Stevens, M.P., are having an interesting and important dispute regarding the ownership of a lot of property on the water-front at Vancouver, Mr. Stevens claiming that the Canadian Pacific Railway is holding much of this property illegally and collecting rents from those who occupy it. A number of lumber and shingle companies are closely interested in this dispute, having their plants located on the property in question. These include the Hanbury Mill Company, the Cotton Shingle Company, the Imperial Shingle Company, the False Creek Lumber Company, the Alberta Lumber Company, the Rat Portage Lumber Company, the Cedar Cove Sash and Door Company, Ltd., J. Chew, and the British Columbia Fir and Cedar Lumber Company. Mr. Stevens claims that the ground belongs to the public, and that the C.P.R. is drawing rentals from it amounting to $80,000 a year.

Leading Southern lumber exporters have decided to fill orders for European cities promptly and to charter ships, if necessary, to move the cargoes. The export committee of the Southern Pine Association took action after J. W. Drewry, European agent, said he had orders for more than 100,000,000 feet of lumber, cross ties, and other forest products.

Ontario Adopts Modern Protection

Minister Announces Improved Fire Prevention Plan Including Settlers' Permits, Telephones, Etc.

An important announcement was made by Hon. G. Howard Ferguson, Minister of Lands, Forests and Mines for the Province of Ontario, to a deputation which waited upon him recently, to urge further and more efficient methods for the protection of standing timber from fire. The deputation was arranged by the Canadian Forestry Association, and included prominent representatives from all the industries interested in the forest products of Ontario, both from a manufacturing and consuming point of view; also representatives from Boards of Trade, banks, fire insurance companies, etc. The request of the deputation was divided under several heads. The chief suggestions were that fire rangers should be given complete control over settlers' clearing fires, by the enactment of a "permit" law; that control of the rangers should be centralized under a skilled manager and a capable inspection staff of sufficient size to make frequent inspections; that the work should be facilitated so far as possible by the use of modern mechanical equipment, including trails, telephones, lookout towers, etc.

After listening attentively to the addresses of a number of members of the deputation, Hon. Mr. Ferguson said that the Governmeent could only work out a successful system of administrating the forest resources of the province with the co-operation of those who were interested in their preservation and use. After he had come into the department as its Minister, one of the subjects to which he had devoted considerable study was that of forest protection, and fire prevention in the north country, and they had fairly well developed an extended and reorganized system, when the clay belt fire calamity of this year overtook them. The conditions prevailing at the time of the fire were unique, but, of course, it was not dealing with the question of prevention of fire or control of its origin, to analyze those conditions. In fact, the province needed some change in the methods of handling the problem, as compared with those of a few years ago. In earlier days it had been largely a question of administerating the timber resources. Mining had developed, however, and, more recently, increased attention had been given to colonization work. The government had endeavored to meet all these changing conditions as fully as possible. During the past year they had placed about 1,400 settlers in Northern Ontario. The settler was essentially an asset to the development of the country. He would not like the public to think that the Government had done nothing, however, in the way of developing further fire protection for the fire resources. They had, in the Nepigon reserve, established a very efficient system and had developed along similar lines in other districts.

The department had now come to the conclusion that it would be necessary to readjust the whole fire protection system, so as to meet the conditions prevailing at the present time. He had had correspondence with a number of lumbermen, and interviews and communications with the different governments, upon this subject, had collected all the information he could, and now had pretty definitely arrived at a conclusion regarding the future. The intention of the Government was to establish a separate branch of the Department of Lands, Forests and Mines, that would deal entirely with the questions of forestry, fire prevention and protection. There would be a head of the branch with entire control of the whole work. He would be given a wide range of authority, an ample staff of competent men and all the means necessary to see that the requirements of the situation were carried out. He had also reached the conclusion that the only way in which they could secure actual control of settlers and others in the north country was by adopting some system of permits or control of fires set out during the close season. He thought also that they would have to extend their telephone systems and lookout tower systems. Perhaps they would appoint a few mounted rangers. The whole problem was one of getting together and concentrating their fire fighting forces as soon as a fire was discovered. Up to the present time the department had spent a very large sum of money on fire protection and proposed to continue doing so. The justification of such expenditure could not be questioned by anybody.

It is understood that the Government intends to appoint, as the head of the new branch of the Department, Mr. E. J. Zavitz, who for many years has been in charge of the Forestry section of the Lands Department.

The deputation which waited upon the Minister was arranged chiefly by Mr. Robson Black, secretary of the Canadian Forestry Association, and included among others: Lt.-Col. J. B. Miller, president of the Canadian Forestry Association, who introduced the speakers; Sir Edmund Walker, President Canadian Bank of Commerce; W. E. Bigwood, President Canadian Lumbermen's Association; J. C. Elliott, Kingston, President Canadian Press Association; Ellwood Wilson, Grand'Mere, P.Q., President St. Maurice Forest Protective Association; Mr. Arthur Hewitt, President Toronto Board of Trade; James White, Commission of Conservation; T. H. Hall, Vice-President Canadian Fire Underwriters' Association; S. R. Parsons, Vice-President Canadian Manufacturers' Association; Mr. T. C. Young, timber manager of the Canadian Northern Railway; ex-Controller James Simpson, Toronto.

Strong Objections to Demurrage Hearing

Urgent representations were made recently to the Dominion Board of Railway Commissioners by lumbermen in many parts of Eastern Canada, to the effect that the proposed hearing of the railway companies' application for permission to increase demurrage charges from $1 per day to $4 per day, and reduce the free time on lumber from 72 hours to 48 hours, which was to be held on December 11th, gave no time to prepare a case against the railway companies. The Canadian Lumbermen's Association, the Lumbermen's Section of the Toronto Board of Trade, and the Montreal Lumbermen's Association all sent in protests. Sir Henry Drayton, chairman of the Board of Railway Commissioners, advised the railways and the shippers to try to arrange a compromise. A number of conferences were held on December 12 and 13, and finally an agreement was reached to the effect that the free time on lumber should remain at 72 hours, but that the demurrage charges should be as follows: For the first day after the free time, $1; for the second day, $1; for the third day, $2; and for the fourth and subsequent days, $5. It is expected that this arrangement will be ratified by the board. This, of course, is a temporary arrangement, to last only until April 30, 1917.

British Columbia Timber Report for October

The timber returns for the month of October, issued by the British Columbia forestry branch, show the total scale of sawlogs for the province to be 156,412,875 feet board measure, in addition to 571,631 lineal feet piles and poles, and 21,294 cords of shingle bolts, posts, ties, etc. The returns according to each forest district are as follows: Vancouver, 107,517,336 feet sawlogs, 102,595 lineal feet poles and piles, and 11,578 cords of bolts, etc.; Island district, 15,064,214 feet sawlogs, 32,968 lineal feet poles, etc., and 727 cords of bolts, etc.; Nelson, 14,484,160 feet sawlogs, 200,495 lineal feet poles, etc., and 2,031 cords of bolts, posts, etc.; Cranbrook, 11,334,310 feet sawlogs, 39,230 lineal feet poles, etc., and 6,373 cords of bolts, etc.; Prince Rupert, 3,217,636 feet sawlogs, 66,462 lineal feet poles and piles, and 562 cords of bolts, etc.; Vernon, 2,189,021 feet sawlogs, and 10,200 lineal feet poles and piles; Kamloops, 1,583,658 feet sawlogs, and 8,277 lineal feet of poles and piles; Fort George, 1,170,662 feet sawlogs, and 44,217 lineal feet poles, etc.; Hazelton, 124,878 feet sawlogs, and 67,187 feet poles, etc.; and Lillooet, 27,000 feet sawlogs. Timber sales recorded during the month of October cover an estimated total of 9,678,097 feet sawlogs, and 50,000 lineal feet of cedar poles, estimated to produce a revenue amounting to $17,174,000.

Beach Combers to be Severely Handled

An interesting judgment was recently given by Judge McInnes at Vancouver, B.C., in connection with the prosecution of a man named Charles Dorey for "fraudulently keeping in his possession logs belonging to the Vancouver Lumber Company." The prosecution was brought under an act placed upon the statute books about three years ago, and recently amended, making it an indictable offence, with liability to three years imprisonment, for anyone, without the consent of the owner, fraudulently taking, collecting, keeping, or selling any timber, mast, spar, saw log, or shingle bolt found adrift or cast ashore in Canada. This was the first prosecution under the act, and the judge was lenient with the defendant, expressing the opinion that it was rather hard upon him to be made an example of when probably he had no intention of infringing the law. Accordingly, he imposed only a moderate fine, but he pointed out that future offenders would be dealt with more severely, the act having been passed for the protection of th lumbering industry.

Toronto Lumbermen Will Hold a Banquet

At a recent meeting of the Lumbermen's Section of the Toronto Board of Trade it was decided that a lumbermen's banquet should be held in Toronto during the week between Christmas and New Year's, to which all lumbermen and members of several affiliated trades should be invited, including the dealers in builders' supplies. It is expected that a very large attendance will be secured and that the occasion will be the most interesting and successful of its kind that has ever been held in Toronto. A special banquet committee was appointed, consisting of Messrs. W. F. Oliver, A. E. Clark, A. K. Johnson, and H. Boultbee. A special programme will be carried out, and a number of good things will be arranged in the way of entertainment.

The citizens of Brockville, Ont., recently gave a banquet in honor of the 230th Forestry Battalion, stationed at that point.

Western Retailers Doing Good Work

Plan Books, Blue Prints, Specifications, Etc., Furnished at Cost—Insurance Rates Reduced.

At one of the recent weekly meetings of the Lumbermen's Section of the Toronto Board of Trade an excellent address was delivered by Mr. A. B. Estlin, of Winnipeg, Man., formerly president of the Western Retail Lumbermen's Association, and one of its board of directors for many years.

Mr. Estlin, in opening his remarks, stated that the Western Retail Lumbermen's Association was now about 27 years old, and it enjoyed the largest representation it had ever had. It included retailers from the three prairie provinces of Manitoba, Saskatchewan, and Alberta, and 80 per cent. of the yards were represented. During the last two or three years the association had made very considerable progress, and was now taking up vigorously the work of educating both its own members and the public in regard to improved methods of doing business.

One of its most important steps had been the recent adoption of the plan book business. The association was now getting out the second edition of this plan book, in which plans and full information were given regarding all the usual types of buildings required in the prairie provinces, such as granaries, silos, barns, houses, etc., a limited number of each class being included. In connection with each plan prices are given based upon the average prices of everything that goes into the construction of the building, and owing to the number of books the association had got out they were able to furnish them to their members very cheaply. The plans included were specially suitable for prairie customers, and were all prepared by the association's own staff. The buildings represented had all been actually erected, and the prices, details, etc., were checked up and corrected from actual results. Thus as the work proceeded and new editions appeared the plans were improved according to the experience obtained. The association was very proud of its plan books because everybody else was copying them. The books were being handed out practically at cost, and they had gone even further than this, having established an architectural department. When any lumberman got a customer who intended to put up a building he simply had to give the association a rough sketch of the building on a piece of paper. The staff of the architectural department would then make him out a set of plans, blue prints, and specifications. In addition, the association furnished a book of quantities for each type of building shown in its plan book. Not content with all this, they had also drawn up and were furnishing a standard estimating sheet which was adaptable to every kind of building. All these lines of service had proved of great assistance to the trade in general.

Another line of work the association had taken up was in connection with insurance on retail yards. About ten years ago the retailers in the prairie provinces had been suffering greatly from the high price of insurance upon their yards. The basis rate of the board companies at this time was $2.50 a thousand, and the exposure charges also were very high. The average cost of insurance was probably about $3.50 a thousand. That was a very heavy charge because the retailers had to carry large stocks. So the idea was conceived that they should get up an insurance company of their own. In order to start it they had to have a little money, and as they had none at that time, they proposed to the board of directors of the association they should lend the insurance institution $10,000, not to be used, but as a basis of credit, upon which a fair rate of interest should be paid. This matter was arranged and the insurance plan was worked out. It was figured that in order to put the plan into successful operation at once it would be necessary for each man to pay in an amount equal to the insurance premiums that he would be paying under a board company rate, this amount to be considered as a guarantee. This step was taken as a precaution to enable them to call up to that amount and not hurt the insurer during his first year. The money thus secured was called the guarantee premium deposit. The association had kept up this plan every year since, but as the basis rate decreased the amount of this deposit also decreased. Instead of $2.50 a thousand, which was the rate during the first year, it had now been brought down to 75 cents.

The association have at the present time about $3,000,000 of insurance in force. They had repaid the $10,000 borrowed from the board of directors of the association, and, roughly speaking, they had $40,000 or $50,000 of capital. Moreover, they had never had to make a call that in any way approached what the board companies had been charging. Last year and for the previous four or five years they had paid 48c. Insurance on his own company's yard at Melita, Man., which had formerly cost them $350, was now costing them only $48, and, in addition to that, instead of having a whole lot of trouble if they had a fire loss, being lumbermen themselves, the policy holders were dealt with as brother lumbermen, and the practice was to give them as fair an adjustment as possible.

Another feature of the insurance plan was that they only covered up to $7,000 in any one yard. They had been able to get other companies to take the excess insurance which they did not carry themselves. Of course, the assocation also made a charge for exposures, like any other companies. During the past year they had not made losses in excess of previous years, although there had been a far greater moral risk than in the days before the hotels went out of business. He could not explain this difference, but statistics showed that it existed. Their latest statements showed that they had about $5,000 surplus on the season's business.

The work of the insurance department had been wholly voluntary on everybody's part, with the exception of the staff, consisting of the secretary and stenographer. All the rest of the work had been done by the members of the association free of charge. As an association, therefore, with the excellent record they had made, they felt very proud of their work.

At the conclusion of Mr. Estlin's address a number of questions were asked and an informal discussion took place. The chairman, Mr. J. B. Reid, expressed the thanks of the Lumbermen's Section of the Board of Trade for Mr. Estlin's instructive address.

Going After Freight Rate Refunds

Toronto Lumbermen Ask Railway Commission to Make Railways Pay Back All Overcharges.

At the meeting of the Lumbermen's Section of the Toronto Board of Trade, held on December 8, Mr. J. L. Campbell introduced a discussion upon the subject of freight rebates, drawing attention to the established policy of the railway companies to delay and, whenever possible to avoid, the payment of refunds for excess freight charges improperly collected. Mr. Campbell referred to the difficulty experienced by all shippers in following this matter up closely. Lumbermen could not all be experts in the matter of freight rates. Sometimes they were charged excessive rates without knowing it. Whenever they did make the discovery that they had been overcharged and wrote to the railway company pointing out the error, the latter would acknowledge receipt of the letter and that would be the last they would hear of it unless they kept after the railway company. Then they would get another letter saying that the matter was being taken up further. From three to six months would pass by without anything being done, depending upon the laxity or diligence of the shipper. If he did not keep after the railway company to the very end he would never get his money.

There was a great grievance here that ought to be remedied. In many cases the local freight agent made mistakes in figuring the charges. Sometimes these mistakes were overcharges and upon rare occasions they were undercharges. The auditor of the railway company, in examining the books, would come across these mistakes. If he found that the shipper had been undercharged the railway company never lost sight of him until it got the rest of its money. The auditor who located these undercharges must, of course, also find the overcharges. If the railway companies were permitted to come back on the shippers for undercharges they should also refund the overcharges. However, this was not done. As a matter of honesty it should be done. If the auditor found an overcharge and the railway company buried it it really became a crime. It seemed to Mr. Campbell that it would be a wise thing to take some action to make the railway companies adopt an honorable policy in this regard.

There was a similar case to be found in the matter of unclaimed bank balances. The banks, however, made some attempt to find the man entitled to the money. By reason of these balances being left in the banks they accumulated to a very substantial sum. This money did not belong to the banks, and as it came from the people at large it should be returned to the people. A law had been passed obliging the banks to hand this money over to the government. Mr. Campbell could see no reason why the same rule should not apply to the railway people. When the auditor found an overcharge he should make a note of it and send in a return regarding it to the railway people. The railways should then return the money to the shipper, and, if the latter could not be found, they should hand the money over to the state. This would be a fair deal for the people.

That the amount of money improperly retained by the railway companies in this manner was very considerable was clearly shown by the fact that numerous companies had been estabilshed for the purpose of checking over freight bills and making claims against the railway companies. These companies did a good-sized business and secured a considerable amount of money, showing that the amount taken from the pockets of the people unjustly was very large.

After Mr. Campbell's discussion of the matter several other members expressed their approval of his remarks, and many definite instances were given of the action of the railway companies along this line. It was finally decided that the secretary of the section should write to the secretary of the Dominion Board of Railway Commissioners asking them for a hearing upon this subject.

Personal Paragraphs

Mr. Harry Brown of the Atlantic Lumber Company, Toronto, who enlisted as a private with the 15th Battalion of the first Canadian contingent, has secured a lieutenancy.

Mr. E. H. Woods, who was connected with Messrs. Frank Harrison & Co., of Liverpool, as their American buyer, has joined the staff of W. N. Hillas & Co., Hull and West Hartlepool, England.

Mr. Harold Kennedy, of Quebec, who owns large lumber interests in the province, including timber limits, has been elected a director of the Bank of Montreal. Mr. Kennedy recently equipped a military hospital in Maidstone, Engand.

Col. A. D. McRae has been appointed acting quartermaster-general of the Canadian forces in Great Britain. Col. McRae will be remembered by lumbermen as the managing director of the Canadian Western Lumber Company, Fraser Mills, B.C.

Mr. B. Russell, of Toronto, one of those interested in the Gordon Development Company, holding 450,000,000 feet of timber in Sechelt Peninsula, visited Vancouver recently and also inspected some of the company's timber property, where logging operations are now in progress.

Major Austin Bain Gillies, Carleton Place, Ont., who went overseas in command of a Toronto battery and is well known to the lumber trade of Ontario, was recently included in the list of wounded. Major Gillis is 31 years of age, and has been connected with the Canadian Field Artillery for about ten years.

E. F. Duby, general superintendent at the Brunette Saw Mills, New Westminster, B.C., left recently for Prince Rupert, where he will have charge of the erection and operation of the sawmill which is being put up by Mr. J. S. Emerson, of Vancouver. On the eve of his departure Mr. Duby was presented with a handsome gold watch by the operating staff of the Brunette Mills.

Obituary

E. T. Nesbitt, a well-known lumber merchant and contractor of Quebec, P.Q., died at the General Hospital, Montreal, recently, at the age of 62. The late Mr. Nesbitt was the fonuder of the Quebec Builders' Exchange.

Second Lieutenant James Douglas Aiken, Royal Field Artillery, is reported killed in action. Lieutenant Aiken graduated in January from the Department of Forestry, University of Toronto. He was the second son of Mrs. J. H. Aiken, 23 Alma Street, London, Ont.

W. H. Rourke, for many years a prominent resident of St. Martins, N.B., and a leading figure in the shipping and lumbering industry of New Brunswick, died recently at St. John, after an illness of three weeks, at the age of 90.

Alexander Gordon, Pembroke, Ont., father of Senator George Gordon, of George Gordon & Co., Ltd., Cache Bay, Ont., died suddenly at his home recently. The late Mr. Gordon was 81 years of age, and moved to Pembroke in 1866. Until recent years he had been extensively engaged in the lumber business, under the firm name of Booth & Gordon.

The Western Retail Lumbermen's Association will hold its annual convention at Winnipeg on January 24, 25, and 26, these dates being a little earlier than usual.

Plan for Single Band Saw Mill

Herewith are submitted the plans of what I consider one of the most successful single band mills in the country. In erecting a new mill the question arises, how to arrange it for convenience as well as to avoid unnecessary labor expense. Anyone contemplating the building or rebuilding of a single band will do well to consider the arrangement shown in the sketches.

The engine and boiler rooms, as well as dust room, can be located at will, but should not be directly connected with the mill building. If possible, the engine and boiler room should be located on the left-hand side of the building, while the filing room should be on the right-hand side, as shown at arrows.—R. C. Leibe, in The Woodworker, Indianapolis.

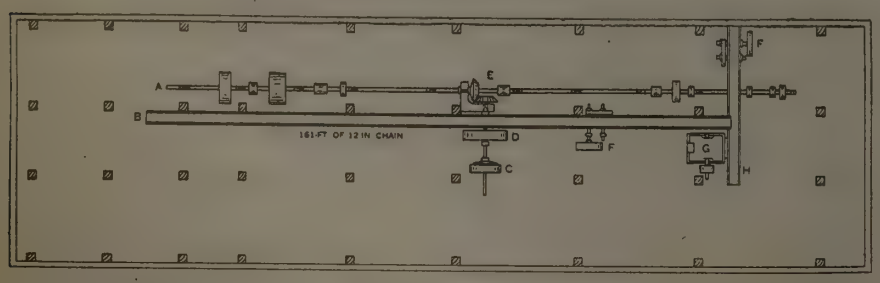

Fig. 1, Plan of lower floor — A, main lineshaft; B, dust conveyor; C, hog drive pulley; D, edger drive pulley; E. gear drive; F, conveyor drive; G, hog; H, conveyor.

Montreal Lumber Association Annual Meeting

Mr. Arthur H. Campbell presided at the annual meeting of the Montreal Lumber Association, held on December 4th at the Board of Trade. In his report Mr. Campbell referred to the increase in railway freights east of Port Arthur, including those on lumber, which was asked for by the companies in February, 1915. The proposed advances were: In cases where the rate was 15 cents or lower, ½c advance; over 15 cents but not exceeding 25 cents, 1c advance; over 25 cents but not exceeding 35 cents, 1½c advance; over 35 cents but not exceeding 45 cents, 2c advance. The association was represeented at the hearings in Montreal, Ottawa, and Toronto by Mr. P. D. Gordon, Mr. W. A. Filion, the president, and other members, and by the manager of the transportation bureau. After more than a year's consideration, the Board of Railway Commissioners granted the increases asked for, and the advanced rates became effective on December 1st. The judgment, however, provided that the present difference between the local rate and the export rate must be continued. Reference was also made by Mr. Campbell to ocean rates, which during last winter advanced to 400s. per standard, and then steadily declined until September, when they were down to 200s. From that date they again advanced, ranging from 300s. to 325s. at the close of navigation.

A few days ago the railway companies applied to the railway commissioners for an amendment to the Canadian car service rules so as to provide that the demurrage charge for each 24 hours, as provided in rule No. 1, be increased from $1 to $4, and that the additional 24 hours beyond the 48 hours free time allowed for loading or unloading, amongst other goods, boards, deals, and scantlings, be cancelled. The lumber trade is most strenuously opposed to the railways' application, being of the opinion that the car shortage is attributable, not so much to the misuse of cars as storage houses by the shippers as to the failure of the railway companies to add sufficiently to their rolling stock during the last two or three years, to the shortage of labor, and to the heavy business offering as a result of the war. When trade is so handicapped and consumers are suffering to such an extent by reason of the phenomenal advances in the prices of all necessaries of life, it was most inopportune to allow of the further handicapping of trade and additional increases in the cost of carrying on business. The hearing was fixed for Monday, December 11, in Toronto. Conferences were held at Toronto on December 12 and 13, resulting in a compromise arrangement, as reported elsewhere in this issue.

The president expressed deep regret at the loss by death of Mr. George J. Esplin, one of the charter members of the association, and of Mr. G. A. Grier.

The following officers were elected: President, Mr. Arthur H. Campbell; vice-president, Mr. P. D. Gordon; treasurer, Mr. F. W. Cotter; directors, Messrs. George Grier, D. H. McLennan, W. A. Filton, and T. J. Rutherford.

Otto Dahl, of Philadelphia, Pa., was in Vancouver, B.C., recently, in order to close shipbuilding contracts to the amount of about $5,000,000, which will entail the employment of 1,500 to 2,000 men. The ships are to be built by the Wallace Shipbuilding Company and by Messrs. Coughlan & Company at their proposed yards on False Creek. Six ships are to be built at the Wallace yards, each registering 8,800 tons. They will be steel steamers. It is expeeted that other contracts will follow these.

"Your Garage—How to Build It," is the title of an attractive and practical booklet published by the Trade Extension Department of the National Lumber Manufacturers' Association. The booklet has been prepared by C. R. W. Edgcumbe and contains complete information and plans for the guidance of automobile owners who wish to erect single, double, or more extensive garages.

A report from Sussex, N.B., states that operations in the woods have already commenced in that district, and that there has been a sufficient snow fall for hauling operations to be undertaken. This is a record in regard to the early commencement of operations in that locality ,and it is thought that the operators will get through their work exceptionally early.

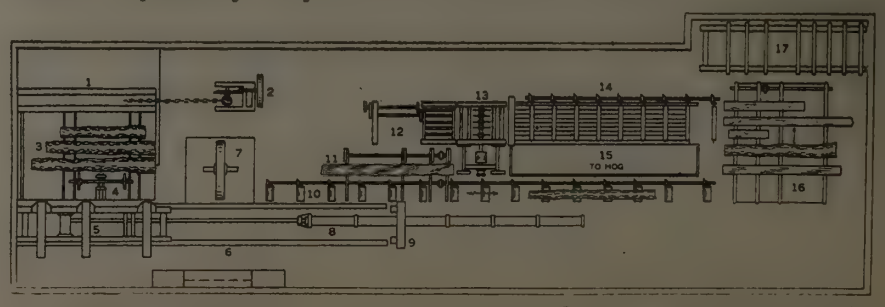

Fig. 2, Plan of upper floor—1, log conveyor chain; 2, chain gear and drive; 3, log deck; 4, steam kicker; 5, carriage; 6, carriage track; 7, band mill; 8, shot gun feed; 9, bumper; 10, live rolls; 11, transfer chain; 12, edger table; 13, edger; 14, live rolls; 15, hog chute; 16, chain conveyor, 17, trimmer

Stave Production in Nova Scotia

Materials Used and Manufacturing Costs—Market Situation Disturbed by War Conditions

Editor Canada Lumberman:—Can you give us any information as to the manufacture of wooden barrels and other packages, the kind of wood used for staves and heads, and other material required, labor necessary, and the prices obtained for the finished product? If you can give us any information on these points, or put us in touch with anyone who can, we will appreciate it very much—Colonial Lumber Company, Antigonish, N.S.

Information in reply to this question was published in our issue of December 1st. To this we are able to add the following information furnished by the Sutherland, Innes Company, Limited, Chatham, Ont.:

The principal timbers used for the manufacture of wooden barrels are as follows:—

For staves—Elm, birch, spruce.
For heading—Basswood, hardwood and spruce.
For hoops—Elm.

The principal timber used is mentioned first in each case. Prices will be governed by quality, proximity to market, and market conditions. There are no fixed prices. This firm would probably want to manufacture principally spruce staves, as they have little elm in their vicinity.

Information we have received from an experienced manufacturer in Nova Scotia is to the effect that they manufacture staves from spruce and fir, and heading from spruce, fir and pine. The machinery required is a saw for cutting the wood to proper lengths, a stave saw for sawing the staves, and two jointers to take care of the output of one stave machine.

Regarding the cost of operation, this firm states that a great deal depends upon the man who operates the stave saw. Some men will saw 6,000 staves per day, some 8,000 and some 10,000, the latter being practically the maximum figure. According to their experience, the cost of sawing and jointing staves is approximately $1.60 per thousand. This applies to normal conditions. At present, on account of the high wages paid to all classes of workmen, the cost would be increased to some extent.

The price of the finished product depends, like that of all other manufafctured goods, upon supply and demand. During 1916 and 1915 staves have been low in price. The apple crop has been less than average, and arrangements had been made for supplying a large demand from this source, the result being that there has been a surplus of stock until quite recently. This has now been practically cleaned up. The foreign demand has also been less than usual on account of the war and the disturbance of trades and industries using staves.

The situation in connection with the stave market in Nova Scotia is indicated by the fact that our informants have not been cutting staves for about a year, although they have three stave mills and had a contract for some 2,000,000 staves for the year 1914. Since that time they have been cutting only for the local demand for apple barrels. They report that according to their experience at the present time, no one can cut staves for less than $6 a thousand f.o.b., shipping point.

The freight rate situation has also been a serious difficulty in connection with the production of staves during the past two years. Freight rates have increased enormously in all directions, both by rail and water, and the cost of placing staves in the hands of the consumer is nearly double. This company nearly closed a contract for 6,000,000 staves, on a delivered price, to a southern port in the autumn of 1915. At that time they estimated that freights on lumber would probably advance during 1916 to $7.50 or possibly $8 per thousand, and they were figuring on this basis. Fortunately for themselves they became a little more cautious than usual and decided to quote only on an f.o.b. basis. The result was that they lost the business, which was really an advantage to them, for the freight rate on lumber to the same port increased to $16 per thousand during the same year.

In conclusion, this firm reports that unless the consumers of staves advance their ideas in regard to price materially, they will have to find some substitute, as no one can cut staves at the prices that have been ruling during the past year.

Another manufacturer in Nova Scotia reports that he uses fir, spruce and poplar, for apple and potato barrels. His machinery includes a stave saw, shingle machine which is used for both shingles and heads, head rounder, planer and stave jointer, and a cut off saw for sawing logs to the right length. One cord of wood makes from 1,000 to 1,200 staves, according to the quality. Five cords of wood will saw into 1,000 pairs of heads. Staves are selling in his locality at about $6 per thousand, heads at $60 per thousand pair, and hoops at about $6 per thousand. Staves are supposed to be sawed 14 to a barrel, coopers are charging 5c per piece for making. Milling ought to cost $1.25 per thousand for staves and $20 per thousand pairs for heads (not including wood). Barrels at this point are bringing 29c or 30c each. He reports also that a good stave sawyer ought to put out on an average 8,000 pieces per day.

Imports of Timber into Australia

According to a report from the Canadian Trade Commissioner at Melbourne, Australia, imports into the State of Victoria during the past three years have been as follows:

Timber.	1914. Super. feet.	1915. Super. feet.	1916. Super. feet.
Total importations	160,609,000	86,170,000	87,886,000
Total consumption	151,854,000	102,571,000	93,177,000
Total stocks held	76,913,000	60,512,000	55,221,000

The fluctuations in the quantities of each classification of timber imported into Melbourne during the fiscal years ended in 1914, 1915, and 1916 are illustrated in the appended schedule:

Class.	1914. Super. feet.	1915. Super. feet.	1916. Super. feet.
Red deals	4,778,000	909,000	2,320,000
Dressed flooring and lining	51,453,000	35,743,000	19,235,000
Spruce and hemlock	5,235,000	3,272,000	711,000
Oregon (Douglas fir)	50,406,000	17,973,000	22,378,000
Sugar and yellow pine	3,669,000	1,433,000	1,389,000
Redwood	13,727,000	10,478,000	11,773,000
Dressed American shelving	25,000	74,000	33,000
New Zealand kauri	4,096,000	3,275,000	4,255,000
New Zealand white pine and rimu	13,947,000	12,400,000	23,697,000
Clear pine	73,000	23,000	61,000
Pacific pine (Siberian)	13,200,000	590,000	2,034,000
Laths ....No.	30,796,000	10,630,000	11,630,000
Pickets ....No.	1,346,000	658,000	752,000

Timber Stocks Held in Melbourne at June 30, 1916.

A tabulated statement of the stocks of timber held in Melbourne at the close of each fiscal year from 1914 to 1916, inclusive, is submitted, thus:

Class.	1914. Super feet.	1915. Super. feet.	1916. Super. feet.
Red deals	3,583,000	1,863,000	2,786,000
Dressed floorings, linings, etc.	18,454,000	23,575,000	18,350,000
Spruce and hemlock	4,691,000	2,996,000	996,000
Oregon (Dougas fir)	21,464,000	9,688,000	6,650,000
Sugar and yellow pine	4,362,000	2,815,000	2,308,000
Redwood	6,169,000	4,420,000	7,226,000
Dressed American shelving	96,000	62,000	47,000
New Zealand kauri	5,009,000	5,249,000	5,521,000
New Zealand white pine and rimu	10,201,000	9,503,000	11,044,000
Clear pine	95,000	46,000	48,000
Pacific pine (Siberian)	2,780,000	295,000	245,000

Contraction in Imports of Timber Forecasted.

While the stocks held in Melbourne on June 30 last were not far short of the usual average, yet the sources of supplies were materially altered.

The inability to arrange charters from the Pacific Coast gave New Zealand timber mills an exceptional opportunity, of which full advantage was taken, to increase their exports to Australia—particularly in white pine and rimu.

With abnormal costs of all building materials, dearer money, and increased taxation, speculative building has ceased in Australia, and, on expert authority, the present outlook points to a marked contraction in importations of timber for some time to come.

The Serbian Timber Mills Near Melbourne.

Failure has followed the enterprise of the Australian capitalists who, a few years ago, constructed large timber mills, equipped with modern plant, near Melbourne, for cutting Siberian pine. The timber was imported in logs, then duty free (now subject to 5 per cent.), in comparison with the duty of 6 shillings per 100 superficial feet on dressed timber.

The logs were comparatively small, but, despite considerable waste in the cutting, the company expected to find a ready market for flooring, lining, and weather boards in competition with Baltic timber, which enters largely into the Victorian trade.

Increased oversea freights also contributed to the non-success of the mills, but it is now admitted that the chief cause of failure was that the first essential was the mills should have been erected alongside the forests.

The mills, which were closed some time ago, are now under offer to the State Government of Victoria for the purpose—after necessary alteration to the machinery—of cutting hardwoods on crown lands and in connection with the established state timber seasoning plant.

A second reading has been given to a bill introduced into the Quebec Legislative Assembly by Mr. R. Tourville (of the Tourville Lumber Mill Company) amending article 1627 of the Revised Statutes. This article, in its present form, provides that the holders of timber limits and all persons having timber to float may, during the winter, haul timber and provisions across the property of persons holding lands within their limits, provided that they shall be liable to indemnify the owners for any damage they may cause. The amending bill seeks to have the time limit changed from during the winter to all the year.

Is Forestry a Business Proposition?

An Outline of the Profits it Returns to the Government, the Public and the Lumberman—Market Extension Fire Protection, and Timber Estimating.

By M. A. Grainger*

I remember, when we started the Forest Service in British Columbia, many good people, and especially lumbermen and business men connected with the industry, shook their heads very doubtfully. "The logging and sawmill industries of the province are business propositions," they said; "commercial propositions, which can only be carried on by business men in a practical, business way." Well, that was five years ago, and since then we've carried on some forestry in British Columbia, and I think people generally have a better notion of what forestry is. I'll tell you some of the forms forestry has taken here.

Take selling lumber—that is forestry. Go through these enormous timberlands of ours and size up the situation. What do you find? You find this: Four-fifths of the annual growth, four-fifths of the annual forest income, that Nature asks us every year to turn into dollars, is wasted. We don't use it; we take out a mere thirty million dollars from the woods and leave the other four-fifths of one's lumbering prosperity behind. Why? Just because the markets for British Columbia lumber are insufficient. What's the remedy? Obviously bigger markets and more of them. Get these markets and this appalling waste of raw material will be stopped. Market extension means true forest conservation; and that's one reason why increasing the markets for British Columbia lumber is true forestry, and why the forest service carries on its market work, co-operating with our lumbermen in every way it can. You are familiar enough with the methods we employ—they are the usual publicity methods, advertisements in papers and periodicals, exhibits, and all that sort of thing. But the essential part of the work is its punch, and the punch is delivered by active, persistent, skilful, personal work by the man on the job.

It is not merely a question of finding new markets for British Columbia lumber to be sold in. It is a question of protecting the markets we already have. Where would the province be if any serious proportion of its existing lumber business were wiped out? It could not happen, you'll say; people have got to buy lumber; it is a staple article, like wheat. Well, they've been carrying on a searching investigation into the lumber trade of the United States, and this is what they've found as a result—just one-fifth of the entire lumber market that existed eight years ago has been wiped out; wiped out by substitutes—steel, concrete, bricks, patent roofing, asphalt paving; wiped out in some cases because the substitute was the better article, but in far too many cases simply because the makers of substitutes used modern selling methods and the lumbering industry did not. There's no better selling method than giving good service to the consumer; helping him to use your material and to get the best value out of it. That's the method we've adopted in this business forestry, or forestry business, of ours. Many a sale of British Columbia lumber has been made this year to prairie farmers who have been supplied by us with building plans and bills of material showing them how easily and well they can build barns or sheds or chicken houses with British Columbia lumber. And, just as we have done in this case, we hope to co-operate with our lumbermen and get all the best selling methods carried out in this community effort to increase the sale of British Columbia lumber.

In short, persistent market work, provided it has a punch in it, is one of the most practical methods of forest conservation. We're not the only pebble on the beach in this market work—our American friends are putting over some progressive ideas. For instance, in the interest of forestry they've allowed the export mills of the Pacific Coast to form a selling combine, the Sherman law notwithstanding, and they're sending five lumber commissioners to strengthen their grip upon European and other markets. It is interesting to note that these five are being selected from candidates who have been put first through a series of severe practical examinations, a new idea in foreign commercial service and a great change from the time-honored method of giving foreign commercial jobs to good Americans with a pull.

Forest Protection—A Publicity Problem.

Now, take another side of forestry—the protection of standing timber. Lots of people think this just means fighting forest fires, but that's not the point at all. Forest protection means two distinct things. Firstly, it means educating public opinion. Just as a breakfast food company keeps banging away with advertisements in newspapers, inside street cars, and on fences, until no conscientious family can sit down to an ordinary breakfast without a guilty feeling that they're neglecting their duty if they don't eat "Fruit Skins" or "popped wheat," or some other patent breakfast food. Just as public opinion is educated by the commercial advertiser so is it the business of the forester to educate public opinion to be careful with fire in the woods. People used to think it was a "josh" these scare-head posters on country roads, these articles in newspapers, these paper cups for campers with "Be careful with fire" stamped on them; these pocket whetstones we've given away to lumberjacks and pre-emptors and all sorts of men who work or camp in the woods. But this publicity campaign has proved itself; people are becoming more careful every year. We notice our fires are caught sooner and cost us less money on an average. The whole cost of all the publicity work responsible for this change has not amounted to the expenditure you may have to make in fighting a single serious fire.

Now this work of education is carried on to prevent fires from ever starting, as far as possible. The second part of forest protection is simply this: Good organization, supervision, the training of the man on the job to use good judgment in handling fires when they start. Good judgment is the one thing needed. There is no line of work in which it is so fatally easy to waste large sums of money as in fighting forest fires. It's emergency work; it needs cool judgment and experience. You can easily waste more money on some fire-fighting effort than what you save is worth. But mark one thing—you've got to realize what is worth saving. I remember an official report of an Eastern Canadian government once congratulated the country because the bad fires of the year had done no damage, "only young growth being destroyed," as the report said. Now, that's absurd. If you're going to adopt a general principle of letting the young growth burn, good night to the lumbering industry of British Columbia before this century is over. But let me repeat again—forestry means the putting of such matters as the fighting of forest fires on a business basis.

Estimating the Timber Resources.

Take another line—the stock-taking of forest resources. A fancy line, you'll say; sort of collecting data and masses of useless information and writing volumes of reports that no one reads. Now, we've done a little stock-taking in the last five years, but it's not of that description. It has been done mostly for the simplest, immediate business reasons. Our men have gone into various forest districts and roughly mapped out the places where the good timber is. We have not done it all over the province, for lack of men and time and money. But this rough mapping of valuable timber lands protects them from alienation, shows where timber sales can be made, and helps in the arranging of fire prevention work. It is a side of business forestry.

Now we come to forestry as a money-maker for the public treasury—something that makes your taxes far lighter than they'd be otherwise; one-third of every public dollar, two to two and a half million dollars of yearly revenue already and going to be a good deal more than that. That revenue has to be worked for; it won't keep coming of itself; and so forestry in British Columbia means an organized forest service with an annual turnover about equal to the three largest of our lumber manufacturing concerns combined. It means a considerable business in valuing and selling timber; it means inspecting logging operations to prevent trespass; it means making sure that cut timber pays the proper dues.

The tourist at a logging camp just sees a boom of logs. Our rangers see material that the crown is selling—something on which any one of twenty different sums of money should be collected. He has to see that these logs are clearly marked so as to show which of these twenty different amounts—ranging from 1c to two or three dollars a thousand feet—must be paid on these logs.

Where Posterity Comes In.

Now I've touched on four aspects of forestry in British Columbia—forestry as selling British Columbia lumber, forestry as forest protection, forestry as stock-taking of timber resources, and forestry as collecting money. Too utilitarian you may say. How about posterity? How about taking long views to safeguard the future? How about the development of a permanent forest policy? Do not mistake my meaning—these things must never be forgotten by any public service engaged in forest management. I have merely skipped over a few topics as an after-luncheon speaker should. Forestry, in the broad conception, is merely a great form of agriculture—the harvesting of Nature's successive timber crops—and we in the West, in our business of harvesting the present enormous crop, must not neglect to safeguard, in every practicable way we can, the next crop that is now growing.

And here's a point for you as business men: Trained men are needed in the work of forestry. What means of training does British Columbia provide? Do you know that almost every West-

* Address delivered before the Rotary Club of Victoria, B.C.

ern state deals with this question. Oregon has a forest school; California has a forest school; so have Washington, Idaho, Montana, and Colorado. Logging engineering is being taught as a profession, just like civil engineering is. Do you know that British Columbia provides no training whatever, though forest industries are our most important ones? Our young men must go and study at Seattle, or, if they have the money, they must go back east. With all its various professional equipment the University of British Columbia has no forest school.

And, again, the foreign buyer of British Columbia lumber, the city engineer back east, architects the world over, ask us, when we try to push the sale of British Columbia lumber: How strong is it What are its qualities? What engineering tests have been made of it? And we must answer: None—and lose the business. All we can do is to distribute hand-books for engineers published by our go-ahead American competitors—like the West Coast Lumbermen's Association at Seattle. It isn't good business when a firm has to send its competitor's price lists to its customers because it hasn't any of its own in print. But that is the fix we are in in selling British Columbia lumber. I think you will agree that we need a timber-testing laboratory at the provincial university.

Dominion Government Constructing Wooden Vessels

An order-in-council has been passed by the Dominion Government which will result in the development of closer trade relations between Eastern and Western Canada, by way of the water route through the Panama Canal, at the same time promoting trade between Canada and the West Indies. An immediate result will be the construction of two vessels of 2,500 tons register each, one at Vancouver and the other at Victoria, to participate in this trade. The vessels will be operated by the Department of Railways of the Dominion Government. They will be constructed of wood, and will have sails and auxiliary power, similar to those now under construction for the export lumber business, as provided for in legislation passed by the British Columbia Legislature last winter. It is expected that they will be the forerunners of much larger vessels to be placed by the Government on the same routes at a later date.

Plant of the Brown Corporation at La Tuque, P. Q.

The accompanying illustrations give one an excellent idea of the extent and layout of the plant of the Brown Corporation at La Tuque, P. Q. This company succeeded the original incorporators, the Quebec and St. Maurice Industrial Company. The mills are located at La Tuque, which is situated a little over one hundred miles north of Quebec city on the St. Maurice River, and has excellent water power facilities. La Tuque is located on the line of two railroads, the Canadian Northern and the Transcontinental. The Brown Corporation have splendid lumber manufacturing facilities, their sawmill and planing mill being of the latest and best construction. The product of these mills has a reputation second to none for being well manufactured and of good grade. The company are making a specialty of dressing lumber in transit and are giving very reasonable rates for dressing, resawing and ripping. In fact they are making a specialty at present of dressing and resawing in transit. In addition to their lumber manufacturing facilities the company are extensive manufacturers of sulphate kraft paper.

British Columbia Exporters Co-operating

Arrangements have been completed in Victoria, B.C., between all the exporting manufacturers of lumber in the province, with one exception, to pool their output for export purposes and have it handled by the Canadian Trading Company, which was incorporated for this purpose recently under British Columbia legislation. This company, through its connections in London and San Francisco, will be able to guarantee tonnage for lumber shipments within a very short time, and has also chartered all the vessels now being built in British Columbia yards for the lumber trade, with one exception.

Ottawa Foresters Hold Meeting

The first regular meeting of the Ottawa Foresters Club for the present season was held recently, the president, Mr. R. H. Campbell, director of forestry, occupying the chair. The chief event was an address by Mr. Roland D. Craig, of the forestry staff of the Commission of Conservation, who spoke in regard to the forests of British Columbia, illustrating his address with a number of magnificent photographs. An interesting discussion followed the address. Mr. Clyde Leavitt, forester for the Commission of Conservation, who recently attended the convention in Albany, N.Y., to discuss the best means of fighting the white pine blister rust, gave an account of the proceedings at that meeting.

Canadians Interested in U. S. Freight Rate Discussion

The Interstate Commerce Commission of the United States recently heard evidence in regard to the effect of the proposed increase in freight rates on lumber shipments over the Bangor and Aroostock, Maine Central, Canadian Pacific, and Canadian government railroads. New England lumber dealers claim that the rates proposed are higher than those in other sections of the conutry and would close them out of the New York market, and to some extent out of the Long Island Sound markets. A number of Canadian shippers also testified, stating that the advanced rates would enable them to do business in Southern New England, where competition had formerly kept them out of the market.

Catching Up to the Demand for Paper

According to the latest report of the News-Print Manufacturers' Association, stocks of news-print on hand at Canadian and United States mills showed a substantial increase during October, as compared with the preceding month, the figures showing an increase of about 1,800 tons, indicating that the mills were at least able to produce in excess of shipments, which is taken to mean that the climax of the unusually heavy demand that began in October, 1915, has been reached and a decline has commenced. The report states, also, that it is expected that from now on the mills will show a steadily increasing accumulation of stocks.

Pencils Made in Canada

The William Cane & Sons Company, Limited, of Newmarket, Ont., have been experimenting in the manufacture of lead pencils since the outbreak of the war, with a view of replacing German-made lead pencils by pencils made in Canada. They now announce that they are in a position to supply the Canadian market with pencils made in Canada.

Plant of the Brown Corporation at La Tuque, P.Q.

A Fine Example of British Columbia Timber

The accompanying illustration gives an interesting idea of the proportions and qualities of some of the timbers taken out in British Columbia. It shows the handling of a Douglas fir stick, logged and sawn on Vancouver Island, the dimensions of the stick being 24 in. x 24 in. x 80 ft. The illustration, unfortunately, does not show the whole stick, but gives some idea of the sizes procurable and the beautiful

A Douglas Fir Stick 24 in. x 24 in. x 80 ft.

quality of the wood. The stick shown in the foreground is not a single example. Others of similar size and quality are being taken out continually.

Dominion Fire Rangers' Annual Meeting

The annual meeting of the Dominion fire rangers was held at Revelstoke, B.C., recently. Reports were presented by all the rangers present, which showed that good results had been secured in the prevention of forest fires. A number of resolutions were adopted, among them being the following:

"That the provincial government be requested to extend the permit period for the season from September 15 to September 30."

"That the provincial government be requested in future when constructing new roads to dispose of the debris as they go along, instead of leaving it lying at the roadside, as it is a great fire danger."

Toys Made of Wood

The accompanying photograph gives an idea of what is being accomplished in Canada in the way of manufacturing wooden toys and novelties to replace the lines that were formerly imported from Germany. A study of this collection might offer suggestions from which other articles could be evolved. There are undoubtedly many articles that could be designed and worked out by studying the things that children are most interested in.

The toy set of furniture shown in the photograph and the small table, doll carriage, doll bed, etc., are good examples of the class of

Toys made of wood—A good market for for small cuttings.

toys required for girls, while the engine, building blocks, construction toy, gun, miniature wagons, etc., are articles that boys always clamor for. Then, again, there is the quoit game (the shield-shaped board with numbers on), swinging clubs, dumb bells, etc., for the older boys and girls.

There is plenty of scope for the man with an inventive mind to work out something that could be manufactured at a profit, but we would strongly advise anyone going into the manufacture of wooden toys and novelties to study the market carefully before going into it to any extent, as there are undoubtedly some toys on the market for which there is very little demand.

Wilfrid H. Pauze Conducting Successful Wholesale Trade at Montreal

In September last the firm of Pauze & Gohier, Cote des Neiges Road, Montreal, was dissolved, and the business taken over by Mr. Wilfrid H. Pauze, the partnership having lasted five years. Mr. Pauze, who has been in the lumber business eighteen years and was at one time a member of the Montreal City Council, specializes in British Columbia lumber products, particularly British Columbia fir, which has of late come into more extensive use in the East. His stock covers about $80,000 worth of materials, including an extensive variety of doors, mouldings, flooring, sheeting, verandah columns, turned posts, British Columbia red cedar shingles, and red cedar clap boards, in addition to Beaver boarding and Bishopric wall board. Besides this, various lines of lumber are stocked.

Mr. Pauze has excellent facilities for handling doors, mouldings, etc. The sheds cover an area of 2,000 feet, and the principal one of three storeys is probably the largest in Montreal. It is arranged so as to minimize handling, the stock being unloaded and loaded direct into C.P.R. cars, which come into the yard over an 800-foot siding, running alongside the sheds. The business is of a wholesale character.

An exhaustive catalogue in English and French is issued. Besides this, Mr. Pauze reaches the trade through samples of standard patterns of British Columbia mouldings, made up in sets of eight. Each sample is numbered, which facilitates the ordering of any line. The sets are put in such a form that they can be hung up in an office ready for immediate use.

Forester Receives Important Appointment

John D. Gilmour, formerly with the Forest Branch of the Department of Lands of British Columbia, has resigned in order to accept the position of general logging superintendent of the Anglo-Newfoundland Development Company, Ltd., a branch of the Harmsworth Company, owners and operators of immense pulpwood holdings in Newfoundland. Mr. Gilmour will assume his new duties during January, and will be stationed at Grand Falls, Newfoundland. Mr. Gilmour is a 1908 graduate of the Ontario Agricultural College and also of the Department of Forestry in the University of Toronto. He has had experience in the employ of private lumber companies and also in the Forest Branch of the Canadian Pacific Railway and the Forest Branch of the Department of the Interior at Ottawa. Since 1912 he has been on the staff of the Forest Branch of the Department of Lands of British Columbia, being district forester at Cranbrook from 1912 to 1915 and on the head office staff at Victoria during the past year.

Sees a Great Future for Western Canada Trade

Mr. Austin A. Briggs, advertising manager of the Dunlop Tire and Rubber Goods Company, Toronto, returned recently from a business trip through Canada, including a visit to Alaska. Speaking of his experience to a representative of the Canada Lumberman, Mr. Briggs said that, next to the kindness of the Western Canadians, the most outstanding impression upon his mind was made by the antiquated immigration regulations kept in force by the United States in Alaska. The same regulations that existed at the time of the gold rush in 1898 seemed to prevail still. Most of the people going to Alaska, Mr. Briggs said, were from the United States or from Western Canada, the majority of them being tourists. The best time for tourists to visit that country was in the month of June. Mr. Briggs visited a number of western points, and was greatly impressed with the immensity both of Canada's industrial progress and her possibilities. He also called upon the branches of his company at Victoria, Vancouver, Calgary, Edmonton, Saskatoon, and Regina, and toured the country in the vicinity of these branches in order to get a grasp of the opportunities for business in their particular lines. He has returned with a great fund of enthusiasm in regard to the outlook for the country's western organization and the prospects for greatly increased business.

Saskatchewan Output will be Large

Reports from Prince Albert, Sask., indicate that extensive woods operations will be carried on by the Prince Albert and Big River lumber companies during the coming winter, and that woodsmen are already going into the bush in considerable numbers. Altogether between four and five thousand men are needed by the two companies for this winter's operations, and the indications are that the supply of labor will be scarce.

CANADA

NATIONAL SERVICE

PUBLIC NOTICE is hereby given under the authority of the "War Measures Act, 1914," that during the first week in January, 1917, an inventory will be made by the Post Office Authorities, of every male between the ages of sixteen and sixty-five, residing in Canada.

National Service Cards and addressed envelopes for their return to Ottawa have been placed in the hands of all Postmasters for distribution amongst the persons required to fill in such cards. Every male person of the prescribed ages is required to fill in and return a card enclosed in an envelope within ten days of its receipt.

Any person who fails to receive a card and envelope may obtain the same upon application to the nearest Postmaster.

R. B. BENNETT,
Director General.

Ottawa, 15th December, 1916.

THE NATIONAL SERVICE CARD

1. What is your full name?..... 2. How old are you?.....years.

3. Where do you live? Province.....

4. Name of city, town, village or Post Office .....

Street..... Number.....

5. In what country were you born? - - .....

6. In what country was your father born? .....

7. In what country was your mother born? .....

8. Were you born a British subject?.....

9. If not, are you naturalized?.....

10. How much time have you lost in last 12 months from sickness? .....

11. Have you full use of your arms?.....

12. Of your legs?..... 13. Of your sight?.....

14. Of your hearing?.....

15. Which are you—married, single or a widower? - .....

16. How many persons besides yourself do you support? .....

17. What are you working at for a living?.....

18. Whom do you work for?.....

19. Have you a trade or profession?..... 20. If so, what?.....

21. Are you working now?..... 22. If not, why?.....

23. Would you be willing to change your present work for other necessary work at the same pay during the war?.....

24. Are you willing, if your railway fare is paid, to leave where you now live, and go to some other place in Canada to do such work?.....

GOD SAVE THE KING

WANTED & FOR SALE DEPARTMENT

PUBLISHER'S NOTICE

Advertisements other than "Employment Wanted" or "Employees Wanted" will be inserted in this department at the rate of 15 cents per agate line (14 agate lines make one inch.) ($2.10 per inch. each insertion, payable in advance. Space measured from rule to rule. When four or more consecutive insertions of the same advertisement are ordered a discount of 25 per cent. will be allowed.

Advertisements of "Wanted Employment" will be inserted at the rate of one cent a word, net. Cash must accompany order. If Canada Lumberman box number is used, enclose ten cents extra for postage in forwarding replies. Minimum charge 25 cents.

Advertisements of "Wanted Employees" will be inserted at the rate of two cents a word, net. Cash must accompany the order. Minimum charge 50 cents.

Advertisements must be received not later than the 10th and 26th of each month to insure insertion in the subsequent issue.

Wanted–Lumber

Basswood Wanted

No. 2 Common and Mill Cull. Winter cut preferred. Apply Firstbrook Brothers, Ltd., Toronto, Ont. 8-t.f.

SPRUCE MILLS

Inquiries for next season are coming in. I have market for your sawing of 1917. All or any part. If interested write me fully.

EDWIN D. HOWE,
P.O. Box 384 Valatie, N. Y.
23-2

Hardwoods Wanted

Wanted, 500 Cords Hemlock, Tamarack or Hardwood Slabs. Give price F.O.B. Galt.

Also 100,000 feet Beech lumber, First and Seconds, 1⅛ in. thick, 5½ to 6 in. wide, 12 ft. long. Give price, face measure. To be cut and delivered this winter.

SHURLY-DIETRICH CO., LTD.,
24-24 Galt, Ont.

WANTED

Large quantity of maple, black birch or hickory plank cuttings, 6 in. x 6 in., also 7 in. x 7 in., all 1¼ in. thick, must be dry and sound.

Also several carloads maple, beech or birch squares, 1 in. to 1¼ in. x 3½ ft. to 4½ ft. in length.

J. FINLAY & SONS CO.,
23-4 Norwood, Ont.

For Sale–Lumber

Sawdust For Sale

For sale two car loads of planing mill sawdust, dry. Apply the Long Lumber Company, Hamilton, Ont. 24-24

For Sale

Pine, Birch, Spruce, for Sale, suitable for shell box manufacturing. Apply The Office Specialty Mfg. Company, Limited, Newmarket, Ont. 22-24

For Sale

Few cars of 2 in. and 3 in. Rock Elm, Log Run, Mill Culls out, also Quebec Spruce for Crating, ⅝ in. and 1 in., and many Carloads of Spruce, suitable for Shell Box manufacturing. Box 486, Canada Lumberman, Toronto, Ont. 24-24

Lumber For Sale

200 Pieces 1 x 15 and up 22 ft. Cypress.
375 Pieces 1 x 15 and up 24 ft. Cypress.
Clear for boat building, in stock at Montreal.

GEO. C. GOODFELLOW,
Montreal, Que.

For Sale–Machinery

Logging Tractor

For sale one Gasoline Lombard Log Tractor, four cylinder engine. Low price. Randolph & Baker, Limited, Randolph, St. John Co., N. B. 23-24

Lumber and Machinery

50 H. P. Steam Saw Mill for sale very reasonable. One care of No. 1 Red Birch. A full set of cooperage machinery. Box 69, Colborne, Ont. 24-1

For Sale

Goldie & McCulloch Corliss Engine, 16 x 38, 150 horse power; Berlin Matcher, No. 90, good as new; Grand Rapids Engine and Generator for 150 lights.

R. LAIDLAW & CO.,
22-2 Toronto, Ont.

For Sale

Fifty H.P. Waterous Boiler (Locomotive type) with 11 in. x 12 in. engine mounted on same. In first class shape and ready for immediate shipment. Apply to Peterborough Canoe Company, Limited, Peterborough, Ont. 23-2

MACHINERY FOR SALE—One pair carriage sett works, with shafts and spring, Wm. Hamilton make. One Lath Mill. One Bolter. All in good condition and cheap.

Papineauville Lumber Co., Ltd.,
22-1 Papineauville, P.Q.

FOR SALE

1—Wicks Gang.
1—Ideal Engine, 13 in. x 12 in.
1—Plain Engine, 16 in. x 24 in.
1—Plain Engine, 5 in. x 7 in.
1—Boiler, 72 in. x 16 in.
1—Boiler, 54 in. x 12 in.
2—Upright boilers.
1—Cookston water heater.
Several steam pumps.

CHAS. PEDWELL,
16-t.f. McVicar, Ont.

Wanted–Machinery

Lumber Trucks

Wanted twenty-five, more or less. Must be in good condition. Iron wheels, 40 inches in diameter; 5-inch tires preferred.

Apply, E. D. McCallum, Drummondville, Que. 23-2

Machinery Wanted

1 Tongue and Grooving Machine.
1 Butting Swing Saw Machine.
1 Swing Shingle Machine.

All for heading mill.

C. B. Janes & Company, Limited,
23-t.f. Orillia, Ont.

Dutch Ovens Wanted

Wanted two Dutch Ovens, suitable for boilers 60 in. x 16 ft., or two boilers of about 75 to 100 H.P., equipped with Dutch Ovens. State price f.o.b. cars.

Trenton Cooperage Mills, Limited,
23-2 Trenton, Ontario.

Burner Wanted

Wanted, Secondhand Standard Steel Burner, 20 to 25 ft. in diameter. Must be in good condition. Give full description with price, and state where same could be delivered in case of purchase.

FRASER LIMITED,
21-24 Fredericton, N. B.

Wanted–Employment

Advertisements under this heading one cent a word per insertion. Box No. 10 cents extra. Minimum charge 25 cents

SUPERINTENDENT operating the largest mills in Minnesota with exceptional success for 20 years, wishes to change. Box 488, Canada Lumberman, Toronto, Ont. 24-1

A YOUNG MAN wishes to make a change. Buying or Sales force preferred. Fifteen years in inspection work. Both rail and water shipments. Box 476, Canada Lumberman, Toronto, Ont. 22-24

MARRIED MAN, THIRTY YEARS OLD, ten years' experience in office work as Accountant, speaking both languages, desires to change, best of references. For particulars write to P. O. Box No. 69, Three Rivers, Que. 16-24

Practical woodsman and millman wants position. College education, both languages; seven years' experience, last three managing mill, seventy-five men. Best of references. Will go anywhere; salary dependent on results. Box 481, Canada Lumberman, Toronto, Ont. 23-24

WHOLESALE LUMBER SALESMAN with four years' experience in New England on road for Boston house selling Western lumber, wants to make a change for a position to represent Western firm in New England States. Box 474, Canada Lumberman, Toronto, Ont. 24-24

ACCOUNTANT—Thirty years old, with twelve years' experience in office; married, and speaking both languages, is prepared to take an engagement with Wholesale Lumber or Pulp and Paper Companies, either in Quebec or New Brunswick. Best of references. For particulars write to P. O. Box No. 69, Three Rivers, Que. 24-1

Wanted–Employees

Advertisements under this heading two cents a word per insertion. Minimum charge 50 cents.

WANTED PRACTICAL SAW MAKER, who can smith circular and gang saws. Prefer young man who can also file and set crosscuts and other saws. Box 487, Canada Lumberman, Toronto, Ont. 24-24

Business Chances

WANTED

Large manufacturers of wooden ware and other wood products selling to hardware stores, want to buy out the business and good will of some manufacturer having a line closely related to the above. Send particulars to Box 482, Canada Lumberman & Woodworker, Toronto, Ont. 23-2

FOR SALE—Factory and property at Mount Albert, Ont., 4 acres land, 7 acres water and water power, complete, 3 storey building, 40 ft. x 80 ft., stone foundation, 3 floors, approximately 9,600 feet, also lean-to, one storey, 20 ft. x 40 ft., and separate office on ground near street, 23 ft. x 25 ft. Boiler and engine auxiliary power equipment. Mill pond valuable for fishing and power. Splendid shipping facilities, C. N. R. and G. T. R. Electric light available. Ten years' exemption from taxes can be arranged. Cheap labor and comfortable homes in village. Apply Wrights Limited, 22 College Street, Toronto. 23-24-25-26

PULPWOOD WANTED

If you have pulpwood for sale in large or small quantities, send for our complete list of pulp and paper manufacturers. In the list you will, no doubt, get in touch with buyers for all the pulpwood you have or can supply. Complete list of all manufacturers and dealers sent for six dollars. Money refunded if not as represented. Get our prices on lists of wholesale and retail lumber yards. Reliable Trade Lists Company, at 641 Calvert Building, Baltimore, Maryland. 24-24

PULPWOOD FOR SALE

10,000 acres of choice pulpwood in Nova Scotia. Excellent shipping facilities. Will sell en bloc or would consider taking contract of ten or fifteen thousand cords of rossed wood, for shipment next year. This is a big opportunity for someone. The paper industry offers a great field, and it will be more important from now on. There is no finer tract than the one offered here, with transportation right at hand. Write for detailed information.

GRANT & CAMPBELL,
New Glasgow, N.S.

Valuable Box Factory For Sale

The undersigned will receive offers for the purchase of that valuable property known as the

Czerwinski Box Factory

situated on Logan Ave. and Tecumseh Street, Winnipeg, Canada. This property comprises what is believed to be the finest box factory in Western Canada, fully equipped with the latest and best machinery for box manufacturing and ready for immediate operation. It also includes the factory site, consisting of about 2½ acres of land close in to the business centre of the city, and possesses unexcelled trackage facilities. Street cars pass the factory door. This is a magnificent opportunity for any person wishing to engage in box manufacturing. The whole may be purchased at a very great bargain.

Further information may be obtained upon application to

H. E. DENEEN,
Assignee of the Czerwinski Box Co., Ltd.,
300 Electric Railway Chambers,
22-t.f. Winnipeg, Man.

FOR SALE TIMBER AND MILLS

The undersigned offer for sale in one or separate blocks their timber and mills situated on the Crow's Nest Pass Railway, B. C., viz:—

About 12 square miles near Cranbrook, B. C., well wooded with larch, fir, etc., and a mill in good working order, capacity forty thousand feet.

On Lamb Creek, near Moyie, B. C., 12 square miles, heavily wooded with white pine and large spruce.

At Yahk Station, 4,551 acres Crown granted timber land, also about 7 miles white pine, larch and spruce, and a mill with a capacity of sixty thousand feet.

At Cranbrook the company own an up-to-date plant equipped with good machinery, where, under a favorable arrangement with the C. P. R., the output from different points named can be assembled and dressed ready for shipment.

The above timber all being in close proximity to the C. P. R. and the distance to the Alberta boundary being about 100 miles, gives the producer an advantage over the Coast mills, saving from $2.00 to $5.00 per thousand feet in freight alone.

The King Lumber Mills, Limited,
23-2 Cranbrook, B.C.

For Sale—Controlling interest in a Saw and Planing Mill, capacity 25,000 feet. Could be increased considerably. Mill on rail and tide water. Unlimited timber supply. For particulars apply to R. H. Young, Squamish, B.C. 21-24

Miscellaneous

Sleighs For Sale

Twenty-five sets logging sleighs, in good condition. The Peterborough Lumber Company, Limited, Peterborough, Ont. 20-1

For Sale

One hundred square miles of Pine and Spruce limits well situated on the St. Maurice River, on which at least 400,000,000 feet of lumber will be found. Price $350,000, payable $150,000 cash and the balance in four annual payments, with interest at 6 per cent. For full particulars apply to La Cie des Bois du Nord, 71a St. James Street, Montreal 21-24

B. C. Timber Limits

The brisk demand for lumber in the Western Canadian Prairie Provinces is attracting attention to timber limits. The closing of the war will largely increase the local and export lumber requirements. We have some meritorious propositions of varying proportions (which can be bought advantageously) and solicit correspondence from partctical parties.

LOUGHEED & TAYLOR, LTD.,
24-24 Calgary, Canada.

Separate Sealed Tenders, addressed to the undersigned, and endorsed "Tender for British Columbia Fir Timber" and "Tender for White Oak Timber" for Dredge "No. 125," as the case may be, will be received at this office until 4 o'clock p.m., on Friday, December 22, 1916, for the supply of Timber for Dredge No. 125.

Combined specifications and form of tender can be obtained at this Department, at the offices of the District Engineers, Shaughnessy Building, Montreal, Que., and Equity Building, Toronto, Ont., also from the Mechanical Superintendent, Birks Building, Ottawa, Ont.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied, and signed with their actual signatures, stating their occupations and places of residence. In the case of firms, the actual signature, the nature of the occupation, and place of residence of each member of the firm must be given.

Each tender must be accompanied by an accepted cheque on a chartered bank, payable to the order of the Honourable the Minister of Public Works, equal to ten per cent. (10 p.c.) of the amount of the tender, which will be forfeited if the person tendering decline to enter into a contract when called upon to do so, or fail to complete the contract. If the tender be not accepted the cheque will be returned. The Department does not bind itself to accept the lowest or any tender.

By order,

R. C. DESROCHERS,
Secretary.

Department of Public Works,
Ottawa, December 1, 1916.

Newspapers will not be paid for this advertisement if they insert it without authority from the Department. 24-24

Hon. G. Howard Ferguson, Minister of Lands, Forests and Mines for Ontario, has announced that the Pic River pulp and timber limit recently offered for sale by his department has been disposed of to J. J. Carrick, former Conservative member of the Legislature, and now member of the Dominion Parliament.

TIMBER ESTIMATES

Appraisal of timber lands, timber maps, logging efficiency reports, planting. Maximum of accuracy in minimum time and at minimum expense.

D. E. LAUDERBURN, Forest Engineer

Rm. 1233, 156 Fifth Ave., New York, N. Y.

FRASER LIMITED'S

LIST OF

Second-hand Lumbering Machinery

1 Auto Shingle Saw Sharpener,
Hanchett Swage Works,
Cat. No. 748.

1 Circular Clapboard Resaw.
Dunbar,

1 Circular Saw Grinder,
Covel,
Cat. No. 35

1 Dougle Clapboard Planer,
Woods,
Cat. No. 46.

1 Double Clapboard Planer,
Dunbar.

1 Dynamo, direct current,
Akron Manufacturing Company,
Cat. No. 1396.

1 Edger, iron frame,
St. John Iron Works,
6 ft. 4 in. x 2¾ in. arbor.

1 Engine, centre crank,
16 in. x 16 in.

1 Engine, side crank,
14 in. x 16 in.

1 Engine Flywheel,
25½ in. face, 14 ft. diameter, 7½ in. shaft.

1 Fan, 16 in. suction, 16 in. discharge,
Sturtevant,
Cat. No. R.H. 3669.

1 Friction Clutch Pulley,
28 in. diameter.
11½ in. face.

1 Gang and 2 sets of saws,
Wicks, 54 in. gate.
Cat. No. 1.

1 Gunshot Feed,
8 in. diameter, 37 ft. long.

1 Knife Grinder
S. A. Wood,

1 Planer and Matcher,
S. A. Wood,
Type No. 27.

1 Pump,
6 in. x 3½ in. x 9 in.

1 Pump,
Snow Steam Pump Works,
3 x 2 x 3, No. 55985.

1 Rotary Carriage, wood, right hand arbor,
5 ft. 9 in. x 3⅜ in.

5 Saws, inserted tooth, edger, 18 in. diameter,
11 gauge, 3 in. pitch, 4½ in. bore.

1 Saw, inserted tooth, rotary, 46 in. diameter,
9 gauge, 3½ in. pitch, 2 in. bore.

1 Saw, inserted tooth, rotary, 48 in. diameter,
9 gauge, 3½ in. pitch, 2 in. bore.

3 Saws, inserted tooth, rotary, Simonds, 52 in.
diameter, 8 gauge, 4 in. pitch, 2¼ in. bore

2 Saw Gummers, wooden frame.

1 Set Works, hand,
Waterous Engine Works,
No. 4 double acting.

14 Shingle Machines,
McF. T. & A.,
Dunbar Type.

1 Small Band Saw Grinder,
Baldwin, Tuthill & Bolton,
Cat. No. 2.

1 Steam Boiler, 16 ft. long, 6 ft. in diameter,
140 3 in. tubes.

1 Steam Cylinder,
Waterous Engine Works,
7 in. diameter, 30 in. stroke.

1 Steam Cylinder,
Waterous Engine Works,
10 in. diameter, 30 in. stroke.

1 Steam Nigger, Oscillating,
Waterous Engine Works,
Size 3-0, No. 109.

1 Twin Engine,
Whitter Machine Co., Boston, Mass.,
12 in. stroke, 7 in. diameter.

1 Upright Engine (Mark F15),
W. E. Hill Company,
4½ in. diameter, 6 in. stroke.

Also a large assortment of Belts, Pulleys and Shafting.

Prices, Descriptions and Complete List, with all particulars, sent on application to—

FRASER LIMITED

FREDERICTON - N. B.

Union Lumber Co.

Limited

Complete Stock

White Pine

Red Pine

Spruce

5 Cars Dry 32 in. Mill Run White Pine Lath

Union Lumber Co., Limited

701 Dominion Bank Building

TORONTO, CANADA

Tenders for Pulpwood and Pine Limit

Tenders will be received by the undersigned up to and including the 1st day of February, 1917, for the right to cut pulpwood and pine timber on a certain area situated on the Black Sturgeon River and other territory adjacent thereto, in the District of Thunder Bay.

Tenderers shall state the amount per cord on pulpwood, and per thousand feet board measure, on pine, that they are prepared to pay as a bonus in addition to dues of 40 cents per cord for spruce, and 20 cents per cord for other pulpwoods, and $2.00 per thousand feet, board measure, for pine, or such other rates as may from time to time be fixed by the Lieutenant-Governor-in-Council, for the right to operate a pulp mill and a paper mill on or near the area referred to.

Such tenderers shall be required to erect a mill or mills on or near the territory and to manufacture the wood into pulp and paper in the Province of Ontario.

Parties making tender will be required to deposit with their tender a marked cheque, payable to the Honourable the Treasurer of the Province of Ontario, for ten thousand dollars ($10,000), which amount will be forfeited in the event of their not entering into agreement to carry out conditions, etc. The said $10,000 will be applied on account of bonus dues as they accrue, but the regulation dues, as mentioned above, will require to be paid in the usual manner as returns of cutting of wood and timber are received.

The highest or any tender not necessarily accepted.

For particulars as to description of territory, capital to be invested, etc., apply to the undersigned.

G. H. FERGUSON,
Minister of Lands, Forests and Mines.

Toronto, 1916.

N.B.—No unauthorized publication of this notice will be paid for. 21-1

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Review of Current Trade Conditions

Ontario.

The chief subject of discussion among the lumber trade of Ontario continues to be the situation in connection with logging operations during the winter. Unquestionably there will be a greatly reduced output of logs, and the cost of taking them out will be far in excess of anything ever experienced in previous years. When these logs reach the mills next spring they will be few in number and high in cost, and the mills themselves will undoubtedly be facing a serious shortage of labor, so that the manufacturing costs will be increased to a greater extent even than the cost of logs. There is only one way out of such a situation for the manufacturer. Prices will have to be increased next year. The extent of the increase cannot be determined until fairly complete returns have been secured of the winter's operations, and some insight is had into the labor situation that is to prevail next year. Moreover, the outlook at present is that there will be a normal demand for lumber next year, and this will be an added influence in the direction of stiffening up prices.

The quantity of hemlock taken out of the woods during this winter will probably amount to only about 40 per cent. of that which came out last winter. A curtailment is also certain in the output of red pine. Last year the red pine output was almost 40 per cent. below that of 1915, so that a decrease this year will have a most important effect upon the trade situation in this particular line of lumber. Quite a number of important white pine manufacturers are not taking out any logs this winter, and those who are operating are finding it very difficult to obtain sufficient labor. Some operators are remaining out of the woods because of the high cost of logging, while others are doing so because of the probability that, even if they got a fair supply of logs at a reasonable cost, the expense of sawing them into lumber next year may be too great to warrant any mill operations.

There is nothing to report in connection with the trade situation beyond the fact that prices continue to stiffen, as will be seen by consulting our quotations elsewhere in this issue. The extraordinary demand for lumber as material for war purposes has resulted in the low grades being practically all shipped out from the mills, while the upper grades have been meeting with a fairly satisfactory demand of a normal nature. There is very little spruce of any kind to be obtained in Ontario to-day.

Eastern Canada.

The lumber trade at Montreal shows no important change, being still in a fairly satisfactory condition for this time of year. The large amount of shell box orders continues to assist in the movement of stocks. Enquiries are quite plentiful, the real difficulty being that of obtaining stocks of dry lumber. Many manufacturers report that they have nothing on hand to sell. The situation is such that wholesalers are predicting further advances in prices of pine and spruce, to the extent of from $1 to $3 per thousand feet. There is a fair volume of building demand, and the outlook in this connection is improving. The export season has come to an end, and shows an increase in the total of shipments from Montreal during the year 1916, which is considered satisfactory in view of all the difficulties the trade has had to meet.

Abnormal conditions continue to prevail in the St. John market. The price of deals is far beyond anything ever experienced, but as there are practically no stocks left for sale, the manufacturers are not much interested in the situation. A few manufacturers who have small stocks for spot delivery are getting as high as $25 per M. feet for deals of the poorest specifications. This is a situation which is not expected to keep up indefinitely, but probably will last for some time yet. The French and English Governments have purchased large quantities of deals for trench work, and extensive shipments are now going forward from St. John. Even if the manufacturer were selling much stock at these prices he would not be making a great profit to-day, as logging costs are so excessive. It looks as though practically all the St. John mills will be closed down shortly. Logging operations have not been very successful up to date, on account of the unfavorable weather for yarding. The local trade at St. John is fairly active, but not much is looked for during the winter months. Stocks of merchantable spruce boards are light and prices have advanced. Shingles are scarce at St. John, and are likely to continue throughout the winter. The box business is very brisk.

Boston wholesalers are not experiencing any difficulty in maintaining quotations on a firm basis. The base price for 8 in. frames is strong at $30, and $31 is asked for 9 in., $32 for 10 in., $33 for 11 in. or 12 in. frames. Even on this basis sellers will not promise delivery in less than a month. Stocks of random are also light, and quotations are firm on the following basis: 2 x 3, $24; 2 x 4, $25; 2 x 6 and 2 x 7, $24; 2 x 8, $28; 2 x 9, $29, and 2 x 12, $30. Stocks of 2 x 8 are very scarce, and $29 has been paid for prompt deliveries. Spruce boards are firm, and good covering boards, 5 in. and up wide, 8 ft. and up long, bring $22. The hardwood market at Boston is firm, and prices include the following for 1 in. first and seconds: Basswood, $44 to $46; maple, $42 to $45; red birch, $57 to $59; sap birch, $47 to $49. Hemlock is also in good demand at Boston, plenty of sales of clipped hemlock boards being reported at $22. The railroad situation has greatly reduced competition from Southern roofers. Shingles also are firm at Boston, and retailers are having difficulty in securing supplies. The lowest price for extra white cedars is $3.60. The range on white clears is $3.30 to $3.50, but some manufacturers are asking more. New Brunswick manufacturers are having difficulty in getting cars to make delivery. The lath market at Boston continues active and strong. Some sellers are now asking $4.65 for 1⅝ in. For 1½ in. the market is firm at $3.90.

United States.

The car shortage in the United States appears to be just as acute still as it has been since the beginning of autumn. Shipments of lumber designated for government use and materials that are to be used by the railroads themselves are being moved regularly, but all other stocks are being delayed. Railroad companies are buying large quantities of cars and increasing their rolling stock as rapidly as possible. They have never before been required to handle such enormous traffic as during recent months. Business conditions throughout the United States continue favorable, so far as producers and dealers are concerned, though the consumer is having a pretty bad time of it, as prices are advancing constantly in practically every line. Even lumber has begun to take a share in the increase. Building operations are still extensive in all parts of the country, the winter season not having had any effect as yet in the way of reducing the volume of building operations. Cotton producers in the South are enjoying great prosperity, and the lumber trade is feeling the benefits of this situation.

Manufacturers in Pacific coast states are feeling the car shortage seriously. Reports from 130 mills show unshipped orders on hand for rail delivery of 10,779 carloads of lumber. Shingle mills are also experiencing great difficulty in making shipment. Pacific Northwest mills are operating at less than normal capacity, production for the latest week under report being 14.72 per cent. below normal, while orders were 2.61 per cent. in excess of production. Extensive shipments are reported from Bellingham, Wash., to Australia. A number of Southern pine mills which recently withdrew from the markeet have succeeded in shipping out all the business they had on hand, and are expecting new business at the advanced prices which recently came into effect. Southern pine manufacturers in general are now securing much more satisfactory prices than previous to the development of the car shortage.

The hardwood situation is similar in many respects to that in the soft woods. The demand is quite up to normal, and is steadily increasing, while buyers are urging manufacturers for prompt deliveries. Northern hardwoods are all in strong demand, and prices are being advanced. Stocks of birch, maple, and basswood are low, and the demand is exceptionally strong, so that buyers are finding it hard to fill their requirements, particularly for thick stock. Hemlock manufacturers are enjoying splendid trade, and stocks at mill points have been greatly decreased. A very satisfactory volume of trade is reported in Northern white pine, but difficulty continues in regard to obtaining shipments, on account of car shortage and the inability of manufacturers to supply the demand for uppers and thick stocks as fast as required. Price advances have been reported on white pine.

Great Britain.

The trade situation in Great Britain shows no change of late, and this is a satisfactory report to be able to make, both from buyers' and sellers' points of view. Although prices are pretty dear for the buyers, they are making good profits, and as to sellers, they are expecting still higher prices in 1917. It is generally concluded that contracts at current c.i.f. prices are good business. The demand is well sustained. Stocks in shape for immediate delivery are moderate, and are bringing good profits to their owners. A continuation of present conditions must involve a steady advance in prices in Great Britain. Spot prices are now very firm, and no one seems to imagine that they are likely to fall for some time to come. From the merchant's point of view, the market is established for the winter, although some are looking for further considerable advances.

At Liverpool there is a general belief on the part of merchants that present-day values for both hard woods and soft woods are not

View of Mills in Sarnia.

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anything like as high as they may ultimately become as a result of shortage of shipping accommodation and other important factors. In the near future they are looking for another upward tendency. The actual consumption of timber is much smaller than it was some months ago, but importations have been restricted abnormally, and trade has suffered by the migration of labor to other lines. Sales of timber have been growing smaller, but stocks are now depleted to a serious extent, and arrivals are even smaller in proportion. Stocks of spruce at Liverpool are considerable, but much of this has already been sold, and prices are advancing. Recent quotations for scantlings were about £26. Quotations for 3 x 7 in. were £27 10s.; 3 x 9 in., £29; and 3 x 11 in., £35.

At Manchester trade continues good, both as to the volume of orders and of enquiries. Firm prices still prevail, and as comparatively little timber will come forward during the balance of the year, the outlook is for much higher values. Large orders have recently been placed by the government for timber for huts and shell boxes. Freight rates are still advancing, and very little tonnage is offering. Spruce prices are well maintained. Stocks of prime lumber are limited, and there is not much coming forward. The hardwood trade at Manchester is steady, and prices are very firm, with a moderate demand. Imports are practically nil, on account of government restrictions. It is reported that the import prohibition orders will shortly be enforced even more strictly.

At Glasgow there is a very firm market for Quebec oak and elm logs, and prices quoted for suitable sizes are very high. Most of the current business in pine and spruce deals is from the ship's side, and prices have been firm, but no important advance is reported.

Market Correspondence

SPECIAL REPORTS ON CONDITIONS AT HOME AND ABROAD

Montreal Trade Continues on Sound Basis

Montreal, December 12.—(Special to the Canada Lumberman.)—There is little change in the situation, the market being still in a satisfactory condition, having regard to the time of the year. Were it not for the demand for shell box orders the position would not be anything like as good as it is. Wholesalers do not complain of the lack of enquiries, but of the great difficulty of obtaining dry lumber. Manufacturers in many instances say they have nothing to sell so far as dry stock is concerned, or that lists are withdrawn and quotations can only be secured on enquiry. Wholesalers state that prices are advancing, and they will have to pay at the least from one to three dollars more for pine and spruce, while some manufacturers are by no means in a hurry to sell the new cut, believing that the market will go still higher next year.

Several building contracts have just been let, and the demand from this source is fair. The erection of a large munitions plant in the east end of the city resulted in some excellent orders. There appears to be a decidedly more optimistic feeling as to the building outlook. The number of empty houses has decreased, and more capital is being invested in buildings, although some of these are necessitated by war requirements. The recent revival is shown by the building permits of last month, which are valued at $865,530, against $435,745 in November of 1915.

The export season closed the first week in this month, when the shippers rushed all that was possible to be taken. As a whole, the year has been better than was at first expected, and tonnage, although scarce, was more plentiful than first anticipations foreshadowed. The falling off in British requirements checked exports during part of the season, some firms declining to ship with freights at such high figures and markets uncertain. The situation so far as space is concerned was relieved somewhat by the engagement of tramps, which loaded here and also at lower ports. Freights were as high as 400s. per standard, but they had a smart decline, falling 90s. in the course of a week. This rather upset calculations, and for a time little lumber was sent forward, exporters not caring to take chances on a falling market and being in the dark as to how far the decline would go. They naturally desired to get the best rates, and held their hands until the market was on a more stable basis. The lowest point touched was 200s. per standard, and the latest quotations were around 300s.

Montreal Exports During 1916

Montreal, December 7.—(Special to the Canada Lumberman.)—Following are the figures of exports from the port of Montreal to the United Kingdom and the European Continent during the season which has just closed. This is not a complete statement, as the statistics for railway, steamship lines, and small shippers have yet to come:

	1916. Ft. B. M.	1915. Ft. B. M.
Watson & Todd, Ltd.	25,131,362	23,445,439
W. & J. Sharples, Regd.	14,039,035	9,847,219
E. M. Nicholson	13,035,542	15,239,280
Cox, Long & Co.	9,814,594	5,130,576
R. Cox & Co.	8,125,121	8,852,632
J. Burstall & Co.	7,667,826	7,762,353
Bennett Lumber Company	6,908,157	11,000,000
E. H. Lemay	4,998,003	7,000,000
Dobell, Beckett & Co.	4,854,406	4,446,160
	94,574,046	92,723,659

The total is very satisfactory, having regard to the difficulties caused by the lack of tonnage and the very high rates of freight. Shippers often found that space on which they had counted was at the last moment commandeered by the government, which held first place for supplies, etc. Markets on the other side were good for a considerable part of the season, although towards the end prices were not encouraging, and some exports were stayed on this account. The total of 94,574,046 feet compares with one of 92,723,659 feet in 1915, an increase of 1,850,387 feet, and with 62,283,783 feet in 1914, which was an exceptionally poor year.

It will be noticed that, as usual, Watson & Todd, Ltd., head the list, and have increased their shipments, notwithstanding that pine was not a very brisk market in the United Kingdom, and W. & J. Sharples are in second position, displacing Mr. E. M. Nicholson, whose exports in 1915 were unusually large owing to the heavy requirements for birch. This season birch and other hardwoods could only be imported into Great Britain under Board of Trade license, and this no doubt had a tendency to check the shipments. The Bennett Lumber Company have fallen off very considerably, while Cox, Long & Co., who in 1914 did not export half a million feet, have neearly doubled their total of 1915, and just fall short of ten millions.

St. John Markets Quite Abnormal

St. John, N.B., December 7.—(Special to the Canada Lumberman.)—The St. John market is in the most abnormal state on record. Prices for deals are beyond anything before experienced, but practically no stocks are left for sale. So the situation means very little to the mill man who disposed of his goods a year ago. Millers who have goods for spot delivery are getting unheard-of prices, $25 per M. feet being a very reasonable price for deals of the poorest specifications. This, of course, is not expected to keep up, but no doubt a good market will be had for a considerable time. Large quantities of deals have been purchased by both the French and English Governments for trench work, and are now going forward from St. John, N.B., in large quantities; but, even though these prices are being paid for spot deliveries, it leaves the miller in a very poor position. The man who has logs to sell thinks that this will keep on forever, as does also the laboring man, both of whom are selling their products at high prices. If anything should happen—and no doubt it will—to lessen the prices for lumber, the mill man must be the loser, as he will have to pay all these increased costs, and is taking a long chance on the market. Labor at St. John is very scarce, the men having gone to the winter port work, forcing all the mills excepting one or two into idleness. It will be only a few weeks until the other mills also will be silent. It is very hard upon the manufacturer, whose season is very short at the best, to be forced to close up his mill at least a month earlier than usual. The American market also remains very firm, showing no signs of weakening at the present moment. The base price in New England has reached $30 per M. feet. The New York market also is firm, but there is very little, if any, lumber to go to this market from St. John. Freights are higher than early in the season, liners being now quoted at around 300 shillings, against 210 shillings early in the season. Many firms are making large commissions on the freights secured early.

The getting of logs is progressing very slowly as the weather up to date has been very much against it, being unfavorable for yarding. The woods have been wet, and any swampy country has not been get-at-able at all. Logs are surely going to cost the operators a good price. If anything happens to the operator's market he will lose very heavily.

Locally business in the factories and lumber yards has been fair, but now shows signs of slackening, and no building of any conse-

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From our many years of experience we evolved this "Dunbar" Original Lath Machine. Every improvement that could be suggested, every time-tested idea for the betterment of product and for greater speed, has been incorporated in this machine. We believe it has no equal, and there are a great number of mill men throughout Canada who share this belief with us. Carefully constructed of high grade materials and designed to work steadily under the hardest conditions.

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Conditions in Canada necessitate an engine that will stand any amount of strain and hard work in the lumber industry. With this idea in mind we have brought out the "Dunbar" engines perhaps a little stronger than is really needed. They do their work easily and willingly, and stand a great amount of hard usage. Built entirely in Canada for the Canadian lumber trade.

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You will need no excuse for the quality of your product if you use the original "Dunbar" Clapboard Machine. Expert in every detail. This machine will give you the very best service under most trying conditions. It will turn out work without delays. It will need practically no repairs and will increase your output. We cannot recommend it too highly because it is giving this very service to lumbermen in all parts of this country.

Send for catalogues of any or all of these machines.

Dunbar Engine & Foundry Co.

WOODSTOCK, N.B.

quence will be undertaken this year. The winter months will probably be extremely dull.

Stocks of merchantable spruce boards are very limited, indeed, and prices have also advanced.

Shingles are also scarce at St. John, and will continue so this winter, as the mills are practically all cleaned up.

The box business is brisk. There is only one box mill here, but it is very busy.

The Corbet Automatic Steam Towing Winch

The accompanying illustration represents the Corbet automatic steam towing winch, manufactured by the Corbet Foundry and Machine Company, Ltd., Owen Sound, Ont. There are many features in connection with this winch that commend it for the use of all who make use of towing apparatus. In the first place, it permits the use of steel flexible cable, instead of the old-fashioned Manilla rope. All marine men will appreciate the importance of this feature, knowing that when using Manilla tow lines they have to purchase a new one every year, whereas the steel cable will last at least fifteen years. They will thus be able to save in a short time sufficient to pay for one of these steam towing winches.

In the second place, a substantial saving is effected in the labor cost. The use of the Corbet steam towing winch does away with the assistance of one or two men on each tug, thus cutting the cost of operation considerably. In addition to these features it is important to note that the steam towing winch is a great time saver in the operation of the tug, as a raft or scow can be brought close to the tug while the latter is under way. Another important feature is the addition of a spool, which can be operated independently from the drum by means of a friction between the gear and drum, thus permitting the machine to serve two purposes at one time. The winch shown in the illustration accommodates 1,050 feet of 1-foot hawser, or 950 feet of 1 1/16-foot hawser, which passes through the automatic hawser leader.

Corbet Automatic Steam Towing Winch

The leader travels to and fro across the front of the machine, thus preventing the hawser from climbing on top of itself on the drum and permitting the hawser to be drawn in when the tug is at any angle with the article it has in tow.

The machine is operated by one lever, which starts, stops, and reverses, only one man being required to operate it. These machines are now installed on some of the best tugs on the lakes, and have already had thorough testing. Those who are using them have sent in enthusiastic letters of recommendation.

The bed of the winch shown in the illustration occupies a deck space of 5 ft. 3 in. x 5 ft. 3 in. The engine is made up of two 8 in. x 8 in. cylinders, which operate the drum and spool by a pinion 10 in. in diameter on the crank shaft and a gear 42 in. diameter x 4 in. face on the drum shaft, thus giving the machine abundance of power.

This description of the machine will show tug owners that it is a very valuable piece of equipment for their work. The machine is made in four sizes, each size accommodating two sizes of hawser, viz.:

		Deck space required.
No. 1 machine will accommodate	1,200 ft. ¾ in. hawser	4 sq. ft.
	1,000 ft. ⅞ in. hawser	
No. 2 marchine will accommodate	1,050 ft. 1 in. hawser	5 sq. ft.
	950 ft. 1 1/16 in. hawser	
No. 3 machine will accommodate	1,500 ft. 1⅛ in. hawser	6 sq ft.
	1,350 ft. 1¼ in. hawser	
No. 4 machine will accommodate	1,600 ft. 1⅜ in hawser	7 sq. ft.
	1,400 ft. 1½ in. hawser	

The engines in Nos. 1, 3, and 4 sizes are placed outside of the frames, so as to permit the machine to be built more compact and lower, thus preventing the tug from being tipped when pulling at right angles with the tow.

Two wealthy young students at Yale University who disappeared on November 4th were recently located working in a lumber camp near Prince Albert, Sask. The fathers immediately left for the woods to bring their boys home.

Cost of Production Always Ahead

Northern Hemlock and Hardwood Manufacturers Find Selling Price Still Behind the Cost

At the regular fall meeting of the Northern Hemlock and Hardwood Manufacturers' Association an address was delivered by Mr. E. A. Hamar, who discussed the increased cost of logging and manufacturing in the following manner:—

We all remember last year's heavy losses with chagrin, and we are not looking forward to a repetition of that disastrous experience with any degree of pleasure. Why did we operate at all during that year? I remember talking to a manufacturer in another line at that time who seemed to be very much surprised to think we would continue to manufacture at a loss. He asked: "Why don't you shut down?" That is the rub, why don't we shut down when our figures indicate red and are on the wrong side of the balance sheet?

The whole trouble with us is, that we do our figuring afterwards instead of before. We are optimists and not opportunists. I think this is the history of the industry, and therein lies one of its greatest weaknesses.

There are a great many ways of figuring the cost of lumber, and perhaps most of them are right; but we cannot get away from the fact that it consists primarily of cost of stumpage, carrying charges, logging, freights, mill operating costs and administration expenses. On a basis of $2.50 to $3.00 for stumpage I dare say that nearly all of our members lost money last year and very few are making any this year; (I am speaking now and this discussion deals only with those members manufacturing largely hemlock and the lower priced hardwoods, for there are a number of plants still cutting a large amount of pine and high-priced hardwoods to which these figures would not apply. Conditions have been materially improved this year through foreign intervention. Lumber, however, has been a laggard; so that we have not been as fortunate as the other fellows; especially those manufacturing iron, copper and brass goods. These manufacturers and others have had very handsome advances; while on the other hand, owing to the very same causes, lumber continued down the toboggan well into the last half of the past year, since which time we have had a gradual increase in prices. This increase was forced by conditions over which we had no control, until at the present time we have an advance of about 15 per cent. Compare this with an increase of 10 to 20 per cent. in wages and an increase in mill and camp supplies, with the possible exception of hay, of 20 to 100 per cent.

For the sake of arriving at something concrete let us assume that we lost $1.00 per thousand last year (I know, of course, none of you will admit to losing that much), add to this loss $1.00 per thousand increase in logging and 60 cents increase in operation at the plant, we show that an increase of $2.60 in price is necessary to let us out even. We have no more than had this advance. Or putting it another way, we might summarize as follows:

Stumpage	$2.25
Logging	5.50
Freight	1.50
Sawing and shipping	3.80
Selling	.70
Administration	2.00
Cost of lumber on cars	$15.80

Our present selling price of hemlock at $1.50 to $2.00 off list prices is netting us about an average of $15.25 to $15.50 for all grades, No. 3 and better or for the product of the log; and maple is not doing much better. It would appear from figures submitted that it is going to keep us hustling to produce lumber the coming year at our present selling price. In my judgment prevailing prices are $2.00 a thousand too low. The market warrants an advance, and we are going to get the advance, for we must have it.

There seems to be one thing peculiar to the hemlock business, and that is, that the cost of production keeps up with, and about two jumps ahead of the selling price. Away back in the 90s we were selling for $9.50 and producing for about the same figure; in 1903 and 1904 we were up to $12.50 and the cost of production was still playing tag. In 1917 it will cost us $15.50 to $16.00 to produce; I am not wise enough, howeer, to guess at the selling price. Will it take a lumber famine to put prices where they belong, and are we to have a lumber famine? The only reason we have not an over-production right now is owing to the shortage of labor and that shortage is going to continue and become more acute. Therefore, the cost of all commodities will advance. Will lumber?

With a history of twenty years back of us, can we not see that the cost of production is going to keep up with, and just a little ahead of the selling price? Shall we strain every nerve to get a large stock of high-priced logs to sell at no profit, or shall we go slow and produce a normal or below normal cut and sell at profitable prices?

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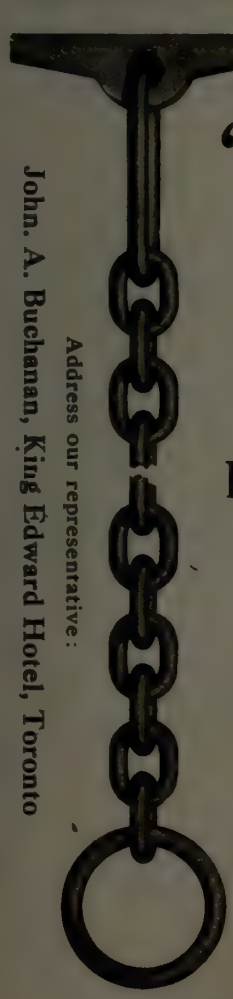

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Sanitation and First Aid in Camps

Description of Plan Followed and Benefits Resulting from Systematic Methods in a Southern Camp.

An interesting address upon the results of two years' sanitation and first aid in logging operations was delivered at the recent Southern Logging Association meeting at New Orleans, La., by Dr. C. L. Vines, physician of the Crossett Lumber Company, Crossett, Ark. Although the logging operations in the South are different in many respects from those in Canada, there are a number of problems relating to the health of employees which are common to both countries, and for this reason we believe that many of our readers will be interested in Dr. Vine's address, which was in part as follows:

The problem of maintaining a constant and dependable supply of material to a modern sawmill depends as much upon the maintenance of a body of men and animals in their maximum of efficiency as upon access to suitable timber and means for its transportation.

Experience has shown that to maintain an effective personnel in camps the same careful attention is required as in permanent towns, and good results will only be obtained when the former makeshifts of medicine, surgery, and preventive medicine will have been supplanted by modern methods. The establishment of camps in remote regions, away from the facilities of community life, has caused the development of highly efficient systems of camp sanitation, which, together with a routine method of caring for injuries to minimize risk of untoward results, has made logging possible where formerly, because of insalubrious conditions, it could not have been attempted.

The adoption of routine sanitary and preventive measures has given such brilliant results in the two camps of the Crossett Lumber Company that, as the title of this paper states, a description of the work done and the results obtained in a short time should prove a matter of interest for those in charge of logging under similar conditions. The two camps of the Crossett Lumber Company supply the mills at Crossett, Ark., with all their timber, and are located in the lowlands of Southern Arkansas and Northern Louisiana, an average distance of eight and twenty miles south of Crossett; the camps are named Toler's and Duncan's, after the foremen in charge, and here are maintained the woods crews and their families. The nearer camp—Toler's—was established four years ago, and is located on somewhat rolling ground in a clearing of pine woods; drainage is excellent, the off-flow being to the south and west, through two natural stream lines. The lower camp—Duncan's—was built one year ago, and is situated on flat prairie land adjoining the woods; drainage of the camp site here has been effected through the digging of ditches, which connect into a common drain along the main line of the railroad, by which surface waters are carried well away from the camp. Each camp accommodates about 115 families, or about a total of 900 in both, white and colored in approximately the same numbers, of whom some 230 constitute the woods crews. All of the houses in both camps are transportable, each room constituting a unit, which can be disconnected and loaded on flat cars for moving. On installation the number of rooms required are simply put together, the junction being effected through accurately fitted doors. As now installed, the completed houses consist of one, three, or five rooms, depending upon the space required by the size of the families. All houses are electrically lighted, the current being generated in each camp by steam power, from which the street lights of the camp are also supplied. The water supply of both camps is derived from driven wells, 112 feet in depth at Toler's and 90 at Duncan's, the water being pumped into overhead pressure tanks, from which it is piped to all houses. The water at both camps has been bacteriologically and chemically examined, and has been found to be of an excellent quality. The water discharged from the houses is collected in small ditches and quickly carried off. There is no standing water or natural collections of water about either camp.

Closets are of the dry earth system, and are systematically inspected and given attention; the contents are removed twice a week during the summer season and lime applied; once a week during the winter, by a scavenger, who hauls the material to points well beyond the camps, where it is buried. The closets are limed during the week by the householders. The public closets in both camps receive the same treatment.

Garbage and household refuse are collected in closed galvanized iron cans, from which the contents are removed once a week by the scavenger. There is a small barn in each camp for the accommodation of a few animals. The barns are cleaned daily, the manure being hauled by the scavenger and buried.

One of the most effective measures with reference to the prevention of illness and injury has been the broad use to which the Y.M.C.A. organizations at both camps have been put. In accordance with the principles of these institutions, their educational effectiveness has been directed towards instruction of all of the people in the principles of disease prevention. Illustrated lectures, demonstrations, and moving pictures of sanitary and first aid methods are given at frequent intervals, and have proven very popular. An annual course in first aid relief is given by the writer to all foremen, upon the satisfactory completion of which a certificate of proficiency is issued by the staff of the Crossett Hospital. This course is given one night a week at the Y.M.C.A. building in each camp for four months, making a total of about fifteen lessons, during which the subjects of germs and infection, wounds, fractures and dislocations, burns and scalds, the use of stimulants, sunstroke are discussed. At the same time demonstrations and practice in the methods for control of hemorrhage, the application of bandages and splints, and the carrying of the injured are conducted. The course as outlined is then supplemented by lectures on accident and disease prevention, ptomaines and ptomaine poisoning, insects dangerous to health, and reptiles, with appropriate moving picture and lantern slide demonstrations at frequent intervals.

Application of First Aid.

As used in practice in the woods, the application of first-aid methods is thus always performed by some qualified individual on whose presence of mind and ability dependence can be put. The foreman in charge acts as captain of the first-aid emergency team and has access at all times to the first-aid appliances. These consist of first-aid boxes measuring about eleven inches in length, five in width and four in depth, and contain sterile dressings, tincture of iodine, liquid petroleum, safety pins, and stimulants. Stretchers are carried on all trains, and in cases of serious accident patients are transferred without delay to the general hospital at Crossett. In every case of accident a written report is made out by the foreman and transmitted to the physician, who records all treatment and later notifies the foreman when the patient is able to return to his work. Each foreman also makes out a monthly report to the hospital of every injury sustained by his men, with the result that a certain pride is taken in keeping the casualty list as small as possible among the different crews employed. As a further means of keeping the necessity of prevention of disease and injury constantly in the minds of the men, bulletins relative to "Safety First" matters, avoidance of carelessness and accidents, and disease prevention are displayed in conspicuous places in the Y.M.C.A. buildings, on the trains, and in the stores.

Results of First Aid.

Reference has been made to some of the results that have followed the introduction of sanitary measures throughout the camps, and there remains for discussion the marked diminution in all illness, more especially illness of the usual camp type, and infection following injury. The immediate application of tincture of iodine, followed by a sterile dressing, has resulted in an early return to their work of men who otherwise would have been incapacitated for lengthy periods by infections, and in addition has frequently been all of the treatment needed in many of the minor injuries that formerly required continued attention. It may be added that this single measure of first aid for wounds is the method in use on the battlefields of Europe before patients can be transferred to hospital.

The very practical and material gains that have followed in the wake of the work done in the camps of the Crossett Lumber Company and in the way of instruction to their personnel are represented by an increase in the efficiency of crews, as shown by the performance of the same work as formerly in less time; infinitely more healthful conditions about the homes and a knowledge of disease and accident prevention has rendered the men more self- reliant and capable of greater earnings. The mental strain incident to loss of rest because of illness in some member of the family has also given way to repose, and full application of energy to the work in hand.

An advantage accruing to the physician in charge of which mention must be made is the gain in time through lessening the daily sick call and dispensing of medicine, whereby he may better apply himself to his first duty—that of prevention of disability and maintaining the efficiency of those under his care.

We have always received hearty and active co-operation from the superintendent and foremen in charge, and from the people themselves, without which the results obtained would not have been possible. The same spirit of enterprise, together with the intelligent application of similar measures as outlined in this paper can be made to be productive of equally beneficial economic results in practically all camps, and the knowledge that better and greater things can be accomplished by individuals living under conditions of increased expectancy of life and health should stimulate extension of the work of disease prevention universally.

Quebec Culler's Report

The following comparative statement of timber, measured and culled to date, is furnished by the Quebec Supervisor of Cullers' Office, under date of December 6th:

	1914—Cu. ft.	1915—Cu. ft.	1916—Cu. ft.
Waney white pine	593,080	401,680	148,760
Red pine	1,040	.....	.....
Oak	343,240	119,440	342,480
Elm	305,240	46,840	72,160
Ash	680	840	1,680
Butternut	.....	.....	40
Birch and maple	50,800	48,880	46,880

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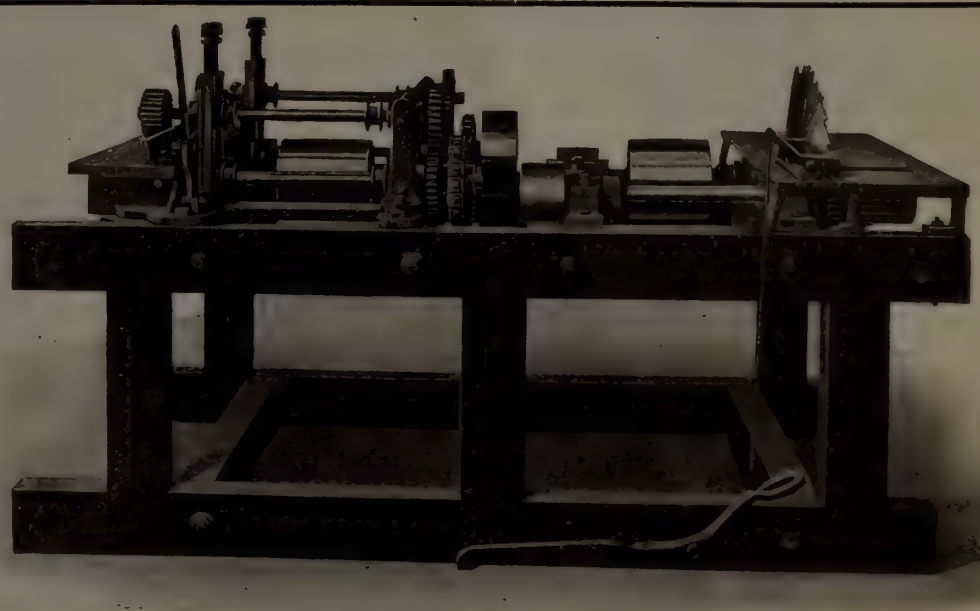

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Superiority of the Wooden Pulley

Analysis Proves It the Most Efficient and Least Expensive Type to Maintain.

Editor's Note.—The most common appliance in mills, factories, and machine shops is the pulley. Wherever belt transmission is used the pulley is in service. The cost of installing and maintaining mills where considerable machinery is employed constitutes a large per cent. of operating expenses. For that reason the pulley is of direct interest to every man who uses one or more. The article which follows was prepared by the National Lumber Manufacturers' Association, and is reproduced from the Hardwood Record.

Are you using wood pulleys or are you not? If, instead, you are using steel pulleys, you are paying some 50 per cent. more at the outset for your pulleys than if you bought wood pulleys. In this case are you getting 50 per cent. greater efficiency and durability, or are you simply favoring the steel trust with a welcome contribution, which, considering its source, it is more than glad to accept?

Wood pulleys have been on the market for over thirty years, and that is too short a time to be able to say how long they will last. Many wood pulleys built thirty years ago are still in use and as good as new. Steel pulleys have been on the market sixteen years, but owing to the inevitable crystallization to which they are subject when in service, this period has been more than long enough to demonstrate their average length of life. So much for durability and its corresponding lack in the two types of pulleys.

There is only one class of service for which a wood pulley is not suited, and that is when exposed to excessive moisture, a service in which a regular leather belt cannot be successfully used. In such service a wood pulley should not be used, nor a sheet steel pulley either. Long continued exposure to excessive moisture will cause a wood pulley to go to pieces. Moisture penetrating the riveted joints of a steel pulley cause rust and corrosion, and in a short time the joints work loose and the pulley is gone. The pulley for wet places is the cast iron pulley.

Wooden Pulleys Are Cheaper.

The following table gives a comparison in price to the user between wood and steel pulleys. Only the most popular sizes are shown, but the comparison holds equally true for all sizes:

Sizes.	Wood.	Steel.	Excess cost of steel.
6 x 3	$ 1.16	$ 1.82	57 per cent.
12 x 4	1.60	2.55	59
24 x 6	3.96	6.02	52
36 x 8	8.04	13.20	64
48 x 10	14.98	26.81	85
60 x 12	24.28	46.20	90

Iron pulleys are even more expensive. Now, if you pay that much more for iron and steel pulleys, you ought to get that much more service out of them. But do you?

Wooden Pulleys Transmit More Power.

A number of years ago Haswell, the leading American authority on mechanics, made a series of exhaustive tests of wood and iron pulleys, and the findings of these tests have never been controverted. Haswell proved that the coefficient of friction of belts running over wood pulleys was 47 and over iron pulleys 24. That is, that with the same belt tension you can transmit, even according to his conservative figures, on the average nearly twice the power over a wood pulley that you can over an iron pulley. Over a steel pulley you cannot transmit so much even as you can over an iron pulley, for steel pulleys are never perfectly round, and their faces are covered with high and low spots, so that for both reasons the belt is prevented from coming in perfect contact with the pulley face. This saving of power transmitted, rather than waste in belt slippage, is very considerable in the course of a year.

Wooden Pulleys Weigh Less.

The following table of weights is instructive, especially in view of the claims of the steel pulley manufacturers that their pulleys are light. These figures are approximate as representing several makes of wood and steel pulleys, but the ratio of comparison is correct:

Sizes.	Wood.	Steel.	Excess weight of steel.
6 x 3	1¾ lbs.	7 lbs.	300 per cent.
12 x 4	8½ lbs.	19 lbs.	124
24 x 6	31 lbs.	41 lbs.	32
36 x 8	79 lbs.	121 lbs.	53
48 x 10	155 lbs.	245 lbs.	58
60 x 12	245 lbs.	384 lbs.	57

What do you gain by putting this extra weight on your hangers and shafting? The answer is, nothing; while in addition you penalize yourself severely every minute that your hangers and shafting carry this weight, and every working minute that your engine has to turn it.

Wooden Pulleys Run True.

Trueness of running is another advantage which wood pulleys possess over steel pulleys. The latter are forced into temporary approximate roundness by dies in the course of their manufacture, but soon spring back out of this even approximate roundness when subjected to the strains and shocks of actual service. This is why you never yet saw a steel pulley in service that did not gallop or wabble or possess a combination of both undesirable gaits. Think about this. Gallowing and wobbling is destructive to belt and bad for hangers and shafting.

Wood pulleys do not crystallize even under hard service; the hardwood from which they are made offers the maximum resistance to compression, and yet has sufficient spring to relieve itself from sudden shocks.

Wooden Pulleys Make Yearly Saving.

Last year Prof. Price, of the University of Toronto, conducted a series of tests for the purpose of analyzing more closely than had heretofore been done the relative efficiency of wood and iron pulleys. His report has been published, and makes interesting reading. These tests seem to have been broad and thorough enough, and made under a sufficient number of varying conditions to be really conclusive. Prof. Price considered the subject under four heads, and so arranges his results, but it is sufficient to state that he found the wood pulley far more efficient than the iron pulley, and that, reduced to dollars and cents, you save on the average about $6 a year per pulley by using wood pulleys rather than iron ones. Had steel pulleys been used in this test rather than iron, there is every reason to believe that the showing would have been even more favorable to the wood pulley.

The interests of the steel trust and the steel pulley manufacturers are parallel, and they have doubtless been of great assistance to each other. The steel pulley manufacturers take advantage of the effect of the word "steel" on their hearers' minds when their salesmen are talking and on their readers' minds when they speak through their advertising. They harp on the alleged fact that this is a "steel age." Steel may be good in some places, but a pulley is not one of these places. The flexibility of steel, its tendency to distortion, and its inevitable crystallization make it utterly untrustworthy for pulleys.

Certainly lumber manufacturers ought to favor a product made from lumber if they sincerely believe in the merits of wood over substitutes. But, laying aside all natural bias of this sort, by using wood pulleys you are using something that has been proven more efficient, more durable, and more economical, both in first cost and operation, than either of the substitutes on the market.

Keeping Co-operative Logging Costs

By R. C. Staebner*

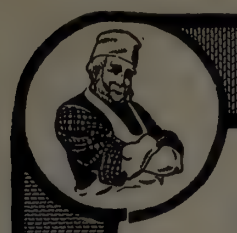
Keeping the cost of logging is, of course, necessary to the conduct of any well-ordered lumber business, for several reasons. Profitable production of any commodity can hardly be carried on without knowing what the finished product costs, and the logging costs is a large, and often the largest, expense in lumber manufacture. Moreover, a record of the logging cost is necessary to enable the manager and owners of any plant to know if their work is being done as cheaply as possible. Such records form a basis for comparing present with previous work, thus enabling one to learn the correct lessons from his own experience.

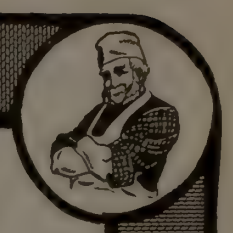
Doubtless all members of the congress keep a record of their logging cost, and probably none know exactly what it does cost nor why it costs that particular figure, because the correct determination of this requires more than a careful account of labor and supply bills. Logging any particular tract of timber is a long-time operation, and in order to determine correct annual or monthly or any other periodic costs many other factors must be known.

First of all the amount of timber on the whole tract, as well as on the different topographic logging units, must be known, in order to know the proper depreciation charge for the important item of railroad construction and other improvements which a given period of logging must bear. The average life of teams, tools, machinery, and equipment of all kinds must be accurately known for the same purpose of allotting to each period its proper charges over and above purely current items of expense. Here, also, we need to know and discount in our cost figures the probability of fires, floods, and other destructive accidents.

The proper distribution of current labor and material costs is a very complicated problem and very difficult in its practical application. On nearly every job more than one product is handled, such as logs, tan-bark, pulpwood, acidwood, ties, etc. Certain operations necessary to getting out one of these products help or hinder directly or indirectly the work on the others; which raises the question as to how

* Address delivered before Appalachian Logging Congress.





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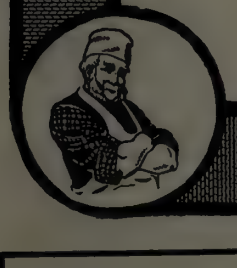

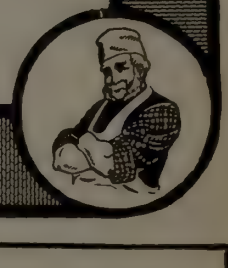

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much of the expense of this work each should bear. For instance, shall the cost of roads over which logs, tanbark, and pulpwood are skidded be charged entirely to the logs?

It follows that a classification system must first be worked out—a satisfactory and practical separation and definition of the different items of expense that are worth keeping separately. It is easier to do this—to know what costs we want to keep separate—than it is to actually get the data for these accounts. The greatest difficulty here is to get correct and intelligible distribution in the cost reports turned in from the field, as they must usually be kept by the foremen, who often have great difficulty in keeping a simple time book correctly.

Suppose, however, that all this has been accomplished; that we have before us a correct and complete record and proper distribution of all the costs for two stated periods on the same operation. We want to learn what we can from these data—what the cost is and why; is it too large, can it be lessened, and how? Our first impulse is to compare them, item by item. But, after all, we cannot learn much from this cost sheet unless we are very familiar with all the conditions under which the work was done. Because the cost of logging depends on a great many varying factors, such as topography, soil, and rocks, species, size, and distribution of timber, character of undergrowth, weather conditions, character and efficiency of labor and supervision, efficiency of equipment and machinery, and so on. So that a higher figure now actually represent more efficient logging than the lower, because done under harder conditions.

However, such a set of cost sheets on any single operation, used with experience and judgment by men thoroughly familiar with all the conditions on that job, is undoubtedly a great aid in keeping expense in line, and the efficiency of the work where it ought to be, and is worth all it costs.

What is the cheapest and most efficient method of logging? The answer to this depends on the following points:

1. Is the actual accounting classification the same? Does every item on each cost sheet include no more and no less than the corresponding one on the others? Most likely not, as the cost accounts of the different members are at present kept.

2. Are all the influencing factors such as those outlined above, which so largely determine the logging cost, the same for all the operations? Certainly not on any two operations we know of.

If it is possible and practical for all the members of an association to adopt a uniform classification of accounts, and if every member can be sufficiently familiar with every operation, its methods and all the influencing factors, then comparative costs will be of great benefit.

One association attempts a comparative cost sheet for the whole logging operation, from the stump to the mill. This sheet requests a statement from each member as to the costs of the different items of the work, coupled with a great many specifications of the conditions and methods which determine costs. For example, character of the country, class of timber, number, rating, weights, models, etc., of the different classes of locomotives, cars, skidders, and loaders, descriptions of the track, stock, and tools, the organization of the crews and methods of doing each kind of work, the character and efficiency of the labor, and the wage scale. All this information is to be contained on a single sheet about the size of an ordinary business letterhead.

This is undoubtedly of some interest in a general way, but we do not believe it is of large practical value in the solution of the logging man's problems. In the first place, when comparing costs we do not know the exact weight to give each influencing factor, nor how to weigh justly the composite of all. Furthermore, it is doubtful if these factors can be stated with sufficient definiteness to convey a clear impression of the exact conditions.

It seems that the problem is too large to be handled in this way. There are too many difficulties to be overcome. The solution rather lies in breaking up the subject into smaller parts and tackling them one at a time, into parts so small that the influencing conditions and methods can be exactly known and measured and intelligently compared. The comparative method that will yield us the most profitable results is the one that will answer the questions. Am I doing any particular piece of work by the best method for the given conditions? If the method is correct and the costs are out of line, does the fault lie with the labor or the machinery and equipment?

We can arrive at this solution by keeping the labor and material costs on a certain phase of logging, together with an exact record of the influencing factors, then getting together and comparing our results. We advocate, then, the assignment of a meeting, or a day, to some particular phase of logging work, and going into it thoroughly in all its details, asking each member to keep the cost of all the items going into this particular piece of work, together with a careful description of the method used and exact data on the influencing factors.

The length of time such records should be kept depends on what may be termed the unit of the work. As an example, the unit for the skidder would naturally be a set, and the records should be kept from the beginning to the completion of a set, whatever the actual time may be.

For instance, a meeting might be assigned to the discussion and comparison of overhead steam skidding costs, and records kept by each member, somewhat as follows:

1. A careful description of each set, with a topographic map, if possible, and a statement of the character, size, and density of the timber and the character and density of the undergrowth.

2. The machine used, with specifications as to boiler, engines, number and size of drums, their arrangement, and cost of the machine, also the size and kind of lines used and the cost of rigging the machine.

3. Crew and wage scale, character and efficiency of the labor.

4. The method of rigging spar-trees, the type and size of blocks used, the methods of putting out and changing the lines, and the costs of this work.

5. The method of working while skidding, distribution of crew, average and maximum amounts skidded for each set, with the labor cost of the same.

6. The method of moving from one set to another, the distance moved, time consumed, and cost.

7. The amount and cost of coal, oil, waste, etc., used on each set.

8. The lost time due to weather conditions, breakdowns, etc.

9. The total amount skidded and the total amount of labor and supplies.

By keeping the cost of these items as set forth above we can arrive very closely at the actual cost of skidding for the conditions represented, except for the depreciation of machinery and wear on the lines, which can only be obtained from longer time records.

At the end of such a discussion as this, if the matter were thoroughly gone into we would have a set of truly comparative figures. Because, besides the actual cost, we would have before us the methods and conditions which determined them. The members using steam skidders would be able to judge accurately of the comparative efficiency of each method and outfit under stated conditions, and the possible improvements in the details by adoption from others. Those members not using overhead skidders should be in a position to decide correctly if they were feasible under their own conditions, and to select the best machines and methods of using them, without going through the long and expensive process of working the whole thing out by trial and error.

By going into every phase of logging work in this manner an association could gradually compile a set of intelligible and working data, which could be used to determine the best method of doing any given piece of work under any stated set of conditions.

This offers, it seems to me, the only way to profit by comparative costs, and the only chance for real advance in the science and art of logging. It is the method by which the great advances in technical processes in all modern industries have been worked out, a step at a time, by studying in detail a certain phase of a process under conditions that could be measured, disregarding for the time the other problems. It is the simplest and easiest method, and opens a way for the final solution, one at a time, of the numerous and complex problems confronting the logging man. It will bring results that we can use in our daily work. It is practicable, and does not entail a rigid system of keeping accounts. It can be gathered as our daily work progresses, and without an undue amount of extra work nor a disturbance of our regular accounting system. Finally, the real problem of efficient logging is the correct selection of detailed methods for each phase of the work, which is most feasible after gathering a set of figures of this sort.

Robert Dollar Interests to Centre at Vancouver

Mr. Robert Dollar, owner of the Dollar Steamship Line, was recently in Ottawa, and from there proceeded to Vancouver. He has announced definitely that he will, in the near future, commence the construction of a large sawmill on Burrard Inlet and that Vancouver will be made the headquarters for his great line of steamships. It is reported also from Vancouver that he has purchased the sawmill at Ruskin, B.C., which formerly belonged to the E. H. Heaps Lumber Company, Limited. This plant has a daily capacity of 100,000 feet of lumber and 500,000 shingles.

Lieut. George E. Bothwell Killed

Lieut. George E. Bothwell, formerly in the employ of the Forestry Branch at Ottawa, is reported as having been killed at Courcelette. At the recent meeting of the Foresters' Club the president, Mr. R. H. Campbell, reported that the manner in which Lieut. Bothwell met his death was as follows: After a successful charge, Lieut. Bothwell's unit was rounding up a party of German prisoners who had surrendered in a dugout. One of the prisoners retained possession of a revolver, and when Lieut. Bothwell's back was turned shot him through the back of the head, and he died instantly.

According to estimates recently made, it now costs 40 per cent. more to construct a wooden vessel at Canadian Atlantic ports than it did five years ago.

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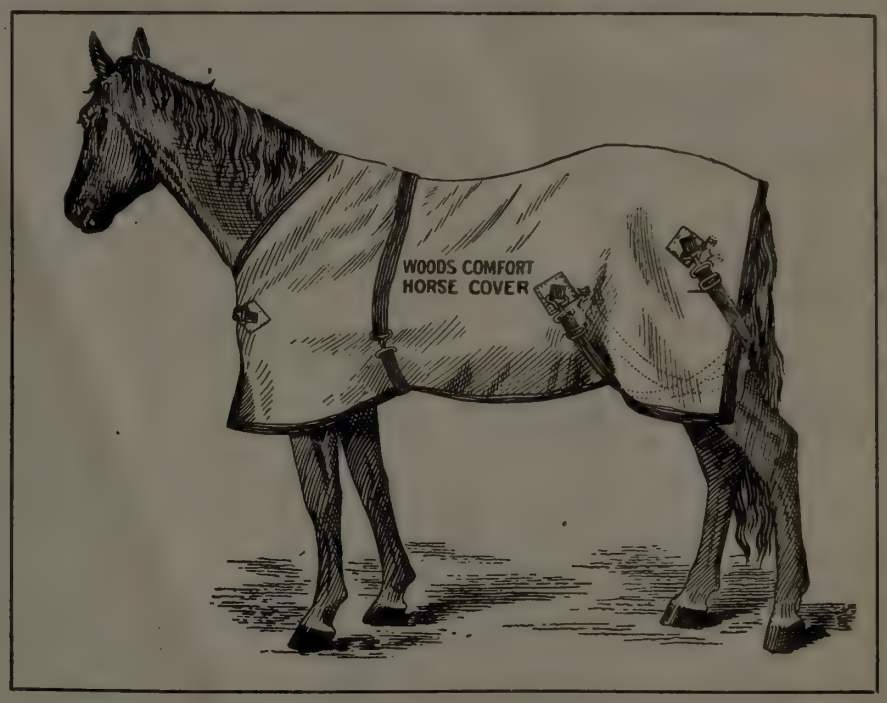
Comfort Horse Covers



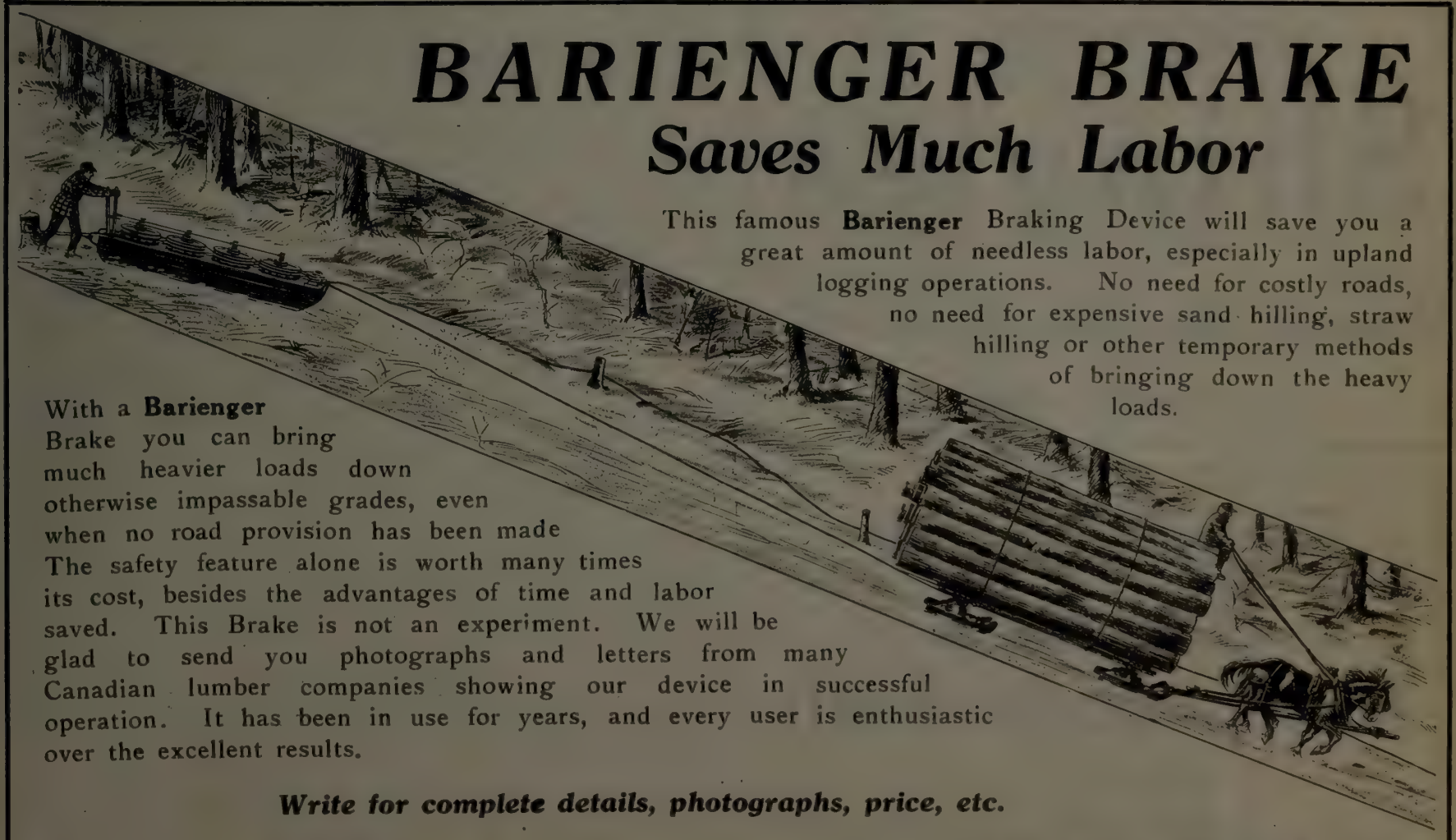
Khaki or White Duck Cover, Kersey Lined, Full Size 74x84 inches. Breast and Leg Straps.

Write for prices.

SMART WOODS
Limited *Canada*

Ottawa Toronto Montreal Winnipeg

BARIENGER BRAKE
Saves Much Labor



This famous **Barienger** Braking Device will save you a great amount of needless labor, especially in upland logging operations. No need for costly roads, no need for expensive sand hilling, straw hilling or other temporary methods of bringing down the heavy loads.

With a **Barienger** Brake you can bring much heavier loads down otherwise impassable grades, even when no road provision has been made The safety feature alone is worth many times its cost, besides the advantages of time and labor saved. This Brake is not an experiment. We will be glad to send you photographs and letters from many Canadian lumber companies showing our device in successful operation. It has been in use for years, and every user is enthusiastic over the excellent results.

Write for complete details, photographs, price, etc.

Ryther & Pringle Company, - Carthage, N. Y.

The EAGLE LUMBER CO. Limited
WHOLESALE LUMBER
SANS-DIEU-RIEN
MONTREAL - Canada

Head Office at Montreal.

SPRUCE
ROUGH or DRESSED

Saw Mills at
MONT LAURIER, QUE.
STE. MARGUERITE, QUE.

Dressing Mills at
ST. JEROME, QUE.

WHITE PINE

We have remaining for sale a few cars in each of the following items:

5/4 x 6 in. 10/16 ft. Mill Run White Pine
2 x 12 in. 10/16 ft. Mill Run White Pine
2 x 4 and wider sound wormy White Pine
3 x 6 and wider sound wormy White Pine
4 x 6 in. 10/16 ft. sound wormy White Pine
4 x 8 in. 10/16 ft. sound wormy White Pine
4 x 10 in. 10/16 ft. sound wormy White Pine
6 x 6 in. 10/16 ft. sound wormy White Pine
8 x 8 in. 10/16 ft. sound wormy White Pine
4/4 x 10 and 12 in. No. 2 Culls

Also a few cars of No. 1 and 2, 4 ft. White Pine Lath and a few cars of 32 in. Mill Run White Pine Lath.

WRITE OR PHONE FOR PRICES

Herman H. Hettler Lumber Co., MIDLAND ONT.

CEDAR
Shingles

Campbell, MacLaurin Lumber Co.
Limited
Board of Trade Building, MONTREAL

Pine, Spruce
Hemlock
Hardwoods, Lath

GOOD STOCKS PROMPT SHIPMENTS SATISFACTION

C. A. SPENCER, LIMITED
Wholesale Dealers in Rough and Dressed Lumber. Lath and Shingles
Offices—500 McGill Building, MONTREAL, Quebec

EDGINGS

Ontario

The Michipicoten Power and Paper Company, Limited, has been incorporated with capital stock of $6,000,000 and head office at Toronto, Ont.

A site has been chosen for the erection of a pulp mill at Arnprior, Ont. The name of the owner has been withheld. For further information address Deputy Reeve Havey, Arnprior, Ont.

Excavating work has been commenced for the erection of a woodworking shop to cost $3,000, for A. L. Voege, 40 Regent Street, St. Thomas, Ont. The building is to be one storey, white brick construction and maple and pine floors.

A planing mill to cost $10,000 will be erected at Chatham, Ont., by C. & J. Hadley, Company, 58 Thames Street. The manager is Mr. J. M. Diver. The owners are purchasing lumber, electric supplies, etc. They have some of the machinery now on hand.

The Hope Lumber Company, Thessalon, Ont., closed their mill for the season about the end of November, and many of their employees left for the lumber camps. The company contemplate a number of important improvements to their plant during the present winter.

The Stone Lumber Company, Limited, Marksville, Ont., report that they expect to take out 1,500,000 feet of birch and maple logs during the present winter. This will be half a million less than their cut last season, but labor conditions and other uncertainties make it inadvisable to operate as heavily as formerly.

The Keenan Woodenware Manufacturing Company, Limited, Owen Sound, Ont., will erect two buildings, as additions to their factory, each to be two storeys, 60 x 120 feet. One will be built in 1917 and one in 1918. A by-law granting a loan of $20,000 for this work will be voted upon by the ratepayers of Owen Sound in January.

The Turner, Day and Woolworth Handle Company, 1217 South Seventh Street, Louisville, Ky., have leased a large factory in Hamilton, Ont., for the purpose of manufacturing all kinds of hickory handles. The machinery for the plant is already en route. At the commencement, the company will employ about 25 men for two or three months, the number to be increased later on.

The Lazier Paper Mills Company, Limited, have been incorporated, under Dominion charter, with head office at Montreal and mills at Belleville, Ont. The capitalization of the company is $150,000. It will acquire as a going concern the property and business of the Lazier Paper Mills, Limited, Belleville, Ont., and will increase the equipment, so as to add to the output of the plant.

The Schroeder Mills & Timber Company, of Milwaukee, Wis., have purchased from the Victoria Harbor Lumber Company, Limited, of Toronto, timber limits covering 138 square miles in the townships of Blair and Mowat, Parry Sound District, Ontario, Canada. It is the intention of the Schroeder Company to take out about twenty-five million feet of white pine from these limits each season, beginning next autumn. The timber will come out by way of the Pickeral and French rivers, although some may be handled by rail.

Tenders are being received until 4 p.m., December 22nd, by R. C. Desrochers, Secretary Dominion Government Department Public Works, Ottawa, for British Columbia fir timber and for white oak timber to be used in construction of dredge No. 125. Specifications may be seen at the office of district engineers, Shaughnessy Building, Montreal, and Equity Building, Toronto, or may be had from the mechanical superintendent, Birks Building, Ottawa, or at the office of MacLean Daily Reports Ltd., 345 Adelaide Street West, Toronto.

Laurie H. Burnaby, manager of the Burnaby Lumber Company, Toronto, has accepted a position as manager of the Argo-Summit Lumber Company, retail lumber dealers, Chicago, Ill., and will leave to take up his new duties early in January. The business of the Burnaby Lumber Company, Toronto, is being closed up. Practically all of the stock has already been disposed of. The Argo-Summit Lumber Company operate two yards in Chicago and Mr. Burnaby will be in charge of all their business. Previous to moving to Chicago, Mr. Burnaby will make a pleasure trip during the Christmas holidays to New Brunswick.

Eastern Canada

The Samara Pulp Company, Limited, have obtained a charter with head office at Montreal, P. Q., and power to manufacture, import, export and deal in pulp and pulpwood paper products.

Messrs. Murray & Gregory, St. John, N.B., who lost their mill at Lac Frontier, Quebec, by fire on November 9th, are rebuilding and will have the mill in operation by the middle of May of 1917. The new mill will be a duplicate of the one destroyed.

The business formerly carried on by the late Mr. E. T. Nesbitt at Limoilou, P.Q., will be continued in future under the name of E. T. Nesbitt Reg., and will be in charge of the executors of his estate, in accordance with the terms of

his will. Mr. Louis Hamel, who was in the late Mr. Nesbitt's employ for many years, will be manager.

According to reports from Newcastle, N.B., Mr. J. D. Volckman has made arrangements for the construction of a large pulp mill on the site of the plant of the New Brunswick Pulp and Paper Company, Limited, at Millerton, N.B., which was recently destroyed by fire.

The Nashwash Pulp & Paper Company, who have purchased the Ed. Partington Pulp & Paper Company's limits and mills, will build a large brick wood room near the pulp mill at Union Point, St. John. Work is now going on, and it will be ready for occupancy about May 1st, 1917.

The sawmill belonging to Ralph D. Wanamaker, about a mile and a half above Nauwigewauk, N.B., was destroyed by fire on December 3rd, the loss being between $4,000 and $5,000. No insurance was carried on the plant. A large quantity of lumber piled in the yard was saved.

The E. Burtt Lumber Company, Limited, has been incorporated with capital stock of $20,000, and head office at Burtt's Corner, N.B. The company is empowered to take over the lumber business formerly carried on by Elwood Burtt. The members of the new company are Elwood Burtt, Roy E. Burtt and S. Howland, all of Douglas, N.B.

The Carthage Sulphite Pulp and Paper Company, Carthage, N. Y., report that the timberlands purchased by them recently in Quebec province, between Murray Bay and Tadusac were secured as a partial source of supply for their pulp and paper mills. They do not contemplate the erection of any mills on this property at present. The purchase includes 80,000 acres of timberlands, estimated to contain 800,000 cords of pulpwood. The price paid was between $250,000 and $300,000. Pulpwood operations are now being conducted on this property for the purchasers by the Provincial Industries, Ltd., of which Ovide Brouillard is manager.

Geo. A. Chappell and his son Claude C. Chappell, Amherst, N.S., under the name of Chappell and Son, report that the timber lands which they recently purchased from W. F. Beatty are located on Second River, which flows into River Philip. The limits contain 2,300 acres, chiefly spruce, but also a quantity of fir, maple and birch, the total being estimated at about 20,000,000. They are logging on the property this winter and already have a mill operating. They expect to cut about a million and a half feet of spruce this winter which will be hauled out to Thomson. Next summer they intend to clear the river for driving operations.

The control of the Ticonderoga Pulp and Paper Company, Ticonderoga, N.Y., has been purchased by the Riordon Pulp & Paper Company. The Ticonderoga Company manufacture about 100 tons of soda pulp and fine book and specialty papers per day. The directors of the company are: Messrs. Charles Riordon, Carl Riordon, F. B. Whittet, Lawrence Macfarlane and T. J. Stevenson, of Montreal; George E. Challes, of Toronto; T. E. Warren, Ticonderoga, N.Y.; C. S. Merrill, Albany, N.Y., and Allen Curtis, New York city. The new officers of the company are as follows: Messrs. Charles Roirdon, president; Carl Riordon, vice-president; F. B. Whittet, secretary and treasurer; T. E. Warren, manager.

Western Canada

Councillor Williams, Langley, B.C., is making arrangements for the erection of a shingle mill and sawmill at Jardine, B.C.

The Western Lumber Company, Saskatoon, Sask., are contemplating the erection of a sawmill to be ready to saw about January 1st, 1917. Mr. C. R. Hill is manager for the company.

The Namu Box Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $24,000, to carry on business as timber and lumber merchants, sawmill proprietors, etc.

The Davis Logging & Trading Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $50,000, to carry on business as loggers, timber and lumber merchants, sawmill and planing mill proprietors, manufacturers of wood pulp, etc.

The Iowa Shingle Company, Limited, has been incorporated with head office at Vancouver, B. C., and capital stock of $10,000, to carry on business as lumber and timber merchants, sawmill and shingle mill proprietors and as manufacturers and dealers in lumber and timber of all kinds.

The Straits Lumber Company, a United States concern, has secured the large mill at Nanoose Bay, B. C., which was closed down some months ago. Operations will be commenced immediately. A. H. Cramer will manage the manufacturing end of the business, and already has men at work overhauling the mill.

Sealed tenders are being received by the Minister of Lands for the province of British Columbia until the 10th day of January, 1917, for the purchase of License X719 to cut 7,230,000 feet of dead and down cedar and 1,000 cords of shingle bolts on an area adjoining Timber Sale X538, Powell Lake, New Westminster District. Three years will be allowed for the removal of the timber.

J. D. McArthur, McArthur Block, Winnipeg, Man., is negotiating with the city of Winnipeg for power and water to be used in connection with a paper mill of which he is contemplating the erection. The capacity of the proposed mill is to be fifty tons per day. It is also likely that the plant will include machinery, for converting waste paper into wrapping paper. The plant will give employment to about five hundred men.

The Model House

will not stay model long if inferior, unseasoned lumber has been used in its construction. It will retain its beauty and serviceability for untold years if built with such lumber as we furnish. Isn't it better to build so that you'll have a house that will last for years without repairs rather than one that keeps on costing all the time.

The McLennan Lumber Co.
LIMITED
Wholesale and Retail
21 Dorchester Street W. - MONTREAL, QUE.
Telephone Main 8656. Private exchange to all departments

H. BOURGOUIN
Dominion Express Bldg., 145 St. James St., Montreal
WHOLESALE LUMBER AND TIMBER
Dressed and Rough
White and Red Pine, Spruce, Hemlock, Banksian Pine, Birch, Maple, Dimension Cedar, B. C. Fir, Yellow Pine, Railway Ties, Fence Posts, etc.
Prompt shipment. Satisfactory stock. Good service Write for Prices.
A. F. B. AUSTIN, Manager

Your Blower System

If you contemplate installation of a new blower system or an extension of your present one, write us, as we have a unique proposition to offer. There is no heating, clogging or shaking with our system.

Prices on application

The Toronto Blower Co.
156 Duke St., Toronto

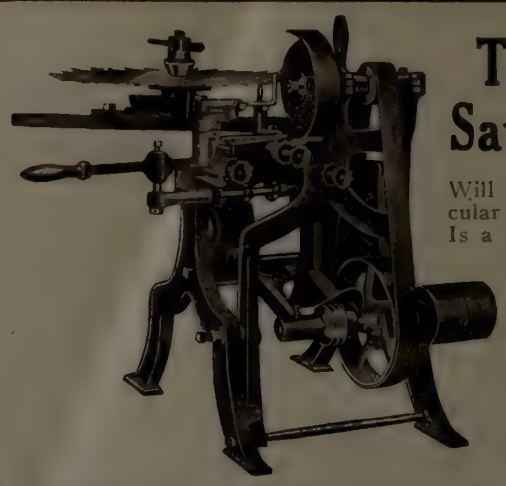
JENCKES ROSSING MACHINES

The Jenckes Barker, fitted with Wilkinson block turning attachment, will ross all kinds of logs perfectly. Besides rossing an exceptionally large number in short time, it handles each piece with a minimum of waste material. It requires relatively small power and stands up under continual hard use.

Write for complete particulars of our Rossing Machines and other wood preparing machinery

The Jenckes Machine Co., Limited
Sherbrooke, Que.

St. Catharines Montreal Toronto Cobalt Timmins Vancouver
Edmonton Calgary



This Circular Saw Sharpener

Will automatically sharpen circular saws up to 40" in diameter. Is a bench machine, exceptionally well built, and thousands are in successful operation.

Price $70.00

We make all sizes of saw sharpeners—both hand and circular—also Automatic Knife Grinders.

Send for Catalog showing the complete Rogers-Buffalo Line.

SAMUEL C. ROGERS & CO., 18 Lock Street, BUFFALO, N. Y.

They Saved 25% in Fuel and 50% in Repairs

SO WRITES Mr. Wm. H. Turner, secretary and treasurer of **The Easton Furniture Company**, of Easton, Md., after giving the "Morehead" system a thorough trial.

Until you are draining the condensation from your kilns and returning it—every drop—to the boilers at the **original temperature**—

—you are wasting heat units that **cost** you DOLLARS to produce.

STOP THAT WASTE!

Rejuvenate your entire steam plant by making the inexpensive "Morehead" system a part of it.

Save **fuel** by bringing the pure condensation directly back to the boilers HOT!

Save **repairs** by eliminating forever the necessity for the wasteful and constantly out-of-order steam pump. The simple, easily installed "Morehead" system will much more than pay for itself the first year of use.

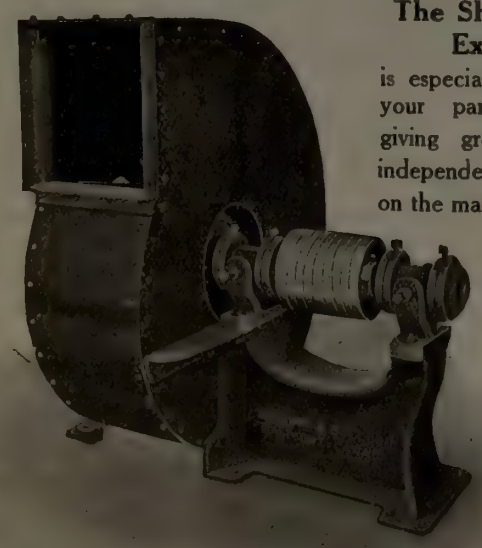
Write for the proof to-day.

The "Morehead" book shows actual photographs of some interesting installations. Don't you want your copy at once?

Canadian Morehead Mfg. Company
WOODSTOCK, ONTARIO

Planing Mill Improvements

Every Manufacturer in the Lumber Industry realizes that to be "up-to-date" their Factory should be installed with **Shaving Exhaust Fans.**



The Sheldon Shaving Exhaust Fan

is especially designed to suit your particular requirements giving greater efficiency and independence than any other on the market.

See our New Catalogue

Sheldons Limited - Galt, Ontario

Toronto Office, 609 Kent Building

AGENTS:

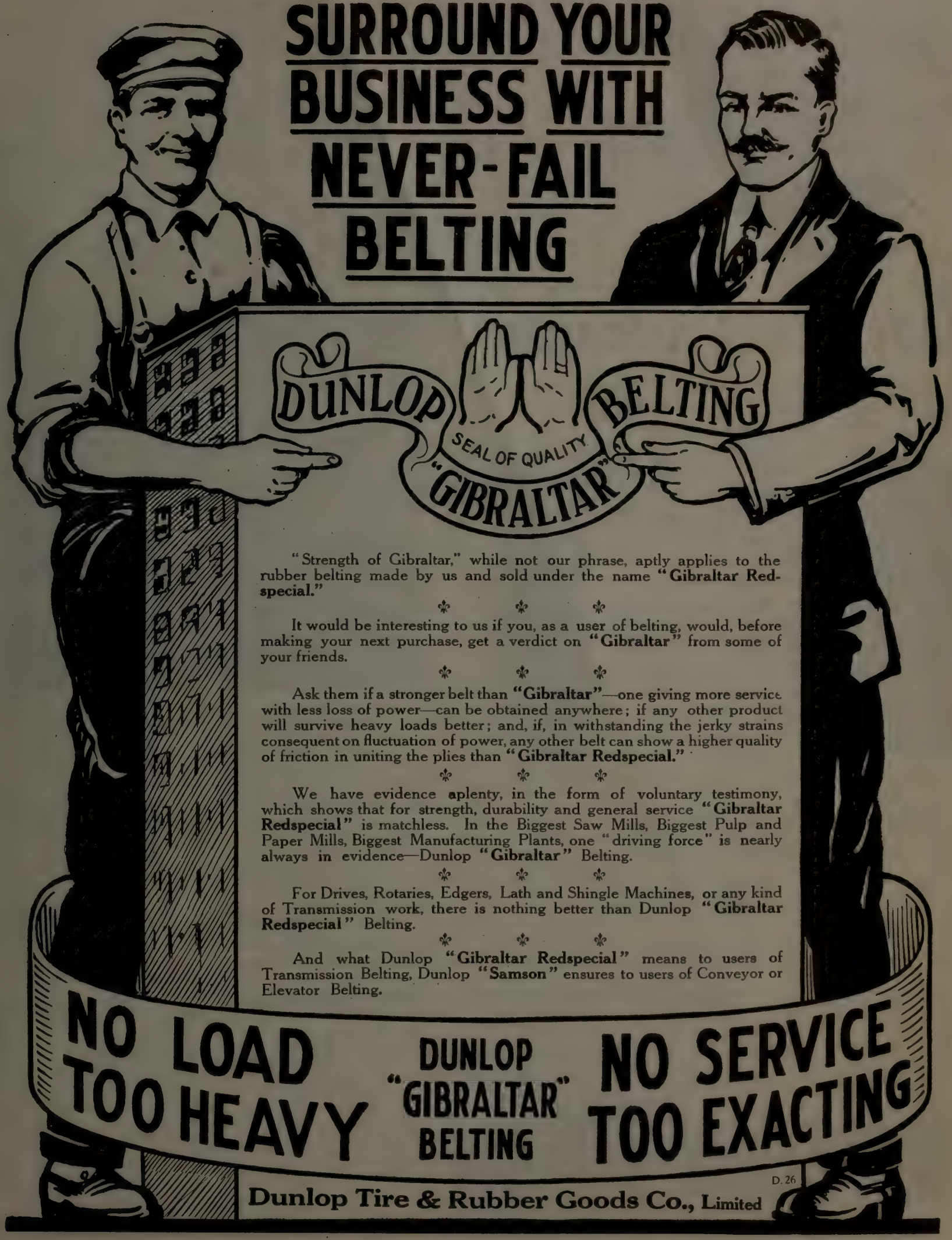
Messrs. Ross & Greig, 412 St. James St. Montreal, Que.
Messrs. Walker's Limited, 259-261 Stanley St. Winnipeg, Man.
Messrs. Gorman, Clancey & Grindley, Ltd., Calgary and Edmonton, Alta.
Messrs. Robt. Hamilton & Co. Ltd., Bank of Ottawa Bldg., Vancouver, B.C.

New RAILS Relaying
12 to 80 pounds per yard.

LOGGING CARS

Jno. J. Gartshore
58 Front St. West, Toronto

SURROUND YOUR BUSINESS WITH NEVER-FAIL BELTING



"Strength of Gibraltar," while not our phrase, aptly applies to the rubber belting made by us and sold under the name **"Gibraltar Redspecial."**

⚜ ⚜ ⚜

It would be interesting to us if you, as a user of belting, would, before making your next purchase, get a verdict on **"Gibraltar"** from some of your friends.

⚜ ⚜ ⚜

Ask them if a stronger belt than **"Gibraltar"**—one giving more service with less loss of power—can be obtained anywhere; if any other product will survive heavy loads better; and, if, in withstanding the jerky strains consequent on fluctuation of power, any other belt can show a higher quality of friction in uniting the plies than **"Gibraltar Redspecial."**

⚜ ⚜ ⚜

We have evidence aplenty, in the form of voluntary testimony, which shows that for strength, durability and general service **"Gibraltar Redspecial"** is matchless. In the Biggest Saw Mills, Biggest Pulp and Paper Mills, Biggest Manufacturing Plants, one "driving force" is nearly always in evidence—Dunlop **"Gibraltar"** Belting.

⚜ ⚜ ⚜

For Drives, Rotaries, Edgers, Lath and Shingle Machines, or any kind of Transmission work, there is nothing better than Dunlop **"Gibraltar Redspecial"** Belting.

⚜ ⚜ ⚜

And what Dunlop **"Gibraltar Redspecial"** means to users of Transmission Belting, Dunlop **"Samson"** ensures to users of Conveyor or Elevator Belting.

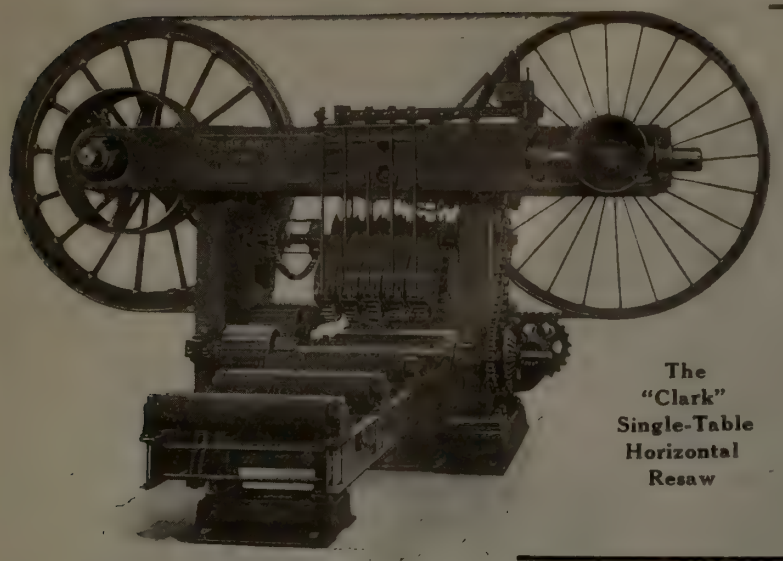
NO LOAD TOO HEAVY

DUNLOP "GIBRALTAR" BELTING

NO SERVICE TOO EXACTING

D. 26

Dunlop Tire & Rubber Goods Co., Limited



The "Clark" Single-Table Horizontal Resaw

Ever Consider Why These Machines are so Popular?

The possibility for fast and accurate production—is the answer

Some of the special features of the "Clark" Horizontal Resaw are—

The method of returning stock through machine, eliminating expensive return system—The use of the lower part of saw blade, this means the resaw sets on mill floor where every part is accessible. Entire table twenty-four feet long raises and lowers—Elimination of sawdust around wheels as all dust and bark passes through frame to conveyor below. Hand or Steam Set-works—Range of thickness from ½ in. to 14 in., made in two sizes, 66 to 84 inches.

Many other special features are described in our Resaw catalog. Mailed on request.

We will introduce Jan. 1st our New Portable Band Mill complete. If interested write us for Catalogue.

BUILT BY

CLARK BROS. CO., Olean, N.Y., U.S.A.

Garlock Packings

Are made in over two hundred styles and combinations to meet every known requirement. We will assume entire responsibility in selecting the proper styles and combinations of our packings to work successfully and economically under any stated condition; and if goods are not wholly satisfactory to purchaser we will refund promptly the cost of same. A card will bring our new catalog which fully describes our various styles of packings.

Style No. 777

Style No. 150

The Garlock Packing Co.

Hamilton, Ontario

Branches: Calgary, Montreal

Branches: Toronto, Winnipeg

Not altogether what we say but what users say

"We have used the Alligator or Warping Tug manufactured by you for the last 7 or 8 years, and consider them indispensable to lumbermen on waters of French River or similar streams."

Will move a bag containing 60,000 logs, in calm weather, 30,000 in a head wind.

West & Peachey - Simcoe, Ont.

A Lombard Hauler
Ready to Ship

We have in stock one used Lombard Steam Log Hauler. It is in good condition and having finished the hauling for one of our customers we offer it at an attractive price. It will do your hauling cheaper than horses.

Ask us about this.

The Jenckes Machine Co.

SHERBROOKE, QUE. Limited

Montreal Office—E. T. Bank Building. Vancouver Office—Exchange Building.
Toronto Office—Traders Bank Building. Ontario Factory at St. Catharines.

Warehouses carrying stocks—Cobalt, South Porcupine, and Vancouver.
Western Agents—Canadian Western Foundry & Supply Co., Calgary, and Edmonton, Alta.

"Leather like gold has no substitute."

Made in Canada

for 40 Years

"AMPHIBIA"

The Waterproof Wonder

Amphibia is more than a waterproof leather belt—it is really a waterproof wonder. In the saw mill where rough, wet, oily conditions prevail and often frost, you will find Amphibia the ONE belt that can "make good."

The leather used is specially tanned from choice hides and manufactured into belting with waterproof materials.

Try a sample run of Amphibia belting on the toughest run in your mill—the result will make you our customer.

Sadler & Haworth

Tanners and Manufacturers *Established 1876*

FOR 40 YEARS TANNERS AND MANUFACTURERS OF THE BEST LEATHER BELTS

MONTREAL, 511 William Street

TORONTO 38 Wellington St. East

ST. JOHN 149 Prince William St.

WINNIPEG Galt Building

VANCOUVER 107-111 Water St.

Dominion Timber Regulations

Licenses to cut timber on Dominion Lands in the Provinces of Manitoba, Saskatchewan, and Alberta, the Northwest Territories, within twenty miles on either side of the main line of the Canadian Pacific Railway in the Province of British Columbia, and in the tract of three and one-half million acres to be located by the Government in the Dominion in the Peace River district in the Province of British Columbia, lying east of the Rocky Mountains and adjoining the Province of Alberta, shall be disposed of by public auction at the office of the Dominion Timber Agent for the districts in which the berths are situated.

Before any parcel of timber is offered for sale it shall be surveyed by a duly qualified Dominion Land Surveyor into berths of an area not exceeding twenty-five square miles, and each of such berths shall then be thoroughly cruised by a duly qualified timber cruiser in the employ of the Dominion Government. The Minister shall then fix an upset price at which the berth shall be disposed of, and no berth shall be sold at less than the price so fixed.

Purchases to the amount of one thousand dollars or under shall be paid in cash at the time of sale. Purchases over one thousand dollars and not exceeding five thousand dollars shall be paid, one-half in cash at the time of sale, and a note or notes shall be given for the remaining half of the purchase price, payable in three months, with interest at the rate of five per cent. per annum. Purchases over five thousand dollars and not exceeding ten thousand dollars shall be paid one-third in cash at the time of sale, and notes shall be given for the remaining two-thirds of the purchase price, payable in three and six months, with interest at the rate of five per cent. per annum. Purchases exceeding ten thousand dollars shall be paid one-fourth in cash at time of sale, and notes shall be given for the remaining three-fourths of the purchase price, payable within three, six and nine months, with interest at the rate of five per cent. per annum. Notes shall be made payable at a bank in the city or town in which the sale is held or at a bank in the city of Ottawa. Cash payments must be made at the time of sale in legal tender or by an accepted cheque on a chartered bank, or by a draft issued by a chartered bank, payable to the order of the Deputy Minister of the Interior. If default is made in any payment required by this section the sale shall be forfeited and void.

The purchaser must also pay the cost or the estimated cost of the survey of the berth before a license is issued.

The licensee shall pay an annual ground rent of five dollars per square mile except for lands situated to the west of Yale, in the Province of British Columbia, in which case the yearly ground rent shall be five cents per acre.

The licensee shall pay the following dues on timber cut on his berth :—

Sawn lumber, 50 cents per thousand feet, board measure.

Railway ties, eight feet long, 1½ cents each.

Railway ties, nine feet long, 1¾ cents each.

Shingle bolts, 25 cents per cord.

And 5 per cent. on the sale of all other products of the berth.

Timber Permits

Yearly permits are granted to settlers, mine operators and others on application to the Dominion Timber Agents, from whom further information can be obtained.

W. W. Cory,

Department of the Interior, Ottawa, Deputy Minister.
December 20th, 1912.

How Is *Your* Work Going?

"Sit down, Thompson; how's the work going?"

"It isn't going—it's ***dragging***."

"What's the matter—men sore?"

"No! There s no complaint. Grub is good; men seem willing enough—but they don't put their heart into the work."

"Say, Thompson, why don't you get real beds for the men, ***like the one I'm sitting on?***"

"Holy mackerel! I ain't running a Ritz-Carlton Hotel at my camp."

"I don't mean brass beds and Ostermoor mattresses; I mean sanitary steel bunks ***with real springs***. They will be money in your pocket."

"You mean money ***out*** of my pocket."

"No, sir! The trouble with your men is lack of rest. They don't get a good night's rest on those hard, wooden bunks of yours that can't possibly be kept free from vermin; they can't do a day's work. Those old bunks are costing you a pile of money, because they are keeping the men from doing their best work.

"Tell you what, Thompson, rip out the old wooden shelves that your men are trying to sleep on—put in ***'Alaska' Sanitary Steel Bunks***—and you'll find that your men will turn out about 25% more work. I proved it myself, and so did Miller." (***So have many others.***)

Alaska Sanitary Steel Bunks Cost More, But are the Cheapest in the End.
It's Not Too Late to Equip *Your* Camp With Them. May We Quote You?

The Parkhill Manufacturing Co., Limited

MONTREAL — WINNIPEG
GUARANTEED ALASKA BEDDING
TRADE MARK REGISTERED

Successors to
THE ALASKA FEATHER & DOWN CO., LIMITED
Makers of Steel Bunks, Bedsteads and Bedding
400 St. Ambroise St. :-: MONTREAL
"ALASKA on an article means HIGH-GRADE EVERY PARTICLE"

CURRENT LUMBER PRICES—WHOLESALE

TORONTO, ONT.

Car Lots

White Pine:		
1 inch No. 1 cuts and better	$50 00	52 00
1½ inch No. 1 cuts and better	60 00	62 00
2-in. No. 1 cuts and better	62 00	64 00
1½-in. No. 2 C. & B.	50 00	52 00
2-in. No. 2 cuts and better	52 00	54 00
4/4 No. 2 and 3 cuts		33 00
5/4 and 6/4 No. 2 and 3 cuts	38 00	40 00
8/4 No. 2 and 3 cuts	40 00	42 00
1-in. Good Shorts	35 00	40 00
1 x 4 and 5 com. and dressing	32 00	33 00
1 x 6 common and dressing	33 00	34 00
1 x 8 common and dressing	33 00	34 00
1 x 10 common and dressing	35 00	36 00
1 x 12 common and dressing	38 00	40 00
1 x 10 and 12 mill cull stocks.	28 00	29 00
1-in. mill cull sidings		26 00
5/4 and 6/4 x 4 m.r., m.c. out	33 00	34 00
5/4 and 6/4 x 5 m.r., m.c. out	33 00	34 00
5/4 and 6/4 x 6 m.r., m.c. out	33 00	34 00
5/4 and 6/4 x 8 m.r., m.c. out	34 00	35 00
5/4 and 6/4 x 10 m.r., m.c. out		37 00
5/4 and 6/4 x 12 m.r., m.c. out	38 00	40 00
2 x 10 common	33 00	35 00
2 and 3 x 12 common	35 00	37 00
1 x 8 box and common		28 00
1 x 10 inch box and common.		30 00
1 x 12 inch box and common.		31 00
1-in. mill run sidings		30 00
1-in. mill run shorts		25 00
1-in. mill run Norway		26 00
2-in. mill run Norway	28 00	29 00
Norway, c. and cf. 1-in.		35 00
Norway, c. and cf. 1½-in.	37 00	38 00
Norway, c. and cf. 2-in.	35 00	37 00
Spruce mill run 1-in. and 2-in.		27 00
Spruce mill culls		23 00
Hemlock No. 1:		
1 x 4 and 5-in. x 9 to 16 ft.		20 00
1 x 6-in. x 9 to 16 ft.		25 00
1 x 8-in. x 9 to 16 ft.		27 00
1 x 10 and 12 in. x 9 to 16 ft.		27 00
1 x 7, 9 and 11 in. x 9 to 16 ft.		25 00
1-in. No. 2, 6-ft. to 16-ft.		20 00
2 x 4 to 12, 10 and 16 ft.		26 00
2 x 4 to 12 in., 12 and 14 ft.		25 00
2 x 4 to 12-in., 18 ft.		28 00
2 x 4 to 12-in., 20 ft.		30 00
2-in. No. 2, 4-in. and up in width, 6 to 16 ft.		20 00
Clear in B. C. cedar, kiln dried		50 00
Douglas Fir:		
Dimension Timber up to 32 feet:		
8x8, 10x10, 10x12, 10x14, 12x12, 12x14, 14x14, 14x16 up to 32 ft.		35 50
6x10, 6x12, 8x10, 8x12, 10x16, 12x16, 16x16		36 00
6x14, 8x14, 12x18, 18x20, up to 32 ft.		36 50
6x16, 8x16, 10x18, 12x20, 14x20, 16x18, 16x20, 18x18, 20x20, up to 32 ft.		37 00
10x20, 18x20, up to 32 ft.		37 50
6x18, 8x18, up to 32 ft.		37 50
6x20, 8x20, up to 32 ft.		38 50
Timber in lengths over 32 feet subject to negotiation.		
Fir flooring, 1 x 3, edge grain		35 00
Fir flooring, 1 x 4, edge grain		38 50
Fir flooring, 1 x 4, flat grain		30 00
No. 1 and 2, 1-in. clear Fir rough		44 50
No. 1 and 2, 1¼ and 1½ in., clear Fir rough		50 00
No. 1 and 2, 2-in. clear Fir rough		46 00
1½-in. No. 1 4-ft. pine lath		5 50
1½-in. No. 2 4-ft. lath		5 25
1½-in. 32-in. pine		2 25
1½-in. No. 1 4-ft. hemlock lath		4 25
1½-in. mill run hemlock lath.		4 00
XX B. C. cedar shingles		2 60
XXX 6 butts to 2-in.		3 45
XXXXX		3 85

Hardwoods—Per M. Feet, Car Lots

Ash, white, 1sts and 2nds, 1½ and 2-in.	60 00
Ash, white, No. 1 common	45 00
Ash, brown, 1sts and 2nds, 4/4	50 00
Ash, brown, common and better	40 00
Ash, brown, 1sts and 2nds, 6/4 & 8/4.	60 00
Birch, 1st and 2nds, 4/4	44 00
Birch, No. 1 com. and bet., 4/4	35 00
Birch, 1st and 2nds, 6/4 and 8/4	46 00
Birch, 1st and 2nds, 10/4 and 12/4	60 00
Birch, 1st and 2nds, 16/4	62 00
Basswood, 1sts and 2nds, 4/4	45 00
Basswood, No. 1 com. and bet., 4/4	35 00
Basswood, No. 2 and 3, common	19 00
Basswood, 6/4 and 8/4, 1sts and 2nds.	48 00
Basswood, 6/4 and 8/4, com. and bet.	40 00
Basswood, 4/4, No. 2 com. and bet.	32 00
Soft elm, 1sts and 2nds, 4/4	40 00
Soft Elm, No. 1 com. and bet., 4/4	35 00
Soft elm, No. 2 and 3 common	19 00
Soft elm, 6/4 and 8/4, 1 and 2	45 00
Rock elm, 1sts and 2nds, 6/4 x 8/4.	55 00
Rock elm, No. 2 com. and bet. 6/4 and 8/4	40 00
Soft maple, 1sts and 2nds, 4/4	33 00
Soft maple, com. and bet., 4/4	25 00
Soft maple, 6/4 & 8/4, 1sts and 2nds.	35 00
Hard maple, 1st and 2nds, 4/4	40 00
Hard Maple, common and better, 4/4	33 00
Hard maple, 12/4 & 16/4, 1sts and 2nds	50 00
Red oak, plain, 1st and 2nds, 4/4	62 00
Red oak, plain, No. 1 co., 4/4	43 00
Red oak, plain No. 2 com. 4/4.	32 00
Red oak, plain 1sts and 2nds, 6/4 & 8/4	68 00
Red oak, plain 1sts and 2nds, 12/4 and 16/4	75 00
White oak, plain, 1sts and 2nds, 4/4	62 00
White oak, plain, No. 1 com., 4/4	42 00
White oak, plain, No. 2 com., 4/4	32 00
Red and White oak, plain, 1sts, and 2nds, 5/4 and 6/4	60 00
Red and White oak, plain, No. 1 com. 5/4 and 6/4	45 00
Red and White oak, plain, No. 2 com. 5/4 and 6/4	35 00
Red and White oak, plain, 1sts and 2nds, 8/4	70 00
Red and White oak, plain, No. 1 com. 8/4	50 00
White oak, plain, 1sts and 2nds, 12/4 and 16/4	80 00
White oak, ¼ cut, 1sts and 2nds, 4/4.	89 00
White oak, ¼ cut, 5/4 and 6/4, 1sts and 2nds	92 00
White oak, ¼ cut No. 1 common	57 00
Hickory, 1sts and 2nds, 4/4	70 00
Hickory, 6/4 and 8/4, 1sts and 2nds.	75 00

OTTAWA, ONT.

Manufacturers' Prices

Pine good sidings:		
1-in. x 7-in. and up	$52 00	54 00
1¼-in. & 1½-in. x 8-in. and up	55 00	58 00
2-in. x 7-in. and up	58 00	62 00
No. 2 cuts 2 x 8-in. and up	40 00	42 00
Pine good strips:		
1-in.	38 00	40 00
1¼-in. and 1½-in.	50 00	52 00
2-in.	52 00	55 00
Pine good shorts:		
1-in. x 7-in. and up	40 00	42 00
1-in. x 4-in. to 6-in.	30 00	33 00
1¼-in. and 1½-in.	50 00	54 00
2-in.	52 00	54 00
7-in. to 9-in. A sidings	25 00	27 00
Pine, No. 1 dressing sidings	33 00	35 00
Pine, No. 1 dressing strips	29 00	30 00
Pine, No. 1 dressing shorts	24 00	26 00
Pine, 1-in. x 4-in. s.c. strips		26 00
Pine, 1-in. x 5-in. s.c. strips		27 00
Pine, 1-in. x 6-in. s.c. strips		30 00
Pine, 1-in. x 7-in., s.c. strips		27 00
Pine, 1 x 8 in. s.c., 12 ft. to 16 ft.		36 00
Pine, 1-in. x 10-in. M. R.		34 00
Pine, s.c. sidings, 1½ and 2-in.	30 00	32 00
Pine, s.c. strips 1-in.		27 00
1¼, 1½ and 2-in.	26 00	28 00
Pine, s.c. shorts, 1 x 4 to 6 in.	22 00	24 00
Pine, s.c. and bet. shorts, 1 x 5		23 00
Pine, s.c. and bet., shorts, 1 x 6		25 00
Pine, s.c. shorts, 6'-11', 1"x10"		26 00
Pine, box boards:		
1" x 4" and up, 6'-11'		20 00
1" x 8", 12'-16'	21 00	22 00
Pine, mill culls, strips and sidings, 1-in. x 4-in. and up, 12-ft. and up	22 00	24 00
Pine, mill culls stock, 1 x 12		23 00
Mill cull shorts, 1-in. x 4-in. and up, 6-ft. to 11-ft.	17 00	18 00
O. culls r & w p	14 00	15 00
Red pine, log run:		
mill culls out, 1-in.	20 00	22 00
mill culls out, 1¼-in.	21 00	23 00
mill culls out, 1½-in.	21 00	23 00
mill culls out, 2-in.	23 00	25 00
mill culls, white pine, 1"x 7" and up	20 00	21 00
Mill run Spruce:		
1"x 4" and up, 6'-11'	17 00	18 00
1"x 4" and up, 12'-16'	21 00	23 00
1"x 9"-10" and up, 12'-16'	25 00	27 00
1¼"x 7" 8-9" and up, 12'-16'	25 00	27 00
1¼"x 10" and up, 12'-16'	25 00	27 00
1½" & 2"x12" and up, 12'-16'	25 00	26 00
Spruce 1-in. clear (fine dressing and B)	25 00	27 00
Hemlock 1-in. cull	13 00	15 00
Hemlock 1-in. log run	17 00	20 00
Hemlock 2x4, 6, 8, 10, 12/16'.	19 00	23 00
Tamarac	19 00	20 00
Basswood log run, dead culls out	22 00	24 00
Basswood log run mill culls out	23 00	26 00
Birch log run	19 00	22 00
Soft elm, common and better, 1, 1½, 2-in.	20 00	24 00
Ash, black, log run	25 00	28 00
1 x 10 No. 1 barn	33 00	36 00
1 x 10 No. 2 barn	23 00	26 00
1 x 8 and 9 No. 2 barn	22 00	23 00
Lath per M:		
No. 1 white pine 1½-in. x 4-ft.	4 25	4 50
No. 2 white pine	3 80	3 95
Mill run white pine	4 00	4 25
Spruce, mill run 1½-in.	3 25	3 50
Red pine, mill run	3 60	3 70
Hemlock, mill run	2 75	3 00
32-in. lath	2 00	2 00
Wmite Cedar Shingles:		
xxxx, 18-in.	3 75	4 25
Clear butt, 18-in.	3 00	3 50
18-in. xx		2 00
Spruce logs (pulp)	13 00	15 00

QUEBEC, QUE.

	cts.	
White Pine		
First class Ottawa waney, 18-in. average, according to lineal	60	65
Oak		
According to average and quality	60	70
Elm		
According to average and quality, 40 to 45 feet	80	85
According to average and quality, 30 to 35 feet	50	60
Ash		
13 inches and up, according to average and quality, per cu. ft.	25	30
Average 16 inch	30	40
Birch		
14 inch, per cu. ft.	20	22
15 inch, per cu. ft.	24	26
16 inch, per cu. ft.	28	30
18 inch, per cu. ft.	32	35
Quebec Spruce Deals		
12 ft. and up x 8 x 9 and up.	$22 00	23 00
Oddments	18 00	19 00
Boards, 1 and 2 in.	18 00	20 00
Birch Planks		
1 to 4 in.	16 00	18 00

SARNIA, ONT.

Fine, Common and Better

1 x 6 and 8 in.	$54 00
1 in., 8 in. and up wide	62 00
1¼ and 1½ in. and up wide	65 00
2 in. and up wide	70 00
Cuts and Better	
4/4 x 8 and up No. 1 and better	50 00
6/4 x 8 and up No. 1 and better	60 00
8/4 x 8 and up No. 1 and better	62 00
6/4 x 6 and up No. 2 and better	52 00
8/4 x 6 and up No. 2 and better	54 00
6/4 x 6 and up No. 3 and better	46 00
8/4 x 6 and up No. 3 and better	50 00
No. 1 Cuts	
1 in., 8 in. and up wide	40 00
1¼ in., 8 in. and up wide	55 00
1½ in., 8 in. and up wide	57 00
2 in., 8 in. and up wide	60 00
2½ and 3, 8 in. and up wide	75 00
4 in., 8 in. and up wide	85 00
No. 2 Cuts	
1 in., 6-in. and up wide	31 00
1¼ in., 6-in. and up wide	42 00
1½ in., 6-in. and up wide	44 00
2-in., 6-in. and up wide	44 00
2½, 3 and 4 in., 6-in. and up wide	62 00 65 00
No. 3 Cuts	
1 in., 6-in. and up wide	24 00
1¼ and 1½ in., 6-in. and up wide	33 00
2-in., 6-in. and up wide	33 00
2½, 3 and 4-in., 6-in. and up wide	43 00 48 00
Common and Dressing Mill Run	
1-in. x 4-in.	27 00
1-in. x 5-in.	27 00
1-in. x 6-in.	28 00
1-in. x 8-in.	28 00
1-in. x 10-in.	30 00
1-in. x 12-in.	34 00
1 in. x 13 in. and up	34 00
1¼, 1½ and 2-in.	30 00
No. 1 Barn	
1 inch	33 00 45 00
1¼, 1½ and 2-in.	36 00 45 00
2½ and 3-in.	45 00
4 inch	50 00
No. 2 Barn	
1 inch	28 00 36 00
1¼, 1½ and 2-in.	30 00 36 00
2½ and 3-in.	38 00
No. 3 Barn	
1 inch	26 00 30 00
No. 1, 1, 1¼, 1½, 2-in.	26 00 30 00
Box	
No. 1, 1, 1¼, 1½, 2-in.	22 00 25 00
No. 2, 1¼, 1½, 2-in.	24 00 25 00
Mill Culls	
Mill run culls, 1-in.	19 00
1, 1¼, 1½ and 2-in.	20 00
No. 2	17 00 18 00
Lath	
No. 1, 32-in. pine	1 85
No. 2, 48-in. pine	4 50
No. 1, 48-in. pine	5 00
No. 3, 48-in. pine	4 00
Hemlock Lath 48 in.	4 00

WINNIPEG, MAN.

No. 1 Pine, Spruce and Tamarac

Dimension	S. 1 S. and 1. E.			
	6 ft.	8 ft.	10 ft.	14x16 ft.
2 x 4, 6, 8..	15 00	18 00	21 50	22 50
2 x 10	19 00	19 50	22 50	23 50
2 x 12	19 00	20 00	24 50	24 00

Dimension in the rough or surfaced one side 50c. per M. extra.

FIR, HEMLOCK, SPRUCE AND LARCH

Mountain Stock

Dimension

2 x 4, 8, 12, 14, 16	23 50
2 x 4, 10, 18, 20	24 50
2 x 6, 8 to 16	22 50
2 x 8, 8 to 16	22 50
2 x 4-6 and 8-in.; 24, 26, 28, 30, 32 ft.	30 50
2 x 10 and 2 x 12; 8-16 ft.	27 50
2 x 10 and 2 x 12; 18, 20, 22 ft.	29 50
2 x 10 and 2 x 12; 24, 36, 28, 30, 32 ft.	31 50
No. 1 Common Boards	
4 inch	22 00
6 inch	24 50
8, 10, 12 inch	26 50
Mixed widths	25 50
Flooring	
4 or 6 inch No. 1	36 00
4 or 6 inch No. 2	31 00
4 or 6 inch No. 3	25 00
Shiplap—Finished	
6 inch	23 00
8, 10 and 12 inch	24 00
Siding	
6 inch No. 1	36 00
6 inch No. 2	34 00
6 inch No. 3	26 00
Lath	
No. 1 Cedar, pine, spruce (not mixed)	5 00
No. 1 Cedar, pine, spruce (mixed)	4 50

PINE—ROUGH TIMBER

3 x 6 in.; 8 to 16 ft.	28 10
3 x 8 in.; 8 to 16 ft.	25 00
3 x 12, 4 x 4, 6 x 6 in.; 8-16 ft.	28 00
4 x 10 to 10 x 10, 8 x 8, 6 x 12 in. up to 32 ft.	30 00

BRITISH COLUMBIA COAST FIR

Dimension S1S & E

2 x 4 in.; 6 and 8 ft.	21 50
2 x 4 in.; 12 and 14 ft.	22 50
2 x 4 in.; 10 and 16 ft.	23 50
2 x 4 in.; 18 and 24 ft.	24 50
2 x 4 in.; 22 and 24 ft.	25 50
2 x 4 in.; 26 to 32 ft.	27 50
2 x 10 and 2 x 12 in.; 10 to 16 ft.	24 00
2 x 10 and 2 x 12 in.; 18 and 20 ft.	26 00
2 x 10 and 2 x 12 in.; 22 and 24 ft.	27 00
2 x 10 and 2 x 12 in.; 26 to 32 ft.	29 00
2 x 14 in.; 10 to 16 ft.	29 00
2 x 14 in.; 18 and 20 ft.	31 00
2 x 14 in.; 22 and 24 ft.	32 00
2 x 14 in.; 26 to 32 ft.	34 00
3 x 3 and 3 x 4 in.; 8 to 14 ft.	25 00
3 x 3 and 3 x 4 in.; 8 to 16 ft.	26 00
3 x 3 and 3 x 4 in.; 18 and 20 ft.	27 00
3 x 3 and 3 x 4 in.; 22 and 24 ft.	28 00
3 x 3 and 3 x 4 in.; 26 to 32 ft.	30 00
6 x 6, 6 x 8, 8 x 8 in.; 6 to 16 ft.	28 00
6 x 6, 6 x 8, 8 x 8 in.; 18 and 20 ft.	28 50
6 x 6, 6 x 8, 8 x 8 in.; 22 and 24 ft.	29 00
6 x 6, 6 x 8, 8 x 8 in.; 26 to 32 ft.	29 50

FLOORING

Nos. 1 and 2, 1 x 3 in., E. G.	40 00
Nos. 1 and 2, 1 x 4 in., E. G.	39 00
Nos. 1 and 2, 1 x 6 in., E. G.	37 00
Nos. 1 and 2, 1 x 4 in., or 6 in., F. G.	31 00
No. 3, 1 x 4 in. or 6 in.	28 00
No. 3 Edge grain $3.00 per M. extra.	

SHIPLAP

B. C. Fir, 6 in.	22 50
B. C. Fir, 8, 10, 12 in.; 8 to 16 ft.	23 50
No. 2 Shiplap, 6 in.	22 50
No. 2 Shiplap, 8, 10 and 12 in.	23 50

FIR, COMMON BOARDS, S 1 S, 8 to 16 Ft.

Mixed widths (may contain 30 per cent. 4 and 6 in.)	21 00
Common Boards, 8 to 12 in.	22 00
No. 2 Mixed widths	17 00
No. 2 Boards, 8 to 12 in.	18 00

SHINGLES

XXX B. C. Cedar	2 85

LATH

Fir lath, ¾ x 1½ in. x 4 ft., bundled in 50's.	4 50
Cedar lath ¾ x 1½ in. x 4 ft.	5 00

BUFFALO AND TONAWANDA, N.Y.

White Pine

Wholesale Selling Price

Uppers 4/4	$100 00
Uppers 5/4 to 8/4	100 00
Uppers 10/4 to 12/4	105 00
Selects 4/4	90 00
Selects 5/4 to 8/4	90 00
Selects 10/4 to 12/4	100 00
Fine common 4/4	70 00
Fine common 5/4	70 00
Fine common 6/4	70 00
Fine common 8/4	72 00
No. 1 Cuts 4/4	53 00
No. 1 Cuts 5/4	60 00
No. 1 Cuts 6/4	62 00
No. 1 Cuts 8/4	66 00
No. 2 Cuts 4/4	36 00
No. 2 Cuts 5/4	45 00
No. 2 Cuts 6/4	47 00
No. 2 Cuts 8/4	50 00
No. 3 Cuts 5/4	34 00
No. 3 Cuts 6/4	35 00
No. 3 Cuts 8/4	36 00
Dressing 5/4	47 00
Dressing 5/4 x 10	52 00
Dressing 5/4 x 12	55 00
No. 1 Moulding 5/4	62 00
No. 1 Moulding 6/4	62 00

(Continued on page 56)

INTERNATIONAL

The Promoter of Punctuality

LARRY LATENESS—"I'd be out a dollar a week if it wasn't for that International."

By reminding—not reprimanding; by encouraging—not hindering; by instruction—not reproving, International Time Recorders bring your men to a realization of the importance of their minutes.

The Minutes of Your Men Mean Money to Them and You

There is no more simple or accurate method of keeping a record of the time you buy. That is why you find Internationals in the largest and smallest plants. 260 styles from which to choose. $100.00 and up in price.

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Toronto Phone—Col. 622.

MONTREAL
W. A. Wood, Jr., Sales Agent
Cartier Bldg., Cor. McGill and Notre Dame Sts
Phone—Main 7025

CURRENT LUMBER PRICES—Continued

No. 1 Moulding 8/4	62 00
No. 2 Moulding 5/4	52 00
No. 2 Moulding 6/4	52 00
No. 2 Moulding 8/4	52 00
No. 1 Barn 1 x 12	48 00
No. 1 Barn 1 x 6 and 8	36 00
No. 1 Barn 1 x 10	37 00
No. 2 Barn 1 x 6 and 8	33 00
No. 2 Barn 1 x 10	35 00
No. 3 Barn 1 x 6 and 8	28 00
No. 3 Barn 1 x 10	29 00
Box 1 x 6 and up	26 00
Box 1 x 10	27 00
Box 1 x 12	28 00
Box 1 x 13 and up	30 00

The following quotations on hardwoods represent the jobber buying price at Buffalo and Tonawanda:

MAPLE

	1s & 2s	No. 1 Com.	No. 2 Com.
4/4	34 - 35	21 - 23	13 - 15
5/4 to 8/4	36 - 38	23 - 25	13 - 14
10/4 to 10/4	41 - 43	29 - 31	18 - 20

RED BIRCH

4/4	44 - 46	28 - 30	14 - 16
5/4 to 8/4	46 - 48	30 - 32	16 - 18

SAP BIRCH

4/4	39 - 41	26 - 28	16 - 18
5/4 and up	39 - 41	26 - 28	16 - 18

SOFT ELM

4/4	37 - 39	22 - 24	16 - 18
5, 6 & 8/4	36 - 38	25 - 27	16 - 18

BASSWOOD

4/4	34 - 36	23 - 25	15 - 17
Thicker	34 - 36	25 - 28	18 - 19

PLAIN OAK

4/4	50 - 52	31 - 33	19 - 21
5/4 to 8/4	52 - 54	33 - 35	21 - 23

ASH, WHITE AND BROWN

4/4	46 - 48	26 - 28	17 - 19
5/4 to 8/4	51 - 53	28 - 30	18 - 20
10/4 and up	64 - 66	40 - 42	20 - 22

BOSTON, MASS.

White pine uppers, 1 to 2 in.	98 00
Selects, 1 to 2 in.	88 00
Fine common, 1 in.	68 00 70 00
Fine common, 1¼ to 2 in.	72 00 74 00
No. 1 Cuts 1 in.	55 00
No. 1 Cuts 1¼ to 2 in.	60 00 64 00
No. 2 Cuts, 1 in.	40 00
No. 2 Cuts, 1¼ to 2 in.	48 00 50 00
Barn Boards, No. 1, 1 x 12	48 00 50 00
No. 1, 1 x 10	38 00 40 00
No. 1, 1 x 8	37 00 38 00
No. 2, 1 x 12	38 00 40 00
No. 2, 1 x 10	37 00
No. 2, 1 x 8	35 00
No. 3, 1 x 12	31 00 32 00
No. 3, 1 x 10	30 00 31 50
No. 3, 1 x 8	30 00 31 00
Canadian spruce boards	25 00 27 00
Spruce, 10 in. dimension	28 00 30 00
Spruce, 12 in. dimension	29 00 31 00
Spruce, 9 in.	29 00
Spruce, 8 in. and under dimen.	28 00
10 and 12 in. random lengths, 10 ft. and up	29 00
2 x 3, 2 x 4, 2 x 5, 2 x 6, 2 x 7 and 3 x 4 random lengths, 10 feet and up	22 00 24 00
All other random lengths, 7-in. and under, 10 ft. and up	21 00 22 00
5-inch and up merchantable boards, 8 ft. and up, p 1s	22 50 23 00
1 x 2 and 1 x 3 furring, p 1s clipped and bundled	22 00
1¾-in. spruce laths	4 25
1½-in. spruce laths	3 80 4 00

New Brunswick Cedar Shingles

Extras	3 50 3 60
Clears	3 30
Second clears	2 30 2 40
Clear whites	2 00 2 20
Extra 1s (Clear whites in)	1 60
Extra 1s (Clear whites out)	1 50
Red Cedar Extras, 16-in. 5 butts to 2-in.	4 00
Red Cedar Eurekas, 18-inch 5 butts to 2-in.	4 25
Red Clear Perfections, 5 butts to 2¼	4 80
Washington 16-in. 5 butts to 2-in extra red clear	3 65

Sturtevant

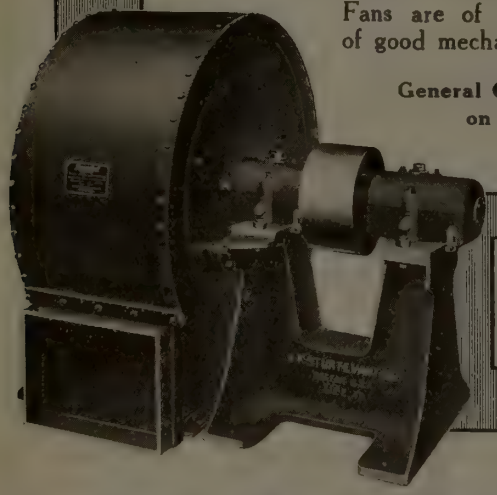
A Service that Others Cannot Afford

The B. F. Sturtevant Company not only builds more fans than all competitors combined but in addition offers better service to customers. For their benefit there is maintained a Research Department working specially to produce fans which will be "Better."

The Research Department is entirely separate from other branches of the business and their sole object is to develop and improve our apparatus entirely unhampered by the demands of routine or commercial work.

This constitutes a service that other fan manufacturers whose facilities and resources are much less cannot afford to give and is assurance to customers that Sturtevant Fans are of high efficiency and of good mechanical construction.

General Catalog 195-C on request



B. F. Sturtevant Co.
of Canada, Ltd.
GALT - ONTARIO
Montreal Winnipeg
Toronto Vancouver

FIRE BRICK

Differs in Quality and Variety

For instance, a certain quality or kind of brick that gives satsatisfaction when used in a Refuse Burner, may show up poorly if used in a Dutch Oven.

It all depends on getting the right kind and the right quality for your particular needs.

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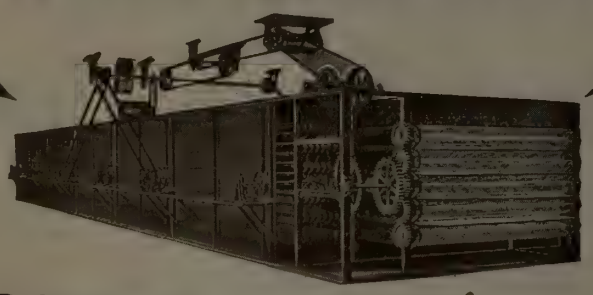

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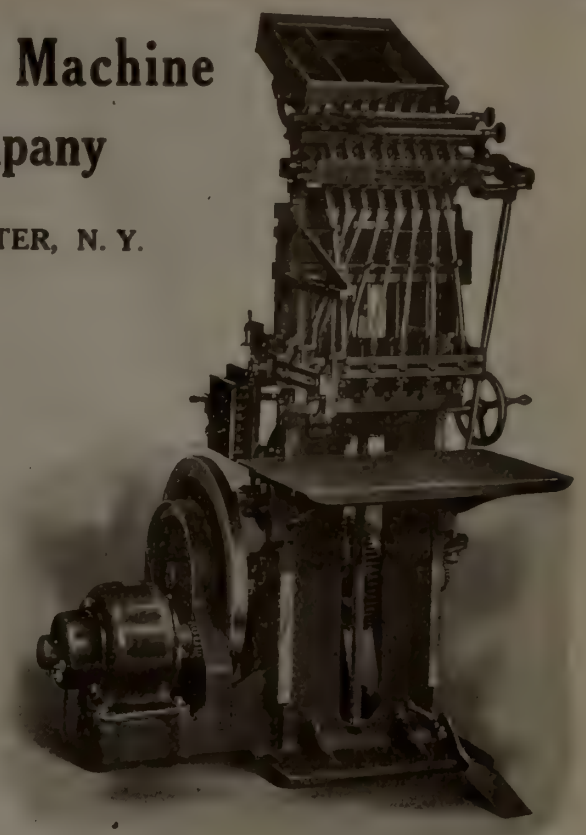

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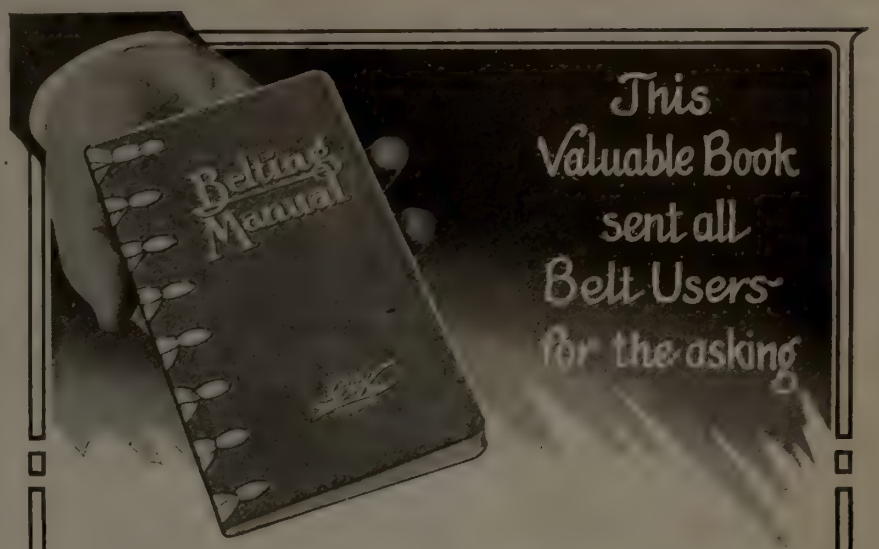

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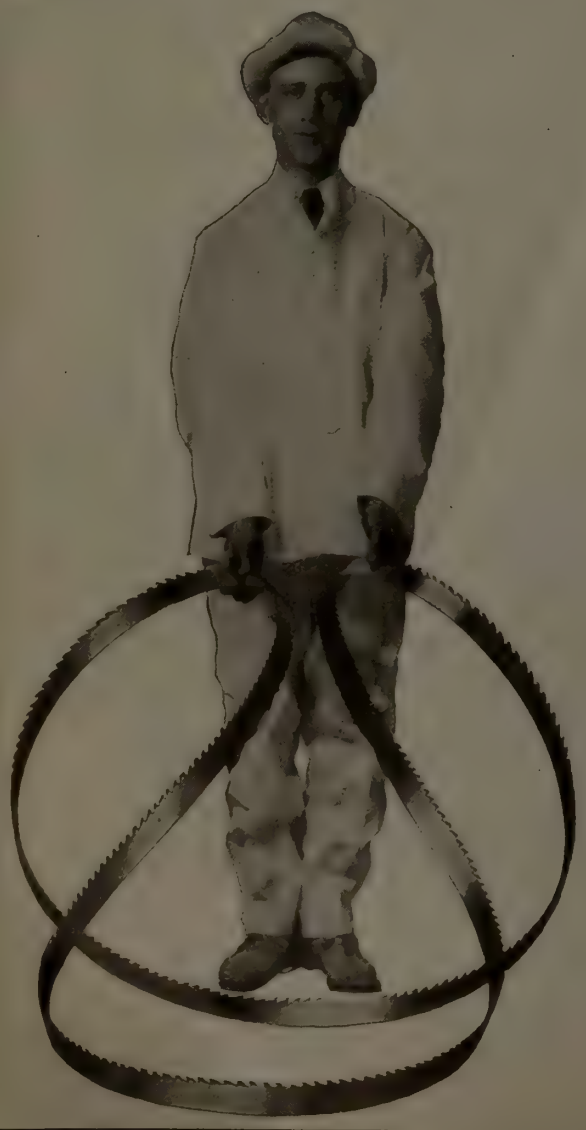

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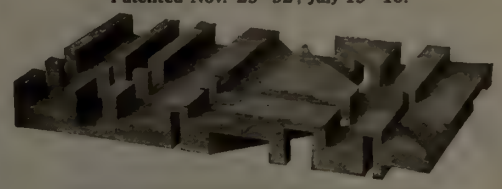

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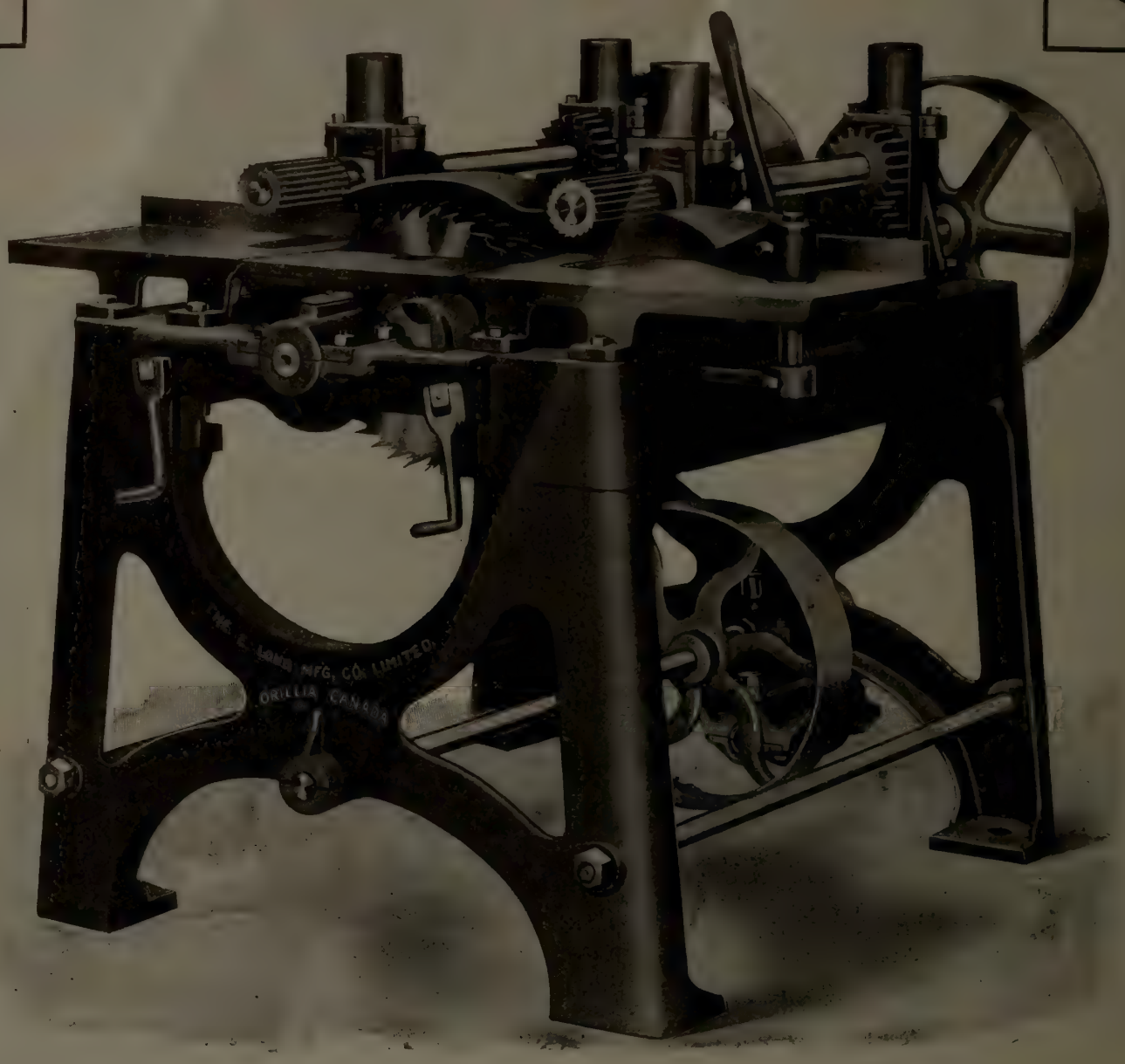

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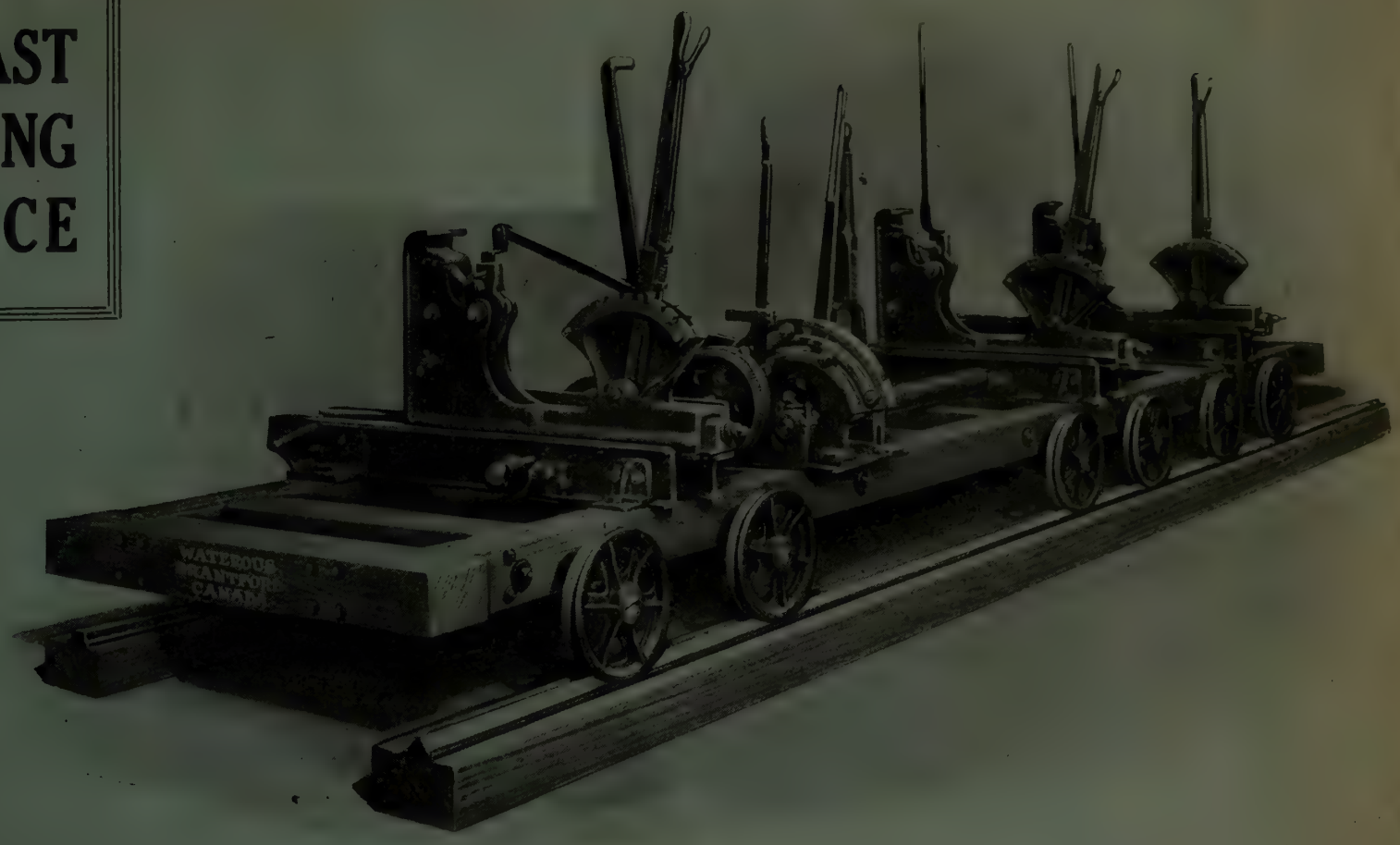

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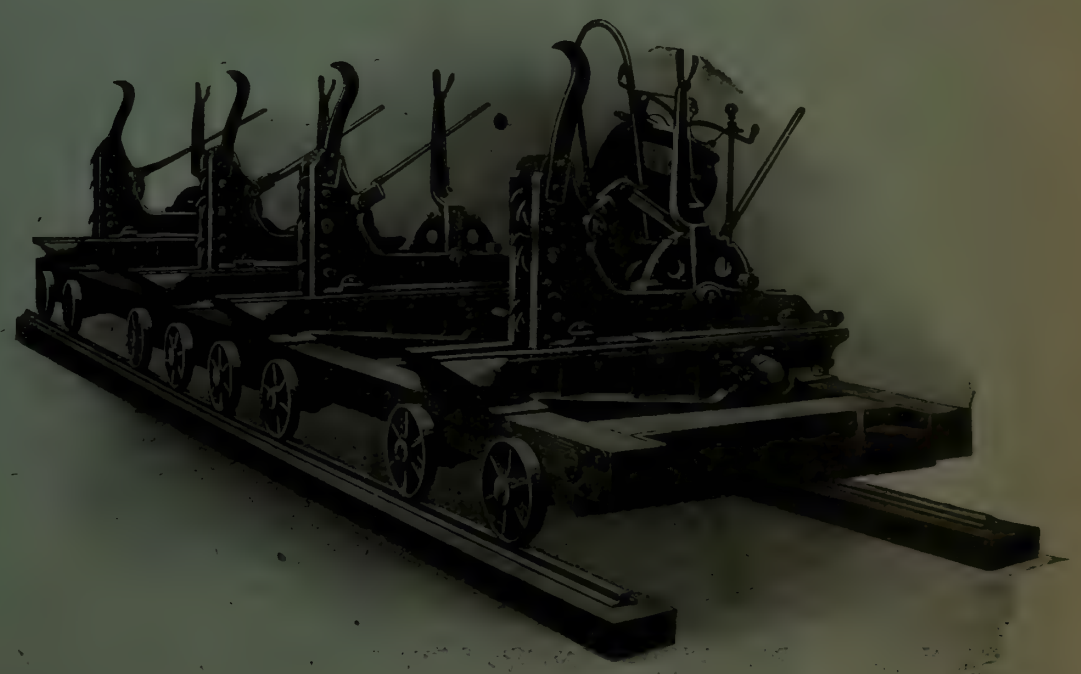

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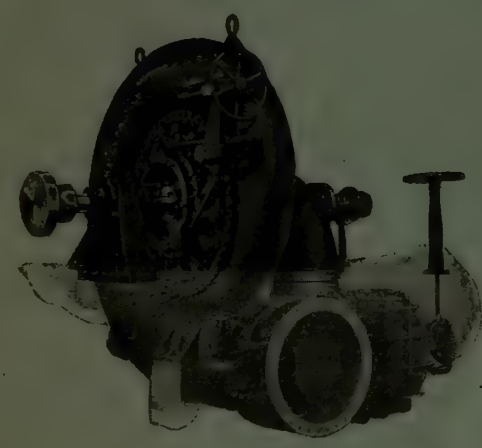

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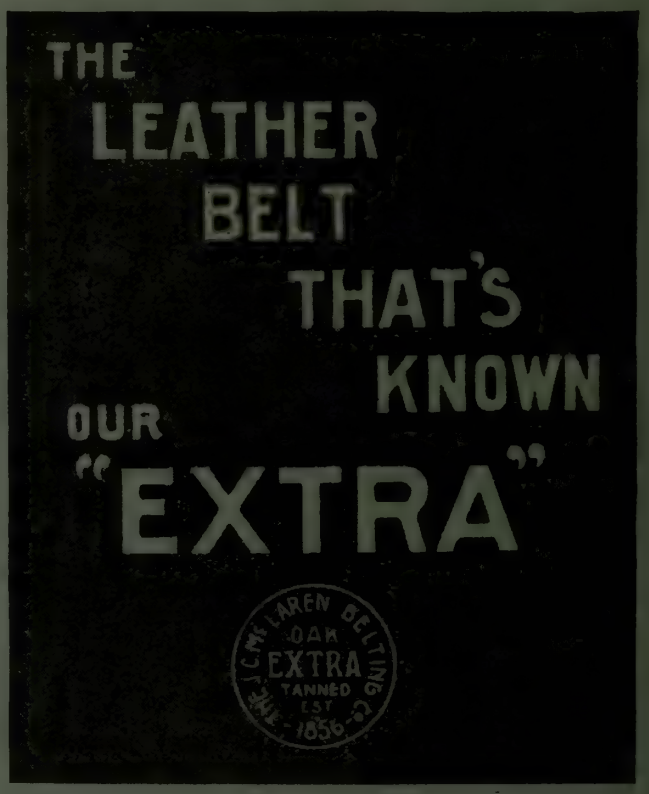

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